Urban Partnership Melting Pot:

Celebrating 70 Years of Germany-Indonesia Bilateral Partnership

January, 17-20 2022
Virtual Conference

A melting pot for urban studies

Welcome to the Humboldt Kolleg "Urban Partnership Melting Pot"

We welcome experts, researchers, and students to 2022 Humboldt Kolleg "Urban Partnership Melting Pot". This virtual Kolleg is a cross-disciplinary conference hosted by Universitas Pembangunan Jaya to strengthen professional cooperation at the regional and global level among Humboldt Fellows (Humboldtians), Indonesian and Asian researchers. In addition, the Kolleg will also introduce various programs for researchers and academics administered by the Alexander von Humboldt Foundation (AvH), a foundation with the vision to establish collaboration among countries through research.

Throughout the year, Humboldt Kollegs have been globally implemented: the United States, France, Italy, Poland, Nigeria, Kenya, South Africa, China, and India. In Indonesia, the 2022 Humboldt Kolleg is the second Kolleg organized by Universitas Pembangunan Jaya, following up the first one in 2017 which carried the theme "The Rise of ASEAN and Strategic Partnership in Understanding the Complexity and Collective Phenomena in Emergent Societies". We designate the current Kolleg as the "melting pot" due to the geographic origin of the researchers and the comprehensive urban themes which cover broad fields of science.

Universitas Pembangunan Jaya is striving for excellence in Urban Studies through scientific activities and community involvements. Center for Urban Studies (CUS), the strategic unit for the establishment of urban studies at Universitas Pembangunan Jaya, spearheads national and international collaborations as well as secures a number of international research and capacity building grants. CUS also hosts urban consortiums, workshops, summer schools, and seminars in the urban themes in the last five years as part of the commitment to establish urban research at Universitas Pembangunan Jaya (https://consortium.upj.ac.id/). In the national arena, Universitas Pembangunan Jaya has succeeded in securing a prestigious matching fund grant from the Indonesian Ministry of Education, Culture, Research in 2021 to pioneer the Master of Urban Studies study program. The involvement of Universitas Pembangunan Jaya in the community is compiled in "About Urban" anthology, a clear sign of our commitment to serve the urban community (http://eprints.upj.ac.id/id/eprint/1910/). In the long run we believe that the field of urban studies in Indonesia will become strong through consistent collaborations of relevant stakeholders.

We will also commemorate the 70th year of the diplomatic relation between Germany and Indonesia during the Kolleg. We are grateful that during our bilateral relationship, there has been strong supports to develop science and technology in Indonesia. Fruitful bilateral collaboration can only be successful through mutual understanding and concrete projects between the countries. We wish that this 70th bilateral celebration will mark future advances in science and technology. Congratulations on celebrating 70 years of bilateral relations between Germany and Indonesia!

Bintaro, January 5, 2022

Leenawaty Limantara, Ph.D.
Humboldt fellow

FOREWORD

CONTENTS

Information: Virtual Platform

- Webpage: https://meltingpot2022.exposim.io/
- Free registration
- "How to" register to the plarform, please watch the video: https://youtu.be/UnugL456QVE
- All of the meeting including opening session, keynote talks, oral presentations, poster presentations, and closing session will be held in the platform mentioned above.

Email: urban.meltingpot@upj.ac.id

Conference webpage: consortium.upj.ac.id/kolleg

INFORMATION OF THE PROGRAM

Programs

Day 1: 17 January 2022

JANUARY 17, 2022	
Time	**Program**
14:55 – 15:00	Call to join the main virtual meeting
15:00 – 16:00	**Opening Melting Pot: kniting stories and the 70th years Germany-Indonesia Bilateral** **H.E. Ina Lepel** German Ambassador for Indonesia **Dr. Laksana Tri Handoko, M.Sc.** Head of National Research & Innovation Agency (BRIN) **Dr. Enno Aufderheide** General Secretary President of the Alexander von Humboldt Foundation **Art performance** UPJ Students **Ir. Frans Sunito** President of Universitas Pembangunan Jaya **Leenawaty Limantara, Ph.D.** Humboldt Fellow Rector of Universitas Pembangunan Jaya
16.00 – 16:15	Break
	Networking on virtual platform Visiting virtual booths
16:15 – 17:00	**Keynote 1 (K1): plenary session (including Q&A)** **Prof. Dr. Bernhard Mueller (Technische Universität Dresden)** **Sustainable Urban Expansion – Lessons for ASEAN Countries**
17:00 – 17:40	**Plenary session: presentation on Humboldt Foundation's programs: Dr. Katja Yang Head of Asia Division, Alexander von Humboldt Foundation**
17:40 – 18:20	**Networking session 1: Consortium: Roadmap for ASEAN Urban Consortium, hosted by: Eddy Yusuf, Ph.D. (Vice Rector Universitas Pembangunan Jaya)**
17:40 – 18:20	**Poster session I: virtual exhibition hall** (19 posters, please refer to the Program Book for the complete list of posters' authors) The posters in this list will stay for Day 1 and Day 2 (January 17-18, 2021)

INFORMATION OF THE PROGRAM

17:40 – 18:20	No.	Author	Title
	1	Abdul Gafur	Urban Smart Waste Management
	2	Agustinus Setiawan	Compressive Strength Model Prediction of Zero Cement Geopolymer Concrete Using Multiple Regression Analysis
	3	Aphitta Yodying	The Accuracy Assessment of the Weather Research and Forecasting (WRF) Model: A Case Study of Tropical Storm Doksuri Over Thailand
	4	Clara Ajisuksmo	The Assessment of Potential Small Group Business Developed in Three District in Jakarta
	5	Deni Setyono	Realizing Spatial Justice in Developing School Zoning, Case Study: Elementary School in Malang City
	6	Endang Pitaloka	Corporate Image: Does it Matters for Urban Customers
	7	Hanif Fitria	Impact of Concrete Use on Infrastructure Development
	8	Hari Nugraha	Identification of Urban Studies' Needs through a Market Survey
	9	I Nyoman Wijaya	Determining The Strategic Issue of Sustainable Development by Operating DEMATEL as Supporting Technique of Analysis – A Case of Strategic Environmental Assessment (SEA) on Gresik Municipality - Indonesia
	10	Johannes Siregar	Designing a Web Application for Product Introduction of Small Enterprise in Urban Area at South Tangerang City, Indonesia
	11	Kamonchat Seejata	Flood hazard mapping using WRF rainfall and geospatial data in Northern Thailand
	12	Muhammad Ibad	The Self-organizing System of Urban Region: A Review
	13	Musa Eya	Effect of Bailout Funds to States Government: Access to Justice and Challenges on Sustainable Development in Nigeria

	14	Nguyen Anh	Efficiency of Mono-stable Piezoelectric Duffing Energy Harvester in Resonance Domain
	15	Nina Ginting	Communication Barriers between Parents and Teachers Marie Joseph School in the Age of Distance Learning
	16	Rufman Akbar	Smart Phone-based Mobile FTP Server Design
	17	Runi Rulanggi	The Subjective Well-being Profile of Working Mothers at Tangerang Selatan During COVID-19 Outbreaks
	18	Safitri Jaya	Building Machine Learning Computing as a Tool to Measure the Characteristics of Prospective Students in Choosing Study Programs

Day 2: 18 January 2022

JANUARY 18, 2022	
Time	**Program**
15:00 – 15:45	**Keynote 2 (K2): plenary session (including Q&A)** **Prof. Dr.-Ing. Dieter D. Genske (Hochschule Nordhausen)** **Creating Resilient Plus-Minus-Energy Regions**
16:00 – 17:30	Parallel Session I (Urban Growth Pattern, Transformation, and Resilience): Virtual closed auditorium 1 (6 presenters): 1. Wat Chulamani, the Oldest Templein Muang Phitsanulok: The Importance of the Past to Urban Expansion in Present Day Charatdao Kongmuang, Natthasasiaon Nakkotchasee, Polpreecha Chidburee 2. Informal Settlements: The Conflicts of Land and Urban Image in Jakarta Eka Permanasari 3. Mangrove Rehabilitation as an Effort for Sustainability and Resilience of Coastal Urban Growth Felia Srinaga, Harianto Hardjasaputra, Natasia Heindri 4. Comparative Study of Electronic Money Acceptance Between Educated Generation X and Generation Y in Urban Areas Edi Purwanto, Rachman Sjarief, Anil Dawan, Sarahnada Kurniawan, Nawangwulan Pertiwi, and Nicky Zahra 5. Improving the Construction Schedule of a Two-Story Housing Project by Using BIM and the Repetitive Scheduling Method Sutthichai Prasatketkarn, Kumpon Subsomboon

	6. Vertical housing development interventions for sustainable urban development in Kigali David Mihigo and Fredrick Bwire Magina
	Parallel Session I (Urban Mobility & Internet of Things): Virtual closed auditorium 2 (6 presenters) 1. The Role of UTAUT Factors in E-Money Acceptance Among Urban Millennial Generation Edi Purwanto, Rachman Sjarief, Anil Dawan, Sarahnada Kurniawan, Nawangwulan Pertiwi, and Nicky Zahra 2. Investigation of Intentions and Resistance to Use Digital Fishery Platforms in Metropolitan Cities Edi Purwanto, Rachman Sjarief, Chaerul Anwar 3. Urban Mobility and Actualisation of Internet of a Thing in the Development of Transport System in Nigeria Musa Adamu Eya, Gobi Krishna Sinniah, Muhammad Zaly Shah, Nasiru Umaru 4. The Relationship Between Problematic Internet Use, Emotion Regulation and College Adjustment in Undergraduate Students of Private Universities in Jakarta Bogor Depok Tangerang and Bekasi Joshua Wianto and Clara R.P. Ajisuksmo 5. Development of the Road Light Profiling Based on Road Lighting Performances for New Car Assessment Program for Southeast Asian Countries (ASEAN NCAP) Protocol Joewono Prasetijo 6. Digital Learning Readiness Among Girls in Urban Setting Agustina Hendriati, Heru Prasadja, Clara Ajisuksmo
	Parallel Session I (Social, Health, Education, Environment, and Economic Development): Virtual closed auditorium 3 (5 presenters) 1. Price Estimation of Used Car Using Machine Learning Aviana Zhafira Rustandiputri, Nur Uddin, and Mohammad Nasucha 2. Durability of Rice Husk Ash Concrete in Sea Water with Hot Steam Curing Methods Aan Fadhilah Rumi, Pratika Riris PutriantI, Agustinus Agus Setiawan 3. Urban Society's Tax Compliance: How Tax Technology Helps Their Reporting Issues Agustine Dwianika, Edi Purwanto, Sila Ninin Wisnantiasri, Fachrul Roza, Affrian Dwi Prasetyo, Jasmine Rafinka Dara 4. Challenges in Reducing Microplastic Waste in Indonesia Amita I. Sitomurni, R. Nida Sopiah, Reba A. Pratama, Muhammad Abdul Kholiq 5. Determinant Factors of the Intention to Invest in the Capital Market among Young Urban People Agnes Debora Bernice Purwanto, Lilis Susilawaty, Edi Purwanto
17:30 – 18:30	**Networking session 2: Collaboration among researchers. Hosted by:**

	(1) Center for Societal Development Studies (Pusat Kajian Pembangunan Masyarakat), Atma Jaya Catholic University of Indonesia.
	The Center for Societal Development Studies (CSDS) was established in 1972 (previously known as Atma Jaya Research Centre or ARC) and is one of the most dynamic and qualified research centers under the Institute for Research and Community Service, Atma Jaya Catholic University of Indonesia. CSDS's vision is to be the center of excellence in social issues that contributes to sustainable community development, humanity problem solving, as well as development of knowledge and appropriate technology. This is also pertinent for its mission, i.e. to assist the Government of Indonesia through action-oriented research and trainings, especially designed to learn and develop an accurate understanding of the life of marginal people in urban settings. CSDS researchers are familiar with multidisciplinary and participatory approach, and the application of both quantitative and qualitative research. CSDS is an ardent believer of strong partnership with other institutions. Our partners and clients include the Ministry of Education and Culture; Ministry of Women Empowerment and Child Protection; Ministry of Health; USAID; AusAID; UNICEF; Foreign Affairs, Trade and Development, Canada; ILO; Global Alliance for Workers; Save the Children; World Vision; and Plan International. We work hand-in-hand in the areas of peace education, poverty, child protection, young workers, women and gender issues, reproductive health and HIV/AIDS prevention. We have been involved in conducting household surveys, school surveys, baseline studies, rapid assessments, program evaluation, industrial relations and social dialogue, and scenario planning and mapping.
	(2)Environmental Technology Research Centre, National Research and Innovation Agency (BRIN).
	Activities in the Centre cover Management of Solid Wastes and Wastewater, Technology to provide clean and ready to drink water, Monitoring of Water Quality, Improvement of Environmental Quality, RECP and Green Chemistry, Chemical Analysis.
17:30 – 19:00	**Poster session I: virtual exhibition hall** (18 posters, please refer to on the list on Day 1 Poster Session 1)

Day 3: 19 January 2022

JANUARY 19, 2022	
Time	**Program**
15:00 – 15:45	**Keynote 3 (K3): plenary session (including Q&A)** **Dr. Matthias Bernt (Leibniz Institute for Research on Society and Space)** **The Limits of Shrinkage: Conceptual Pitfalls and Alternatives in the Discussion of Urban Population Loss**
16:00 – 17:30	Parallel Session II (Social, Health, Education, Environment, and Economic Development): Virtual closed auditorium 1 (6 presenters) 1. Predicting Urban Consumer Demand by Using Apriori Algorithm from Smartphone Sales Transactions Johannes Hamonangan Siregar, Yuni Septiana 2. Indonesia's Biogas Technology Status Update for Biomass Utilization and Its Potential Application to Support the Development of Energy Self Sufficient Villages Iin Parlina, Muhammad Abdul Kholiq 3. Study of CO_2 Aborting Plants at Signalized Intersection (Case Study of Intersection JL Saddang New-JL.Veteran Makassar City) Mahmud, Agus Widodo, Subagyo, Lambang Basri, Dwija Wisnu Brata 4. The Development of an Inclusive Commercial Strip for Women through Defensible Space

Christal Yohanes, Felia Srinaga
5. The Role of Smart Transport in Managing Transportation Systems in Third World Countries. The Case of Kigali City - Rwanda
David Mihigo, Lukenangula John
6. The Concept of Compensation for Expropriated Real Properties and Livelihood Restoration of the Affected Persons: A Case Study Analysis of Batsinda Resettlement in Kigali, Rwanda
Diane Uwera, David Mihigo

Parallel Session II (Social, Health, Education, Environment, and Economic Development): Virtual closed auditorium 2 (6 presenters)
1. Changes in Urbanization and Urban Heat Island Effect in Dhaka City
A S M Shanawaz Uddin, Najeebullah Khan, Shamsuddin Shahid
2. Female Politicians in Social Media (Qualitative Contents Analysis of Female Members of LRegional House of Representative's Instagram Account)
Suci Marini Novianty
3. Correlation between Trust and Conflict Resolution Style
Chelsya Karuna Handaya, Theresia Indira Shanti, Sri Juwita Kusumawardhani
4. Does Beauty Influencer Play a More Important Role than Product Quality on Purchase Decision for Urban Customers?
Yohanes Totok Suyoto, Hastuti Naibaho, Endang Pitaloka, and Nova Arlyana Karrisa .
5. Utilization of Solid Waste Transfer Stations in Managing Solid Waste in Rapidly Transforming Neighborhoods: The Case of Sinza Ward in Dar es Salaam City, Tanzania.
David Mihigo, Regina John
6. Development of Islamic Religious Education Learning (PAI) in Schools to Counter Intolerance and Radicalism
Koko Adya Winata, Uus Ruswandi, Adang Hambali, Erni Haryanti

Parallel Session II (Social, Health, Education, Environment, and Economic Development): Virtual closed auditorium 3 (5 presenters)
1. Applying Machine Learning in Predicting the Risk of Diabetes
Dzaky Athallah Luqman and Nur Uddin
2. Optimism, Perceived Social Support, and Subjectives Well-being of the Community in Densely Slums Populated on the North Coast of Jakarta
Kusendi, R., Irwanto, Riyanti, B. P. D, Yogyanti, C. R., & Herabadi, A. G.
3. Introducing Natural Pigments to Urban Society: Social Engineering to Reduce Stunting in Indonesia
Renny Indrawati, Reni Dyanasari, Naurissa Biasini, Leenawaty Limantara
4. A Development of Machine Learning for Predicting Study Period of Undergraduate Students
Herlina Risma Utami Putri, Safitri Jaya, Nur Uddin

	5. Personal Growth Initiative Among Perpetrators of Sexual Violence Theresia Indira Shanti, Reneta Kristiani, Evelyn Tandias, Theresa Wynne, Benedictus Wishnu Samudera
17:30-18:30	**Networking session 2: Collaboration among researchers. Hosted by:** **The Center of Family Resilience and Development** Pusat Ketangguhan dan Pembangunan Keluarga (The Center of Family Resilience and Development) was founded on June 1st, 2018, and has five divisions: 1) Minority Community; 2) Disaster; 3) Trauma and Conflict; 4) Organization Development; 5) Capacity Building. These divisions covered the research topics. Examples of research topics: behavior change during and post-pandemic, rehabilitation application and enablement, Rapid assessment influence of Covid among mothers and children, intergenerational transmission of memories, mobile art for peace, parenting skills learning delivery.
17:45 – 19:00	**Poster session II: virtual exhibition hall** (20 posters, please refer to the Program Book for the complete list of posters' authors) The posters in this list will stay for Day 3 and Day 4 (January 19-20, 2021)

No	Author	Title
1	Alimah Sekarningrum	Development of Maturity Levels of Organizational Process Assets Cost Management for Project Success in Geothermal Exploration Development Companies in Indonesia
2	Amalia Indrati	Community Based Health Service in Pandemic Era: Partnership Practice of Banjarnegara Islamic Hospital in Central Java
3	Bernadetta Kwintiana	Urbanization and NCDs Geomap in the South-East Asia
4	Elisabeth Rukmini	The "21st Century Digital Skills" to Measure Graduate Students' Higher Order Thinking Skills: Its Adaptation into the Indonesian Language
5	Faradila Chika Arienta	Temperature Measuring Pole for Urban Facilities After New Normal Covid-19
6	Glory Clementine	Open Defecation Practice and Access to Latrine Assessment in a Community-led Total Sanitation Program Evaluation in Rajeg Distric, Banten, Indonesia
7	Grecebio Alejandro	Ethnobotanical Documentation of Medicinal Plants used by the Indigenous Ati Tribes in Panay Island, Philippines
8	Hastuti Naibaho	A Study of Students' Dysfunctional Behavior in an Urban Campus
9	Kumpon Subsomboon	An Application of Building Information Modeling for Work Processes of Small

			Contractors in the Case Study of Housing Estate Project
	10	Kyaw Naing	Phosphorous Recovery from Wastewater Using Struvite Precipitation and Reuse in Plant Growth
	11	Masum Ahmad	Melting Pot at Fast Growing Urbanization in Bangladesh
	12	Mochamad Asih	Waterfront City
	13	Rachman Sjarief	The Role of IRT Factors in E-Money Acceptance among Urban Generation X
	14	Safitri Jaya	Building A Village With Clean Water And Sanitation As An Effort To Realize Sustainable Development In Leuwibatu Village
	15	Sasima Charoenkit	Creative Urban District: A Comparative Study of Community Participation Approaches in Three Cities of Thailand
	16	Sitti Rahmawati	Analysis of Socio-economic Case Study on Early Marriage in Ulujadi District, Palu City Central Sulawesi
	17	Sri Wijayanti	Readability of the "Corona Education Series" Comic by Kemenpppa RI (Level of Readability of Covid-19 Educational Materials by Children Using Cloze Procedure)
	18	Sri Wijayanti	The Use of WhatsApp Group as a Communication Medium for Covid-19 Risks Among Mothers (Case Study of WhatsApp Group STI's Moms During the Pandemic Period)
	19	Warit Chookate	An Application of Building Information Modeling for Work Processes of Small Contractors in the Case Study of Housing Estate Project
	20	Zhia Unnahar	Using Artificial Neural Networks to Predict Concrete Compressive Strength Using With Back Propagation Algorithm

JANUARY 20, 2022	
Time	**Program**
15:00 – 15:45	**Keynote 4 (K4): plenary session (including Q&A)** **Prof. Dr.rer.nat. Wolfgang Bock (Technische Universität Kaiserslautern)** **(Urbanization and Spreading of Diseases)**

16:00 – 17:30	Parallel Session III (Social, Health, Education, Environment, and Economic Development): Virtual closed auditorium 1 (6 presenters)
	  1. Predicting Rice Prices in Jakarta Using Machine Learning
	     Axl Rose Kika Annisa , Lathifah Alfat , Nur Uddin
	  2. Web-Based Integrated Applications Design for Urban Tourism Needs Using a Prototyping Method
	     Johannes Hamonangan Siregar, Rufman Imam Akbar Effendi, Marshall Theofilus
	  3. Language Policy, Multilingualism and Sustainable Development in ASEAN
	     Azirah Hashim
	  4. Virtual Observation of the Mahogany Trees to Promoteits Conservation as the Landscape Heritageof the Colonization Period in Metro City, Lampung
	     Fritz Akhmad Nuzir
	  5. Preliminary Study on the Malaysian Unity in Relation to Comic Elements
	     Mohamad Quzami An-Nuur bin Ahmad Radzi, Nur Hisham Ibrahim, Muhammad Abdul Aziz bin Gani, Nur Liana Kamal
	  6. Improving Construction Scheduling of Two-Story Housing Project by Using BIM and Repetitive Scheduling Method
	     Kumpon Subsomboon

	Parallel Session III (Social, Health, Education, Environment, and Economic Development): Virtual closed auditorium 2 (6 presenters)
	  1. After Agglomeration: Changing Trends of Urban Economic Growth in Industrial Revolution 4.0?
	     Chairul Maulidi
	  2. Tales of Cities: Envisioning Urbanism through Contemporary Indonesian Short Stories
	     Clara Evi C. Citraningtyas
	  3. Reconstructing the Spatial Design and Functional Factor of a 'Modern' Community Centre in Malaysia
	     Nangkula Utaberta
	  4. Applying Digital Twins to Cancer Care: an exploratory study
	     Nilmini Wickramasinghe, J. Zelcer, and S. Vaughan
	  5. Relationship of Pulmonary TB, Nutritional Status and Quality of Life with TB-DM Comorbidity
	     Novie Elvinawaty Mauliku, Ika Kusumasari,Dyan Kunthi Nugrahaeni

	6. Wayfinding Signage Criteria and Ineffectiveness Factors towards Navigating in Airport Nur Liana Kamal, Nurhisham Ibrahim, Muhammad Abdul Aziz bin Ab Gani, Mohamad Quzami An-Nuur bin Ahmad Radzi
	Parallel Session III (Social, Health, Education, Environment, and Economic Development): Virtual closed auditorium 3 (5 presenters) 1. Building Social Cohesion as a Preventive Measure for Potential Conflicts between Gated Community and *Kampong* Settlers Edi Purwanto, Rachman Sjarief, Issa Tafridj, Mochammad Veldian Ardana, Azel Syahreza Pasha, Salina Widiya Putri Agusta 2. Smart Biomaterials: How Smart Can We Go? Bidhari Pidhatika 3. Improving the Psychospiritual of Nurses in Private Hospitals in Makassar City by Measuring the Assessment of Spirituality and Religious Sentiments Blasius Perang 4. The Professional City: Bintaro Jaya, Tangerang Selatan Surya Gunanta Tarigan 5. Key Factors Influencing the Performance Improvement of Solid Waste Management in Banyumas District Muhammad Abdul Kholiq, Sri Wahyono, Regina Dea Tilottama, Priska Alfatri Hendrayanto, Khalda Afifah Haris
17:30 – 18:00	**Poster session II: virtual exhibition hall** (20 posters, please refer to on the list on Day 3 Poster Session 2)
18:00 – 18:30	**Closing Melting Pot: kniting stories and the 70th years Germany-Indonesia Bilateral** Announcement: best posters/best oral presentation Performance: from UPJ Network Closing statement: Closing statement: Ministry of Education, Culture, Research & Technology, "MBKM policy and the next collaboration between Germany and Indonesia's higher education institutions." Doorprize

JANUARY 17 – 20, 2022	
Time	**Program**
15:00 – 18:30	Virtual booth: Sponsors

Day 1: Opening Remarks & Celebrating 70 Years of Germany-Indonesia Bilateral Partnership

DAY 1
January, 17 2022

Sustainable Urban Expansion – Lessons for ASEAN Countries

Bernhard Müller & Paulina Schiappacasse
Technische Universität Dresden, Germany

Abstract

The keynote speech deals with sustainable urban expansion of cities in Europe and lessons to be learnt. The guiding question asks how planned urban expansion can promote urban sustainability and which perspectives this provides for future urban development. This question is relevant for many urban expansion projects worldwide, and it can be inspiring for public and private city devel-opment in Indonesia and other ASEAN countries.

The authors analyze three good practice examples in Europe. The analytical framework includes five factors, i.e., strategy, environment, diversity, connectivity, and involvement. As a result, they derive six factors for successful sustainable urban expansion: 1. strategic planning guidance, 2. ac-tive participation and engagement, 3. quality-oriented master planning and design codes, 4. inte-grated and coordinated planning and implementation, 5. strong local government involvement, and 6. a strong drive towards innovation.

In their conclusion, the authors discuss the relevance and applicability of these factors for private city projects in Indonesia and other ASEAN countries. They refer to a project between Universitas Pembangunan Jaya and Technische Universität Dresden, "Cooperation for Sustainable Urbaniza-tion: Managing Urban Expansion in Asia - The Case of the Jakarta Metropolitan Area (Jabodetabek) in Indonesia" (CfSU), which is supported by the Alexander von Humboldt Foundation.

Bernhard Müller is a senior professor at the Faculty of Environmental Sciences of Technische Universi-tät Dresden, Germany. Until mid 2019, he was the Director of the Leibniz Institute of Ecological Urban and Regional Development (IOER), a think tank and one of the largest non-university research institu-tions for urban and regional development in Germany, and Professor for Spatial Development at the Technische Universität Dresden. He was the founder of the doctoral program of the Dresden Leibniz Graduate School, a joint venture between Technische Universität Dresden and IOER. Bernhard Müller has worked in urban sustainability for many years. He was engaged in international projects as a re-searcher and as a consultant, and he participated in elaborating the New Urban Agenda at UN-Habitat. Bernhard Müller is an academician of the German National Academy of Science and Engineer-ing (acatech), the Saxonian Academy of Sciences (SAW), the German Academy for Spatial Develop-ment (ARL), and the Academy of Engineering Sciences of Serbia (AESS).
Contact: bernhard.mueller@tu-dresden.de

KEYNOTE SPEAKER

Paulina Schiappacasse has been a senior researcher, lecturer and guest researcher at Technische Uni-versität Dresden, Faculty of Environmental Sciences, since 2005, and the Scientific Coordinator of the Dresden Leibniz Graduate School (DLGS) between 2010 and 2019. She is a geographer and holds a MSc. Degree in Urban and Regional Planning from the University of Chile, as well as Diplomas in Hu-man Settlements in Latin America and the Caribbean from the University of Chile and the United Na-tions Economic Commission for Latin America, and in Urban Economics from the Catholic University of Chile. She received her doctoral degree from Technische Universität Dresden in 2007. Before coming to Germany, Paulina Schiappacasse held positions as a Professor in the Department of Geography at the University of Chile, the University of Santiago, and the Andres Bello University. She has been a consultant to several private and government institutions, e.g. to the Santiago Metropolitan Govern-ment for the development of a sustainable master plan. Moreover, she has been appointed to a num-ber of respective expert commissions. She was co-author and co-editor of numerous books and scien-tific articles, and she is a reviewer to a number of scientific journals.

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Day 2: Main Conference & Networking

DAY 2
January, 18 2022

Creating Resilient Plus-Minus-Energy Regions

Dieter D. Genske
Hochschule Nordhausen, dieter.genske@hs-nordhausen.de

Abstract

In the 21st century, cities continue to grow. It is, nevertheless, important that they grow in a smart way. Smart growth unites sustainability with resilience and is particularly concerned with stabilizing biodiversity and decarbonizing energy consumption. This presentation will introduce basic principles aiming at a smart transformation of urban environments into sustainable and resilient ones. These principles will be illustrated with examples from European cities and regions. In addition, our just-completed renewable energy atlas for the Province of Maluku, Indonesia, will be presented. This atlas highlights Maluku Province as a future plus-minus energy region, i.e., a region that produces more green energy than it actually needs and sequesters more carbon than it emits. The author believes that the plus-minus strategy can be applied to other regions in the world and that only with the development of plus-minus regions the international 2-degree target can be achieved.

Dieter D. Genske worked as Humboldt Research Fellow in Kyoto, Japan, then for DMT Essen, Germany. Later, he taught at TU Delft, EPF Lausanne, ETH-Zurich and Nordhausen University. His project work includes the IBA Emscher Park, the 2000-Watt-Society for Basel and the IBA Hamburg. In 2012, Professor Genske received the European Solar Prize. (Email dieter.genske@hs-nordhausen.de)

KEYNOTE SPEAKER

Wat Chulamani, the Oldest Templein Muang Phitsanulok: The Importance of the Past to Urban Expansion in Present Day

Charatdao Kongmuang*, Natthasasiaon Nakkotchasee**, Polpreecha Chidburee***

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CODE: O-NH-UGPTR-57-THA-CHARATDAO KONGMUANG

ABSTRACT

Wat Chulamani is one of the oldest and the most important temples in Muang Phitsanulok located on the east bank of Nan River. This research aimed to study land use changes of Wat Chulamani and its surrounding areas in three periods of time: 1997, 2007, and 2017 by using remote sensing and Unmanned Aerial Vehicle survey (UAV). The satellite data sets derived from LANDSAT–5 TM and LANDSAT–8 OLI systems. By using supervised classification technique, land uses are classified into five classes, which are agricultural land, forest land, urban land, water land, and miscellaneous land. ArcGIS and QGIS were used to accomplish the analysis. The result shows that Wat Chulamani and surrounding areas have changed due to urbanization. However, important ancient sites still remain. Based on the observation, the changes are in the form of a reduction of agricultural land and an increase in urban land in the past two decades. Naresuan University establishment in 1990 was mainly the cause of urban expansion in this area.

Key words:
Remote sensing, Urban expansion, Supervised classification, Geographic information system

Urban Growth Pattern, Transformation, and Resilience

Informal Settlements: The Conflicts of Land and Urban Image in Jakarta

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ABSTRACT

Urban informality is often seen as illegal settlements and often attributed to the poor in the cites of the Global South. The term 'urban informality' is the state of exception determined by the sovereign power. Informality is often seen as a land use problem where formalization creates pressure on the poorest group which in turn triggers displacement of social issues, wealth, and power distribution. This paper analyzes the conflict and desire in portraying the image of the city by controlling informal settlements. Taking a case study in Kampung Akuarium in Jakarta, this paper opens a debate on alternative planning strategies in upgrading informal settlements. Amid the controversial issues of the legal status of the land, this paper analyzes participatory design through Community Action Program as a sustainable approach for the city.

Key words:

Urban informality, Image of the city, Planning strategy, Urban design

Urban Growth Pattern, Transformation, and Resilience

Mangrove Rehabilitation as an Effort for Sustainability and Resilience of Coastal Urban Growth

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ABSTRACT

Global climate change has affected the human race for since. Today, the carbon dioxide with greenhouse gas emissions has made it worse. Particularly in the coastal area as the front line to floods and abrasion. The coastal area used to have mangroves as a forest ecosystem to protect the beach from the sea waves abrasion in the tropical climate condition. However, over the time, the development on the coast continues to occur and replace the role of mangroves. Whereas mangrove forest is also the habitat of human beings, animals, plants which could produce oxygen for the surrounding environment. To elongate the resiliency of the coastal area, it has to rehabilitate the mangroves. This study aims to acknowledge the damage in the coastal settlements on the North-side of Jakarta. This study offers recommendations about stages of solutions to overcome the development and transformation of the resiliency and sustainability of mangrove forests in the coastal settlement's cities.

Key words:
Mangrove Rehabilitation, Sustainability and Resilience, Costal Urban Growth

Urban Growth Pattern, Transformation, and Resilience

Comparative Study of Electronic Money Acceptance Between Educated Generation X and Generation Y in Urban Areas

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ABSTRACT

In general, Generation Y has a higher acceptance of technological innovation than Generation X. However, the assessment is based on the assumption that Generation Y has higher technology literacy than Generation X. This assumption does not consider that Generation X, who has higher education, will be a different case. The purpose of this study was to examine the comparison of the electronic money acceptance between educated Generation X and Generation Y using the Unified Theory of Acceptance and Use of Technology (UTAUT) model. This research applied quantitative method by using SEM analysis. In addition, this study applied a non-probability convenience sampling technique. Ninety-six samples from educated Generation X and one hundred and seventy-two samples from Generation Y from Greater Jakarta area were processed using the Smart-PLS statistical tool. The study results proved that among Generation X, the performance expectancy and the effort expectancy were not a significant influence on the e-money acceptance. In contrast, social influences and facilitating conditions were the factors that significantly affected the e-money acceptance. This study also proved that social influences and facilitating conditions affected the e-money acceptance significantly among Generation Y, but the other two factors had no significant effect. In short, there were no differences in the factors that encourage the acceptance of e-money among the educated Generation X and Generation Y.

Key words:
UTAUT, e-money, technology acceptance, Gen X, Gen Y

Urban Growth Pattern, Transformation, and Resilience

Improving the Construction Schedule of a Two-Story Housing Project by Using BIM and the Repetitive Scheduling Method

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ABSTRACT

This research presents the obstacles of a construction plan of a real estate developer in Phitsanulok, Thailand, then proposes a new construction schedule by adopting BIM (Building Information Modeling) and the repetitive scheduling method to improve project efficiency. The real estate and housing project comprised 47 houses including land and their associated infrastructure. The original plan was made to build three types of housing consisting of Type A, B, and C with developer resource constraints involving 30 crew members, 100 scaffoldings, several subcontractors by trade, and circulating funds. During the construction of the first three houses, the owner found that their original plan lacked efficiency. Several things could have been done better in terms of procurement and productivity based on the data collected at the construction site. Therefore, the repetitive scheduling method was adopted and BIM was developed for the project, resulting in better resource management, procurement, and efficiency.

Key words:

repetitive scheduling, BIM, resource constraints, real estate

Urban Growth Pattern, Transformation, and Resilience

Vertical Housing Development Interventions for Sustainable Urban Development in Kigali

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ABSTRACT

This paper analyzes vertical housing development interventions as a means to combat housing problem, inappropriate use of land and land development failures in Nyarugenge district. Interviewing Kigali City 100 residents and 2 urban professionals were used to capture opinions and planning standards on vertical housing development and their influence on urban development as opposed to horizontal development. In addition, 20 site visits and observations confirmed actual development practices. Findings had shown that 87% of Nyarugenge residents view vertical development in a positive impact by providing enough space for outdoor activities while saving more land for further land uses. Urban planning and housing professionals had an opinion that vertical development influences proper land use in the city. Despite these opportunities, vertical housing development initiatives were obstructed by insufficient fund and technical experts to facilitate construction of many high-rise buildings while integrating the concept of smart housing which promotes (mention the elements of smart housing). As a result, buildings which result from vertical developments are [mention the structure of the buildings (e.g. height, street configuration/layouts, density characteristics, etc)] in which the height of most Buildings range from 8 to 25 storeys as opposed to the official 8 to 15 storeys. Density characteristics also is well arranged and connected to each other to offer easy accessibility in short time. Therefore, these buildings take into account three components of sustainability which are environment, economy and community

Key words:
Vertical Development, Urban Development, Nyarugenge District, Rwanda.

Urban Growth Pattern, Transformation, and Resilience

The Role of UTAUT Factors in E-Money Acceptance Among Urban Millennial Generation

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ABSTRACT

The use of electronic money is overgrowing, especially among the urban millennial generation. Social factors and facilities, in general, are the highest drivers of the millennial generation's interest in electronic money. The purpose of this study was to examine the effects of the unified theory of acceptance and use of technology (UTAUT) factors on electronic money acceptance among the urban millennial generation. This study applied a non-probability convenience sampling technique to millennial respondents in Jakarta and its surrounding cities with the majority of respondents being students. The total sample collected was 172, which were analyzed using the SEM-PLS analysis technique. The results prove that social influences and facility conditions significantly affect the urban millennial behavior intention to use e-money; this intention impacts the actual usage significantly. Moreover, the performance expectancy factor has no significant effect on behavior intention because the only use of e-money for the millennial generation is for making purchases unrelated to their work performance. The effort expectancy also does not significantly affect behavior intention because the urban millennial generation does not have any obstacles in using new technology as they are more technologically literate than the older generation.

Key words:
UTAUT, behavior intention, actual usage, e-money, technology acceptance

Urban Mobility and Internet of Things

Investigation of Intentions and Resistance to Use Digital Fishery Platforms in Metropolitan Cities

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ABSTRACT

This study aimed to determine the level of acceptance and resistance of urban consumers towards the use of digital fishery platforms. The sampling used a non-probability convenience sampling method and 360 samples were collected from Jakarta, Bogor, Tangerang, Bekasi, and Depok. The study results prove that the level of intention to use digital fishery platforms, and vice versa, the level of resistance to use the digital fishery platform is low . Research also proves that when innovation resistance decreases, the intention to use will increase. Therefore, this study will be helpful as a market test for fishery digital platform developers. The limitation of this study is that the sample was taken from urban consumers only. Therefore, future research might be better off to also examine the intention and resistance to use digital fishery platforms among fishers.

Key words:
Intention to use, resistance to use, digital fishery platform, urban

Urban Mobility and Internet of Things

Urban Mobility and Actualisation of Internet of Things in The Development of Transport System in Nigeria

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ABSTRACT

The influx of people from different places around the globe arerising and increasing the urban populations in developing countries, specifically Nigeria. This unprecedented human population may be associate with high demand for urban services, placing further demands on the transport system and the recent technology internet of things to address the urban transport challenges. Urban mobility is critical to the operation of any given community as an avenue to everyday lives, enabling people to have access to housing, places of assignment and other services. With the current development, internet services have reduced the level of needs placed on the transport. The internet mobile services have not totally pushed away the urban transport systems within the urban mobility in our towns and cities. The aim of this paper is to assess the operational performance of urban mobility and internet of things in transportation system. The study objectives are; to assess the level of traveller's accessibility on internet of a thing; to identify the weaknesses of urban mobility and operational performance of internet of things in the development of the transportation system based on primary and secondary data. The study targeted five (5) respondents in 37 states including Abuja the Federal Capital Territory making a total of 185 respondents. The primary data are about the commuter's knowledge on the cellular networks efficiency in accessing the mobility and the Wi-Fi network applications. The study revealed strong evidence of a relationship and correlation between urban mobility and the internet of things.

Key words:
Mobility, Cellular Networks, Wireless Fidelity Network, Operational Efficiency, Transport System.

Urban Mobility and Internet of Things

The Relationship Between Problematic Internet Use, Emotion Regulation, and College Adjustment in Undergraduate Students of Private Universities in Jakarta, Bogor, Depok, Tangerang, and Bekasi

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ABSTRACT

Students who start college for the first time may face several challenges. In high school, students are used to a fixed class schedule, teacher-centered learning, parental supervision. In addition, they have many academic decisions made for them either by the school or their parents. Starting college, however, is almost a whole new experience for the students. College students are introduced to various new environments involving new classmates, roommates, values, opportunities, study patterns, and many more. College students are also required to be independent and make decisions on their own especially regarding academics, social circle, campus activities, etc. While adjusting to academic life, therefore, students may encounter several challenges. An individual may need to adjust in various aspects such as academic, emotional, and social life to reach optimum performance. The increasing necessity of internet in college activities also demands students to adjust their familiarity, knowledge, and skills to cope with the academic requirements. During the Covid-19 pandemic, students use internet most of their time for communicating, finishing tasks, attending online classes, and scheduling meeting as well as daily activities such as grocery shopping and seeking entertainments. Excessive use of the internet in daily living may present risks to the users. Some of these risks include difficulty in socializing, inability to finish responsibilities on time, unable to focus on tasks at hand, escaping from reality, so forth. It is therefore, the increasing use of internet among students along with the risks of its problematic usage may also influence the adjustment process of college students. Moreover, emotion regulation also plays an important role towards adjustment process in general. Cognitive reappraisal, a method of emotion regulation, is known to be positively related with adjustment. Emotion suppression, however, tends to have negative correlation with adjustment. Specific research on the relationship between emotion regulation and college student's adjustment is still rare and undefined.

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Therefore, this study aimed to examine the relationship between problematic internet use (PIU) and emotional regulation towards college adjustment of undergraduate students in universities within the area of Jakarta, Bogor, Depok, Tangerang and Bekasi (Greater Jakarta). The data were collected through purposive sampling using online questionnaire. The questionnaire used for the survey consisted of the Indonesian versions of Student's Adjustment to College Questionnaire (SACQ), Emotion Regulation Questionnaire (ERQ), and Indonesia Problematic Internet Use Scale (IPIUS). This study analysed the data using IBM SPSS software to answer the hypothesis of whether there is a relationship between problematic internet use, emotion regulation, and college adjustment. Furthermore, this study conducted an additional analysis to find out other underlying potential factors influenced College Adjustment, Emotion Regulation, and Problematic Internet Use. The additional analysis considered demographic information such as gender, age, college majors, and participation in organizations.

Development of the Road Light Profiling Based on Road Lighting Performances for New Car Assessment Program for Southeast Asian Countries (ASEAN NCAP) Protocol

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ABSTRACT

The Department of Transportation Engineering Technology UTHM (UTHM–Fraunhofer Innovation Laboratory) with Malaysian Institute of Road Safety Research (MIROS) have developed the Test Protocol Auto High Beam (AHB) under the New Car Assessment Program for Southeast Asian Countries (ASEAN NCAP –C2-5), https://aseancap.org/v2/ The results indicate that AHB vehicle requirements should be based on the Stopping Sight Distance (SSD) by considering the velocity ($V0$), the driver's perception reaction time (tR), the coefficient of breaking friction (fT), the gravitational constant (g), the deceleration rate (a) and the roadway grade (G). However, the AHB local vehicle products may not meet the standard concerning the length/distances of the minimum SSD. Therefore, the road lighting performances/systems plays essential roles that produce suitable luminous intensity which give potential implications for safety drive and AHB requirements based on speed-stopping distance (SSD) requirements. The following study intends to determine the minimum luminous intensity and linear lighting profiles produced by the road lighting system, the environments, and infrastructures along the Federal roads in Johor. The Federal road of FT050 would be the best option of the target location since the road has the highest rate of accidents and fatalities in Malaysia. Furthermore, the study is expected to develop the road lights profiling based on the road geometric and the road lights performances. The primary data involved are lumens [lux]/light intensities measurements data which will be collected along the side of street lamps. Illumination measurements will use a calibrated Lux meter of SD-1128. Experiments will be conducted at the UTHM and MIROS PC3 Laboratories and will be based on the ASEAN NCAP and Euro NCAP standard procedures. The selected sites/federal roads will be at the Federal Road FT050 (Batu Pahat – Ayer Hitam – Kluang), Batu Pahat, Johor, Malaysia. Two federal roads in Johor were picked as experiment sites, i.e. FT050 and FT001. FT050 road is a two carriageway with a width average of 2.6 meters, 134-kilometer in length, and the most used lamp was the double arm lamp. FT001 is similar in width (2.6-meter), 992.6-kilometer in length, and used single-arm lamps. The study found that FT050's lighting performance decreased at each interval grid while away from the lights at the range of 38 lux to 16 lux, however, FT001's result was decreasing at mid-interval and increasing when approaching mid between the lights at 23 lux – 15 lux – 19 lux.

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The following study concluded that using the single arm lighting systems (by turns) resulted in higher lights (lux) performances and larger (lux) distributions (coverage) on roads. Therefore, the installments of a single arm lighting system (by turns) would be considered for the lights performances and the efficiency concerning the drivers' visibility.

Key words:
Road assessment, single arm lighting, light performance

Digital Learning Readiness Among Girls in Urban Setting

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ABSTRACT

This study aimed to assess the readiness of digital learning among marginalized girls and women (aged 18 - 29 years) in Jakarta. The specific objectives were 1) to assess the current marginalized youth employment status; 2) to assess work readiness of the marginalized youth for the targeted employment sector namely hospitality, retail, and ICT; 3) to identify gender issues and transformation regarding employment in marginalized communities; 4) to assess the level of involvement and infrastructure readiness of private sectors, local government, and TVET in employment for marginalized girls; and 5) to assess digital learning readiness (knowledge, attitude, preference) of the marginalized youth as a basis for developing the intervention strategy.

The study was conducted in Kali Baru Cilincing, North Jakarta; Getasan, Semarang Regency, Central Java; and Central Sekotong, West Lombok Regency, West Nusa Tenggara. The study applied both quantitative and qualitative approaches. In the quantitative study, a Household (HH) survey and Youth survey were carried out by distributing questionnaires to assess demographic characteristics, employment status, work readiness, gender issue, and transformation associated with work in digital platform. Protocols for Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) were developed to collect qualitative data. A total of 202 people participated in the HH Survey and 202 younger people participated in the Youth survey.

The following are results of this study.
1. Youth unemployment is regarded as an important policy issue for many countries including Indonesia. The highest unemployment rate in Indonesia falls into the age group of 15 - 24 years old. Fresh graduates from senior high schools, vocational high schools, and universities have difficulties in finding jobs.
2. Referring to the data obtained from the fields, only one-third of the participants has ever attended courses or vocational training provided by training providers. There are several reasons for not attending courses or vocational training.
3. This study indicates that young people understand that there are gender treatment differences in the workplace.

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4. Related to the rapid growth of ICTs, it is essential for the relevant stakeholders to understand what is needed. The Indonesian government does not seem to have a clear plan to tackle youth employment issues. Formal employment remains limited although Indonesia experiences a relatively healthy economic growth. The highest unemployed group, consisting of vocational secondary school graduates, indicates poor relevance of formal education to enter employment.

Price Estimation of Used Car Using Machine Learning

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ABSTRACT

Buying a used car is one way to own a car on a limited budget. However, the used cars have uncertain prices. Many factors influence the prices, for example: manufacturing year, mileage, physical condition, and maintenance history. This research presents a study of applying machine learning in estimating prices of the used cars. Two price estimation models were developed using two different machine learning algorithms, i.e., k-Nearest Neighbor (kNN) and decision trees. A dataset containing the used- car prices and the influencing factors was applied in developing the estimation models. The model development was done through the following steps: preparing the dataset, preprocessing data, building a model, training the model, and validating the model. It results in a model that is able to estimate the car price with a certain accuracy. The accuracy will be used as a parameter in evaluating performance of both estimation models.

Key words

Used car, machine learning, prediction, price

Social Health, Education, Environment, and Economic Development

Durability of Rice Husk Ash Concrete in Sea Water with Hot Steam Curing Methods

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ABSTRACT

Every aspect of urban development, especially in the sector of infrastructure development, cannot be separated from concrete materials. Concrete combines several materials or materials consisting of aggregates mixed with water and cement as binders or fillers and additional materials if needed. Innovation of materials as a mixture of concrete uses rice husk ash. Rice husk ash is one of the innovative materials in concrete technology, which can substitute cement to reduce the effect of CO_2 pollution. In addition, concrete curing is carried out using heat evaporation to get better compressive strength. Heat evaporation is the process of curing concrete using hot steam curing at a predetermined temperature and time. The manufacture of buildings around the beach makes seawater contact unavoidable. Seawater contains 3.5% salt that can eat away the strength and durability of concrete. Therefore, in this study, the durability of rice husk ash concrete in sea water environment will be tested. This study used concrete with a quality of 25 MPa made with rice husk ash as a partial substitution of cement, with a percentage of 0%, 25%, 30%, 35%, and 40% from the weight of cement. Each sample underwent steam curing at a temperature of 80°C for 3 hours. The concrete treated with steam shows better durability under sea water environment compared to the concrete cured with normal condition.

Key words
Rice husk ask, durability, concrete, heat evaporation, steam curing, sea water

Social Health, Education, Environment, and Economic Development

Urban Society's Tax Compliance: How Tax Technology Helps Their Reporting Issues

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ABSTRACT

Tax systems in Indonesia face both new challenges and new possibilities corresponding to the technological change as occur in more developed countries. In developing countries, taxpayers and tax administrations must cope with crucial environments with fewer resources. How current technology might or should influence the way a tax system or particular taxes of a country are designed and administered in urban areas might be essential. This paper examines the issues faced by the developing countries from technological changes and provides some benefits of technological innovation and its application in tax administration particularly for urban taxpayers reporting issues. The findings indicate that online tax registration has a positive impact on the individual tax compliance in the registration and filling measured, instead of remitting. The study recommends that a further study should be conducted to establish the tax technology in another issue such as the e-whistleblowing system to enhance the tax compliance in a larger survey area. The technology could encourage the taxpayers to trust and optimize technology for their remittances.

Key words

Tax Technology, Individual Tax Payers, Urban Society, Tax Compliance

Social Health, Education, Environment, and Economic Development

Challenges in Reducing Microplastic Waste in Indonesia

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ABSTRACT

Organic waste and plastic account for 60% and 15%, respectively, of the 64 million tons of waste that Indonesia produces annually (Ministry of Environment and Forestry, 2019). Approximately, 10 billion plastic bags, which is equal to 85,000 tons, are released to the local environment each year (MoEF, 2018). Indonesia produces 3.2 million tons of unmanaged plastic waste per year, around 1.29 tons of which ends up in the sea (Jambeck, 2015). Microplastics can be formed from the decay of plastic waste in nature. Due to its small size (<5 m and even in the nm size) and many types of microplastics, the treatment of the waste will be more difficult than plastic waste.

It is, therefore, necessary to tackle microplastic waste in an integrated manner. Efforts have to be made to reduce the amount of plastic waste, for instance, by implementing the 3R concept (reduce, reuse, recycle) and hindering the formation of microplastics such as using suitable type of plastic for certain usage and sending collected plastic waste to a collector for a proper processing.

This paper describes the challenges faced in reducing microplastics to protect human health and the environment which can be effectively solved by involving several parties: government, community, educational bodies, and non-governmental organizations.

Key words
Microplastic waste, Types of microplastics, Plastic debris

Social Health, Education, Environment, and Economic Development

Determinant Factors of the Intention to Invest in the Capital Market among Young Urban People

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ABSTRACT

This study aims to examine whether past behavior, subjective norms, and financial literacy influence the intention to invest in the capital market by mediating attitudes and perceived behavioral control. This study employed quantitative method with a sample of 100 respondents. The sampling technique used was the convenience sampling technique. The data analysis technique used in this study was the Partial Least Square-Structural Equation Model (PLS-SEM) technique. The results of this study indicated that attitudes, perceived behavioral control, and past behavior significantly influence individual intentions to invest in the capital market. However, subjective norms have no significant effect on personal intentions to invest in the capital market. In addition, past behavior and financial literacy significantly affect investors' attitudes, while subjective norms have no significant impact on investors' attitudes. Lastly, financial literacy has a significant influence on perceived behavioral control.

Key words

Past behavior, subjective norms, financial literacy, investment intentions, attitudes, perceived behavioral control

Social Health, Education, Environment, and Economic Development

Day 3: Main Conference & Networking

DAY 3
January, 19 2022

The Limits of Shrinkage: Conceptual Pitfalls and Alternatives in the Discussion of Urban Population Loss

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Abstract

Studying "shrinking cities" has become popular and a new wave of research has raised awareness of a phenomenon which has long been sidelined. As urban population losses are becoming more relevant than ever before across the globe and "shrinkage" is usually connected to urban problems such as outmigration, housing vacancies, impoverishment and fiscal stress, the value of this research can hardly be overestimated. At the same time, the conceptual foundation of much of the "shrinking cities"-literature has remained rather weak and the limits of established research are becoming more and more evident.

Against this background, the presentation reflects on the conceptual underpinnings of research on 'shrinking cities' over the last two decades. It criticizes the definition of shrinkage in terms of urban population losses and argues that the state-of-the art research on 'shrinking cities' suffers from a misleading conceptualization of shrinkage which forces essentially different urban constellations into a universal model of 'shrinkage'. Four problems of this procrustean bed are discussed in detail: methodological pitfalls of threshold definitions of urban shrinkage; empirical contradictions; an absence of attention to scalar interrelations; and insufficient understanding of cities as historical processes.

On this basis, the paper calls for a widened conceptualization of shrinkage and a new research agenda which puts the "making" of shrinkage into the center of attention and reconnects the study of shrinking cities with developments in urban studies in general.

Keywords: Urban Theory, Growth and Decline, Shrinkage, Power

Matthias Bernt works as head of the Research Group "Urban Politics" at the Leibniz Institute for Research on Society and Space in Erkner and as Adjunct Professor of Urban Sociology at the Humboldt University Berlin. He has specialized in the interrelations of urban development with urban governance, with a strong focus on urban shrinkage and on processes of gentrification and extensively published on the two issues both in national and international journals.

KEYNOTE SPEAKER

Predicting Urban Consumer Demand by Using Apriori Algorithm from Smartphone Sales Transactions

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ABSTRACT

The number of urban residents in Indonesia from year to year will continue to increase. In response to this, companies can project the market demand of the urban population, especially products on information technology devices that are rapidly changing. However, this situation can make old products to be unused and not sold to urban consumers, which causes the company to lose. The aim of this research is to predict current urban consumer demand for smartphone devices, which is useful for distributors of smartphone companies to find out which brands have the most sales in urban areas. This research applied Apriori Algorithm, a type of data mining association rule. In this case, it is a part of the association analysis stage to produce efficient data with high frequency patterns. The data was in the form of sales transaction of smartphones for three months from the distributor companies. The way the algorithm works to optimize the sale of goods at distributors is to process the accumulated data into useful information. The results of the association can be known by benchmarks, namely support and confidence. Support is the percentage of the combination of these items in the database, while confidence is the strength of the relationship between items in the association rules. By using Apriori algorithm, a system can be developed to process data that produces information on which products are most often purchased by consumers. Therefore, through this information, it can be used as a reference for developing marketing strategies to consumers.

Key words

Urban Consumer, Apriori Algorithm, Sales Transactions

Social Health, Education, Environment, and Economic Development

Indonesia's Biogas Technology Status Update for Biomass Utilization and Its Potential Application to Support the Development of Energy Self Sufficient Villages

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ABSTRACT

Biogas technology as a technological solution for climate change, as well as the establishment of new and renewable energy, has advanced at a breakneck pace in Indonesia. Indonesia has rules and laws in existence, as well as measures to put them into practice, in the area of regulatory and institutional development. For example, a government regulation on energy security (PP no. 79 of 2014 on national energy strategy), which includes biogas, targets for a 23 percent national energy mix by 2025. In actuality, biogas production in 2020 was just 27.86 million m3, compared to a target of 489.8 million m3 in 2025. There is still a 461.94 million m3 shortfall to be made up. This shows that there is a slew of obstacles to biogas technology adoption, one of which is the ability to convert raw resources. Indonesia, on the other hand, has vast waste resources, including solid waste from organic municipal solid waste and agricultural waste that can be converted to biogas.

There are numerous agricultural biomass wastes in Indonesia that have significant potential due to their quantity and high organic biodegradable content. For instance, biomass waste from palm oil industries (empty fruit bunch, mesocarp fiber, palm kernel shell, and palm kernel meal), rice straw, bagasse, corn stover, coconut trunk, kernel, and sugar canes. Among these biomass waste, biomass waste from palm oil industries, particularly oil palm empty fruit bunch (OP-EFB/TKS), and oil palm trunk, have the highest potential to enable energy self-sufficient villages because to their high holocellulose content and collectability. However, the method for separating the lignocellulosic content of biomass will be the most difficult in terms of technical and economic practicality. Pretreatment technologies, such as delignification, will be critical in overcoming the bottleneck in the conversion of biomass waste to biogas. Co-digestion technology will also become an alternative to accommodate the recalcitrance of the biomass, allowing it to be processed concurrently with organic wastewater, such as palm oil mill effluent.

Key words
Biogas, biomass, pretreatment, lignocellulose, energy self sufficient villages

Social Health, Education, Environment, and Economic Development

Study of CO_2 Aborting Plants at Signalized Intersection (Case Study of Intersection JL Saddang New-JL.Veteran Makassar City)

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ABSTRACT

Intersections are part of the urban road network which tends to experience congestion due to an increase in the number of motor vehicles and uncoordinated traffic lights between intersection arms. In this condition, it will increase the number of victims of CO_2 dioxide in motor vehicles from incomplete fuel combustion at signalized intersections. The number of victims of dioxide (CO_2) at the intersection of Jl. S. Saddang Baru – Jl, Veteran in the city of Makassar due to motorized vehicles during queues and delays, with the Biomass method (Brown, 1997), the plant absorption capacity at the intersection arm Jl. S. Saddang – Jl, Veteran was 488.63 kg. The arm of intersection of Jl. Veteran Utara is 1,720.32 Kg. The arm of the intersection of Jl. S. Saddang was100.41 Kg. arm intersection Jl. Southern veterans 1,720.32 kg. The difference in CO_2 absorption of plants was influenced by the type and number of trees as well as the CO_2 absorption capacity of each tree in the arm of each intersection. Along Jl. North Veterans – Jl. Veterans, the tree position was located on the median road, while Jl. S. Saddang Baru and Jl. S Saddang were located on the left and right shoulders. Number of trees and size of tree diameter at the intersection arm of Jl. North Veteran and Jl. Southern veterans were relatively numerous and had a relatively medium diameter so that they had a large CO_2 absorption capacity. From the results of the analysis of each type of plant showed that each arm of the intersection was a value that will be compared to the value of the results of motor vehicle CO_2 exhaust emissions to obtain a value for the needs of absorbent plants. The arrangement and selection of plants at the signalized intersection was based on the type and potential for CO_2 absorption and land suitability at the signalized intersection. It is recommended for the selection and arrangement of plants at signalized intersections based on the Minister of Public Works Regulation No.

5/PRT/M/2012 and Road Landscape Engineering Planning to produce a sustainable signalized intersection.

Key words
Signalized Intersection, CO_2 Emissions, CO_2 Absorbing.

Social Health, Education, Environment, and Economic Development

The Development of an Inclusive Commercial Strip for Women through Defensible Space

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ABSTRACT

The spatial movement of women in Indonesian urban spaces is in a very worrying condition. It is found that there is an increase in sexual against women which is 792% in the last 12 years. It shows that there is a security issue for woman in particular when they are in open public spaces. Given that the involvement of women in economic activities is increasing and the average age of the victims is 20 to 40 years, this phenomenon rises questions and concern. The purpose of this research is to find a solution for the urban space design for a safe and comfortable commercial area including for women who socially defenseless through the arrangement of defensive space. Jalan Raden Saleh Raya, in the heart of Jakarta, was taken as the case study and research object. The analysis of this space was complemented by the distribution of questionnaires to 51 respondents as a study to see the activities and needs of women as well as the field observations by researchers. The results of this study bring about three main concepts in designing safe and comfortable and inclusive commercial routes, namely zoning arrangements, visual permeability, and circulation arrangements to increase security and comfort for women through a defensible space approach and women's spatial movement studies.

Key words

Defensible Space, Security and Comfort, Commercial Strip, Women's Spatial Movement.

Social Health, Education, Environment, and Economic Development

Transportation System in Third World Countries. The Case of Kigali City – Rwanda

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ABSTRACT

Smart transportation uses new and emerging technologies so they can move around the city more conveniently, more cost effectively (for both city and the individual), and safer. Smart transportation and smart city traffic management are revolutionizing how cities approach mobility and emergency response, while reducing congestion on city streets. This is through the use of sensors, advanced communication technologies, automation and high speed networks. In fact, transportation systems (i.e. ground, water or aerial) are very essential in facilitating people's mobility. This is because all community members residing in neighborhoods, towns, cities, and countries need to travel from one destination to the other for their daily activities so as to achieve their desire, goal, and self-development. However, the rapid urbanization in many cities of Africa has resulted in urban transport crises and urban sprawl. Faced with a high rate of motorization, city authorities are more preoccupied with road-based motorized transport systems at the expense of pedestrian's mobility. The increase of transportation facilities like vehicles, trains, and planes is taking place in many African Countries including Kigali City, and these transformations will continue in the coming years. This implies that once the idea of Smart Transportation is not associated with traffic management it will result in transportation difficulties in urban and rural areas. In order to manage traffic issues, rural, and urban transportation systems in most cities in Africa, Asia, Latin-America and Europe have to fix the issues connected with transportation they face such as traffic jams, traffic congestion, air and noise pollution, unexpected accidents as well as transport infrastructure destruction.

Hence, this study aims to explore the role of smart transportation in managing transportation issues in Third World Countries, taking the sample in Kigali City,Rwanda. This study employed methodological fronts, interviews, observations, group discussions, and photographing. Both open and closed questions were used to interview the residents in the City of Kigali to capture their understanding on the concept of smart transportation and its applicability in managing traffic in urban areas. Moreover, Nyarugenge District Professionals were asked including District Urban Planner and in charge of Urbanization at District level together with One (1) representative from Kigali City transportation company to get more clarification on the importance of smart transport in managing transportation in Kigali City.

The results showed that the transportation changes were happening not only in African cities like the City of Kigali, but also in many other developed countries. During field data collection, men and women participated in the interview. The participants were 68 % women and 32% men. This shows that there was gender inclusiveness in this study. Thus all professionals

confirmed 100% that smart transport can help in managing urban and rural transportation systems while making it better and accessible to everyone in case transportation apps are used during smart transport. More than 75% of Kigali city residents also said that emerging transportation technologies solved various problems of the transportation system in Kigali City which could not be managed or solved by human beings. Road Cameras to monitor traffic movement in the city of Kigali was mentioned by 83% of the respondents as highly utilized technology to manage ground transportation in the city. Overwhelmingly, the study has revealed that several challenges occurred during the initial stages of implementation of smart transport experts and lack of high internet connectivity to connect roads, vehicles, and traffic during smart transport concept adaptation. Smart Transport concept is highly recommended to fill the gap of traffic management related to transportation in urban and rural places as well as for the future management of Autonomous Vehicles or Self-driving cars for the future transportation.

The Concept of Compensation for Expropriated Real Properties and Livelihood Restoration of the Affected Persons: A Case Study Analysis of Batsinda Resettlement in Kigali, Rwanda.

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ABSTRACT

During the past two decades, Rwanda like many other African developing countries has witnessed many implementations of projects involving expropriation of land in course of its urban land rapid transformation. Where previous studies on in-kind compensation to the property owners in Kigali have revealed that residents in the areas that are envisaged for expropriation in the near future doubt the advantages of this form of compensation. Thus the Government of Rwanda has recently embraced in-kind compensation mode to solve impoverishment problem which has been persistently resulting from monetary compensation in the previous projects. Therefore, this paper explores the effectiveness of this newly adopted mode of compensation toward restoration of the livelihood of the affected people. It was evaluated in terms of four key aspects which are land tenure security, housing condition, employment status, and quality of the restored community assets. Structured interviews, self-administered questionnaires, field observation and document review are the methods used to collect both primary and secondary data for this study.

During this study different participants gave their point of view during data collection where 78% were people aged from 35 years up to 45 years while 89% were male and 11% were female taking into consideration gender aspect. Then according to land ownership, interviewed Batsinda Settlement residents 100% of those who provided answers where the land owners in the Settlement, which gives hope that responses received from property owners are correct enough as they are experienced in owning land. The findings revealed that in-kind compensation mode has been effective in delivering the increased land tenure security to Project Affected People (PAP), improved housing condition and improved access to infrastructures in post relocation. On the other hand, some undesirable outcomes were realized in terms of the dissatisfying replacement house size, market facilities provided and unsuccessful employment restoration in post relocation. This failure was mainly a result of poor planning reflected in the lack of resettlement framework in Kigali, low values of the expropriated properties, poor land valuation practice and suitable resettlement space unavailability. Results also show that 250 houses were constructed on the resettlement site to host the relocated people, but among 336 households who were supposed to relocate only 123 accepted the replacement houses as in-kind compensation while others opted for monetary compensation.

Based on the results presented and discussed this study concludes that through the livelihood restoration strategies associated with in-kind compensation, this mode of compensation can improve the livelihood of Project Affected People(PAP) to the extent of increasing land tenure security, improving housing condition and improving access to infrastructures in post relocation. However effort is required to improve the employment restoration strategy used. It is therefore recommended that on-site resettlement should be considered as an alternative way of resettling Project Affected People (PAP), clear guidelines for in-kind compensation practice need to be established and additional resources need to be allocated in livelihood restoration schemes associated with this mode

Changes in Urbanization and Urban Heat Island Effect in Dhaka City

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ABSTRACT

Urban heat island (UHI) effect is the direct implication of urbanization which significantly affects public health and comfort. Understanding changes in urban environments and temperature is vital to outline the urban planning process for mitigation of UHI effect. The study aims to assess the changes in urban areas and UHI effects in Dhaka city, Bangladesh from 2001 to 2017 using Moderate Resolution Imaging Spectroradiometer daily day- and nighttime land surface temperature data from 2001 to 2017. The expansion of the city was calculated using the city clustering algorithm. The temperature of the identified urbanized area was analysed and compared with the adjacent regions. The changes in urban temperature were estimated using non-parametric statistical methods. The results showed that the Dhaka city area has grown by 19.12% and its inhabitants by 76.65% during 2001-2017. The urban expansion and dense settlements caused an average temperature to increase in some areas of Dhaka city nearly 3°C compared to the border. The day and night temperatures at Dhaka city's warmest location were nearly 7 and 5ºC respectively, more than the coolest point outside the city. The city's annual average day- and nighttime temperature was increasing at the rate of 0.03° and 0.023°C annually over 2001-2017. The rising temperature would increase the UHI effect in the future, which combined with high humidity may cause a significant increase of thepublic health risk in the city if not proceed by the mitigation practices.

Key words

 City clustering algorithm, Dhaka city, MODIS, urban heat island, trend analysis

Social Health, Education, Environment, and Economic Development

Female Politicians in Social Media (Qualitative Contents Analysis of Female Members of Regional House of Representative's Instagram Account)

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ABSTRACT

In Indonesia, where patriarchy is the main mindset for most of the people, female politicians are rarely represented. Politics is often viewed to be male business. This means that female representatives have less contributions in politics. As a result, there are only few female legislators elected in regional elections. One of the regions is East Java. The province of East Java is located on the eastern part of Java; it has a unique identity. Their political mind map is diversified into three categories, Tapal Kuda, Mataraman, and Arek. This paper focuses on Arek and Mataraman, since those two groups have the most and least voters in their regional elections, Surabaya and Blitar, respectively. The paper applied a qualitative content analysis to the social media content of elected female legislators in the Regional People's Representative Assembly of Surabaya City and Blitar City, 2019–2024. Based on the study, female legislators of Surabaya City are more active to update various contents regarding their activities, despite the lack of enthusiasm that is reflected in the number of followers they have, which is below 1000. Among Blitar City's female legislators, only one of them is actively using social media to communicate. Moreover, this paper found that some legislators have no personal social media handle; their message or activity is relayed through their party's regional social media.

Key words
Female Politicians, Social Media, Content Analysis

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Correlation between Trust and Conflict Resolution Style

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ABSTRACT

Emerging adulthood is pictured as a part of exploration, which impacts changes in various aspects of life. One of the examples is dating relationship. Dating relationships can be divided into two, which are geographically close and long-distance relationships. Occasionally, in the process, couples, who are previously having the short-distance relationship, have to adjust to go through a long-distance relationship because of pursuing careers or education in distant places. Fortunately, technological advancement helps them to break the geographical barriers and to keep them in touch making long-distance relationship more tolerant nowadays, in particular those who live in urban areas. However, couples, who are in long-distance relationship, will be more prone to have conflicts such as having misunderstandings or being suspicious of each other. A long-distance relationship is a learning process for emerging adulthood to trust each other and make them discovering the most effective way to deal with some conflicts they face. This study explores the correlation between trust and conflict management style in emerging adulthood in long-distance relationships. This study used two scales: the Trust Scale and CCRS Scale; both are in the form of a Likert scale. The total participants of this study were 224 people that come from urban areas (Jakarta, Bogor, Depok, Tangerang, Bekasi). The result revealed that trust variables and five dimensions of the conflict management style variables were significantly correlated. Further research is suggested to examine the effect of trust on conflict resolution style.

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Does Beauty Influencer Play a More Important Role than Product Quality on Purchase Decision for Urban Customers?

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ABSTRACT

The Stimulus Response Theory (SRT) states that individual attitudes and behavior are influenced by external stimuli, such as friends and families. When positive information is obtained from trusted external sources, it will influence the individual's attitudes and behavior. Another example of stimuli based on the SRT is an admiration towards someone, which causes the individual to make that person a role model, or better known as an "influencer". Consumers who live in urban areas receive a lot of stimuli that influence their decisions for buying products. In particular, purchase decisions of beauty products seem to no longer be solely based on product quality, but also refer to their role model's purchase decision. This research aimed to examine the effect of beauty influencers (product ambassadors) and product quality on purchase decisions for beauty products. To collect the data, this study distributed survey forms to 155 respondents. Regression analysis showed that both beauty influencers and product quality had a significant influence on purchase decisions; however, the effect of beauty influencers on purchase decisions was greater ($\beta=.430$, ρ-value $<.000$) than that of product quality ($\beta=.263$, ρ-value $<.00$). The correlation between beauty influencers and purchasing decisions was also greater ($r=.623$, ρ-value $<.00$) than the correlation between product quality and purchasing decisions ($r=579$, ρ-value $<.00$). This research, therefore, contributes to customer behavior literature as it suggests that product quality is not the main determining factor of purchase decisions for urban customers. The practical implication suggests that companies with urban consumer segments should prioritize the strategy of using beauty influencers to influence their target consumers.

Key words
Urban Customer, Product Ambassador, Product Quality, Purchase Decision, Stimulus Response Theory.

Social Health, Education, Environment, and Economic Development

Utilization of Solid Waste Transfer Stations in Managing Solid Waste in Rapidly Transforming Neighborhoods: The Case of Sinza Ward in Dar es Salaam City, Tanzania

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ABSTRACT

Managing waste properly is essential for building sustainable and livable cities, but it remains a challenge for many developing countries. Around the world, waste generation rates are rising. Various studies estimate that in 2016, the world's cities generated about two billion tons of solid waste, amounting to a footprint of 0.79 kilograms per person per day. With rapid population growth and urbanization, annual waste generation is expected to increase by 70% to 3.40 billion tones in 2050. Compared to those in developed nations, residents in developing countries, especially the urban poor, are more severely impacted by unsustainably managed waste aggravated by an increase in population and economic activities and financial constraints. Consequently, there is a widespread dumping of waste in non-designated areas including in water bodies, valleys, open spaces, and openly burning practices which create serious health, safety, and environmental problems. Oftentimes, the high-density low-income housing areas are the most affected since they are less able to make their own arrangements for getting rid of their waste which allow no space burying or composting the waste materials. Effective waste management, therefore, is administered from the collection, transfer, to disposing or treatment in designated sites. Within the generation sites, the location and utilization of solid waste transfer stations thus become important in the management of solid waste. Through the lenses of central place theory, this study examines location and accessibility of solid waste transfer stations in rapidly transforming neighborhood of Sinza. The data were collected through mixed methods which involved interviews with community leaders, ward and sub-wards leaders, and environmentalists. Interviews were also held with residents as well as a representative of Community Based Organization (CBO) involved in solid waste management in the study area. Direct observation was also made to capture information on the existing situation of solid waste transfer stations, as well as best practices of informal solid waste collection within the neighborhood. The data collected were analyzed both qualitatively and quantitatively through thematic building and descriptive statistics.

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Sinza Ward livelihood activities include agriculture, livestock keeping, and commercial activities. During the interview, there were 69% females and 31 males who participated in providing their point view on location and accessibility of solid waste transfer stations in Sinza Ward. In addition, 47% of them attended secondary education and 17% took their university education. From the interview with Ubungo Municipal Council Environmentalist and Ubungo Municipal Urban Planner, Sinza Ward neighborhood is among the planned settlements in Dar es Salaam, where the existing solid waste transfer station in Sinza Ward is located at Mawasiliano Fruits Market behind the bus terminal. Thus, there are two solid waste transfer stations in Sinza Neighborhood which serves a population of about 9889 houses: one at Mawasiliano Market near Bus Park and another one at Mabibo Fruits Market about 12 km from Sinza Ward.

Among the systems of solid waste management used in Sinza Ward, the most popular is franchise methodology, where there is a Community Based Organisation (CBOs) which collects solid waste from households in each sub-ward. Additionally, small private companies in neighboring settlements do the same work as CBOs in Sinza Ward due to insufficient financial support from the government to finance big companies with heavy machines that are used in solid waste management projects. The challenges faced in utilization of solid waste transfer station include long distance, high transportation cost due to the location of their final dumping site far from the settlement, and poor road accessibility. The study also observed negligence among the residence in utilization of the transfer station including improper dumping site as well as utilization of non-designated areas.

The study recommends the need to improve utilization and management of solid waste transfer stations by involving stakeholders through formulation of teams for solid waste transfer station plan and design. It is recommended that the location of transfer station should be carefully analyzed to increase accessibility, used by households and communities. The use of technologies like QGIS and GIS in analyzing the suitable location and accessibility of solid waste transfer station is also recommended. We finally recommend that communities should be educated on the proper ways to dispose solid waste including the use of transfer stations.

Key words

Solid Waste Transfer Station, Transforming, Neighborhood, Dar es Salaam City

Development of Islamic Religious Education Learning (PAI) in Schools To Counter Intolerance and Radicalism

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ABSTRACT

The development of intolerant and radical understanding has allegedly entered the educational environment. This phenomenon is very concerning and if it is not immediately anticipated it can threaten the integrity of the nation and state. Schools, that should be a place for students to gain knowledge, skills and personality, have become a place of very dangerous extremist ideological battles. The process of spreading intolerance and radicalism in schools to recruit members always uses religious arguments. This article aims to examine and describe the development of Islamic religious education in schools to counteract intolerance and radicalism. The method used in this research is a qualitative descriptive method. The data generated by the researcher comes from observations and literature studies through literature reviews of various written works, journals, and published articles related to research. The data were analyzed using data analysis techniques through the stages of data reduction, data presentation and data verification. The results showed that; a. Intolerant and radical understanding has entered the world of education, b. The recruitment process uses religious arguments, c. It is necessary to develop the Islamic Religious Education Learning (PAI) learning through strengthening religious moderation material.

Key words

Development, Islamic Religious Education Learning, Intolerance and Radical Understanding

Social Health, Education, Environment, and Economic Development

Applying Machine Learning in Predicting the Risk of Diabetes

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ABSTRACT

Diabetes is one of the deadliest human diseases as stated by the International Diabetes Federation (IDF). According to the World Health Organization (WHO), about 1.5 million people died due to diabetes, which is the ninth leading cause of death in 2019. Technologies are developed to overcome and prevent the disease. In this study, two machine learning models were developed to predict a risk of suffering diabetes. Both machine learning models applied two different algorithms: KNN (K-Nearest Neighbors) and Random Forest. The models were built based on a dataset which provides diagnostic measurements whether a patient has diabetes or not. Several parameters were applied to predict diabetes, such as pregnancy, glucose, blood pressure, skin thickness, and blood pressure. The models were trained to learn the information from the dataset in order to gain a prediction ability. The performance of both models were evaluated based on the prediction accuracy.

Key words
Diabetes, machine learning, model, evaluation, assessment

Social Health, Education, Environment, and Economic Development

Optimism, Perceived Social Support, and Subjective Well-being of the Community in Densely Populated Slum on the North Coast of Jakarta

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ABSTRACT

This study aims to explore the effect of optimism, perceived social support on subjective well-being in the densely populated slum settlements on the northern coast of Jakarta. The approach applied in this study was quantitative approach using Seligman's Optimism, Perception of Social Support using the 12-item Multidimensional Scale of Perceived Social Support MSPSS and Subjective Well-Being with Diener's Scale of Positive and Negative Experience (SPANE) along with the Satisfaction Scale Live (SWLS Indonesia). The population in this study was 109 adults, who have lived in the settlements for more than three years. The hypothesis testing used the One-Sample Kolmogorov-Smirnov normality formula and statistical analysis and was performed using simple linear regression.

Key words
Optimism, Perception of Social Support, Subjective Well-being, Dense Settlements

Social Health, Education, Environment, and Economic Development

Introducing Natural Pigments to Urban Society: Social Engineering to Reduce Stunting in Indonesia

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ABSTRACT

Stunting is one of the major health problems in Indonesia which can silently degrade the quality of future generations. The prevalence of stunting child at the national level was approximately 27.7% in 2019, of which several provinces possessed undeniable high stunting rate, such as East Nusa Tenggara (43.8%), West Sulawesi (40.4%), and West Nusa Tenggara (37.9%). Proper education belongs to one of the community and societal factors which often receives less attention. In fact, Indonesia is a tropical country and endowed with rich natural resources, containing not only a variety of essential nutrients but also the natural pigments. Numerous reports were listed, revealing the potential local sources in Indonesia as well as the key roles of natural pigments. Natural pigments are important to ensure an optimum growth quality, such as beta-carotene for body's immunity, chlorophylls as the anti-anemia, lutein for a good cognitive and visual function, and some other carotenoids are able to reduce the prevalence of early degenerative diseases. In the present study, we conducted an educational approach, in which we introduce the sources and health benefits of natural pigments into urban communities as the early step of social engineering to reduce stunting in Indonesia. The targeted communities consisted of the members of RPTRA ("Ruang Publik Terpadu Ramah Anak", a child care community) as well as urban society. The scores of pre- and post-test during the sessions were analyzed using paired t-tests and the result attested significant increase on their knowledge related to natural pigments. Interestingly, the female participants showed faster comprehension improvement. More intensive and extensive sessions are indeed important, particularly in regions with potential local resources but still bearing high stunting rate.

Key words
Natural Pigments; Social Engineering; Stunting; Urban

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A Development of Machine Learning for Predicting Study Period of Undergraduate Students

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ABSTRACT

This research work presents an application of machine learning to predict study period of undergraduate students. A study case is presented base on academic data at Universitas Pembangunan Jaya (UPJ), Indonesia. The undergraduate program is done by accomplishing 144 study credits that are scheduled for four years or eight semesters. Performance of the students is usually measured based on grade point average (GPA) and study period. The GPA is an average of accumulated grade points from the first semester to the last semester. At the end of the third year, the students can predict a range of expected GPA as they have accomplished about 75% of the program. However, the study period is not easily predicted as the GPA. At the last semester, the students have to do a final project. This assigns the students to demonstrate their knowledge, skill, persistence, and independency through carrying a research topic. Accomplishment time of the final project might be varying among the students that can be one to four semesters. This definitely makes the study period being varying. In this study, we develop a machine learning to predict whether the students will graduate on time or not. The machine learning is built by applying the K-Nearest Neighbors (KNN) algorithm and a dataset of academic data of the UPJ students. The prediction is done using three features: GPA, gender, and high school of the students. This study results show that the developed machine learning is able to predict the study period of students with accuracy 82%. Furthermore, the machine learning prediction is implemented in a web application and integrated with an academic database. This web application is developed as a prototype of advance academic information system.

Key words
Machine learning, K-Nearest Neighbors, prediction, study period

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Personal Growth Initiative Among Perpetrators of Sexual Violence

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ABSTRACT

Perpetrators of sexual violence need to raise their self-awareness and initiative to grow and change to improve themselves so that they do not repeat their crimes, are accepted, and play an active role in society. This study describes the Personal Growth Initiative (PGI) among perpetrators of sexual violence in prisons. PGI consists of Readiness for Change and Planfulness factors included in the cognitive dimension and Resources and Intentional Behavior included in behavioral dimension. This study applied a qualitative approach and used focus group discussion (FGD) method on five people who possessed the highest PGI scores (five out thirty-seven respondents were chosen using the convenience sampling method). The data from these respondents were analyzed to model the method to other perpetrators. According to the research results, central theme was that they had time to reflect and recognize their mistakes in the aspects of behavior and emotions; prepared themselves to have a better life; and made plans after being released from prison. They used the facilities they received, such as praying, cooking, sewing, learning to patch tires, and other skills. When they were bored, they would look for activities, such as talking to friends, exercising, or taking a walk around the place. For further research, it is suggested to examine personality with PGI. From these results, it is recommended to organize several personal development activities which can facilitate individuals to have self-growth initiatives.

Key words
Sexual violence perpetrators, Personal Growth Initiative

Social Health, Education, Environment, and Economic Development

Day 4: Main Conference & Networking

DAY 4
January, 20 2022

Urbanization and Spreading of Diseases

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Abstract

Contacts between humans are one of the major driver of the spread of diseases. In this talk we will present how the household sizes contribute to disease spread in the recent COVID-19 pandemic and give an historical overview, how urbanization contributed to epidemics in the past.

Wolfgang Bock is a senior lecturer (Akademischer Rat) at Technische Universität Kaiserslautern, Germany and visiting professor at MSU-IIT, Iligan, Philippines. His work has centered around Mathematical Physics, Stochastics and Complex Systems, particularly in the field on non-local dynamics. He is part of the MOCOS international research group for the modelling of the spread of COVID-19. And is a consultant for the MOCOS group in Iligan, Philippines. In Mathematical Biology his contributions are in the field of the impact of human mobility to the spread of the disease. He worked in (partial) differential modelling as well as in agent based models and random graphs. His contributions in Probability are in field of White Noise analysis, where studied Hamiltonian path integrals as well as the Edwards polymer measure for fractional Brownian motion. With the help of Dirichlet forms he constructed with collaborators a Markov process which has the fractional Edwards measure as an invariant measure. And developed, based on this, a simulation method for self avoiding fractional Brownian motion. Recently his studies focus on non-local dynamics in complex system and fractional differential operators and the resulting dynamics. Apart from his Mathematical studies he also published several articles in Mathematics Education with the emphasis on Mathematical Modeling from primary schools to university level. (Email: bock@mathematik.uni-kl.de)

KEYNOTE SPEAKER

Predicting Rice Prices in Jakarta Using Machine Learning

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ABSTRACT

A study of the application of machine learning in predicting the price of rice in Jakarta is presented. Three prediction models were built using different machine learning algorithms: k-nearest neighbor (kNN), multi-layer perceptron (MLP), and decision tree. The prediction models were trained using a data set that includes the rice price, grain price, average daily temperature, and inflation in Jakarta from the period of September 2018 to December 2020. The prediction models were evaluated based on their accuracy in predicting the rice price from the period of January to April 2021. The results showed that all of the models were able to make a good price prediction with high accuracy. The best prediction model was achieved by the one built using the MLP algorithm that resulted in up to 90.58% accuracy. The prediction model applying the kNN algorithm resulted in almost the same accuracy as the model using MLP; it achieved up to 90.50% accuracy. Finally, the prediction model using decision tree algorithm resulted in the least accuracy with a maximum accuracy of 84.34%.

Key words
Internet of things (IoT), system monitoring, temperature monitoring, hydroponics.

Social Health, Education, Environment, and Economic Development

Web-Based Integrated Applications Design for Urban Tourism Needs Using a Prototyping Method

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ABSTRACT

The tourism sector in Indonesia has an important role that can be a source of state revenue and can encourage national economic growth. In order to attract tourists to come to a tourism places, it requires a lot of information about the tourism object, events, culinary and existing facilities. The aim of this research was to develop tourism information services that are integrated in a web application. This web application can be used for urban tourism where a tourist visits a city for various purposes such as vacations, attending events, watching art performances, seeking information about history, or shopping. This application can integrate with other websites that have the information needed by tourists and the public. The method in this research used the Prototyping method in the web application design and development.The application was built with a structured native PHP programming language, MySQL database, and framework CodeIgniter. The process of making API (Application Programing Interface) was createdto process data exchange from web-based tourism applications with websites that provide other tourism needs. The results of this research were a prototype of a web-based tourism application that can integrate other websites providing information on tourism needs.

Key words

Urban Tourism, Web-based Integration, Prototyping method

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Language Policy, Multilingualism, and Sustainable Development in ASEAN

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ABSTRACT

Sustainable development for countries and policies is increasingly viewed from not only an economic perspective, but also from social and environmental lenses. In September 2015, the United Nations adopted the Sustainable Development Goals, several of which imply direct attention to the issues of language. For example, SDG 4 on Quality Education would include issues to do with language of instruction as well as other linguistic concerns. This study aims to show that inclusive and equitable quality education is only possible when education responds to and reflects the multilingual nature of a society. Focusing on the ASEAN region, it examines multilingualism and the extent to which development of multilingual competency is given a place in the education system. Given the special status of English as ASEAN's sole working language, together with its perceived utility as the gateway to internationalisation and globalisation, English is promoted as the first language of education after the respective national languages. At the same time, however, the ASEAN Charter also refers to 'respect for the different cultures, languages and religions of the peoples of ASEAN while emphasising their common values in the spirit of unity in diversity'. The one-nation-one-language ideology and the promotion of single languages as national languages, together with the pragmatic rationale for language learning that prioritises English, conflicts with actual multilingual realities. A change in perspective with policies promoting multilingual approaches and a framework that supports life-long learning development of multilingual competency is needed.

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Virtual Observation of Mahogany Trees to Promote Its Conservation as the Landscape Heritage of the Colonization Period in Metro City, Lampung

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ABSTRACT

Metro City in Lampung Province is an urban area established as a result of the policy of population movement from Java Island carried out by the Dutch East Indies colonial government. This program, in addition to relocating residents from the island of Java, also "transferred" an urban landscape element with a distinctive physical character, namely a row of mahogany trees. In Metro City, mahogany trees have grown well along Jalan A. H. Nasution which is the axial line of the Metro City spatial structure. Through virtual observations and documentation using Google Maps data from 2015, 2018, and 2019 using the Street View feature, it is known that there are 161 Mahogany trees along this road. By knowing the current condition of the row of mahogany trees, it can be seen the importance of immediately making conservation efforts. There are four conservation components that need to be implemented, which are community participation, knowledge-sharing, and skill enhancement as well as good planning, regulations and institutions, and financing. If conservation can be done well, landscape heritage will not only become a good city identity but will also act as a catalyst for socio-economic development through tourism and trade as well as benefiting the health of residents and their natural environment in accordance with Goal 11 of Sustainable Development Goals (SDGs).

Key words
Landscape, colonization, image of the city, metro, conservation

Social Health, Education, Environment, and Economic Development

Preliminary study on the Malaysian unity in relation to comic elements

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ABSTRACT

This preliminary paper is a part of an ongoing research on the relationship between Malaysian unity in relation to the elements presented in comics. This paper is aimed to define national unity in Malaysian comic elements. This research was conducted by collecting existing literature on the national unity, the elements of comics, and the Malaysian comics which has therefore fulfilled the objective of this paper. Qualitative method is presented by way of visual analysis has also been used to identify appropriate elements in comics reflecting the national unity in Malaysia. Therefore, the appropriate Malaysian comic elements incorporating the national unity may serve a better understanding to the public on the relationship between Malaysian comics and the national unity.

Key words
Comic, Unity, National Unity, Visual Analysis

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Improving construction scheduling of two-story housing project by using BIM and repetitive scheduling method

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ABSTRACT

This research addressed the obstacles from an original construction plan of a real estate developer in Phitsanulok, Thailand, and proposed a new construction scheduling by adopting BIM (Building Information Modeling) as well as repetitive scheduling method to improve the project efficiency. The real estate and housing project were comprised of 47 houses with land and their associated infrastructure. The original plan introduced the construction of three types of housing: Type A, B, and C with the developer's resource constraints such as 30 crew members, 100 scaffoldings, several subcontractors by trade, and circulating fund. According to the owner's observation, during the construction of the first three houses, they found that their original plan lacked efficiency, and several things could have been done better regarding the procurement and productivity. Therefore, this study adopted repetitive scheduling methods and developed BIM to the project, resulting in better resources management, procurement, and efficiency.

Key words
Repetitive scheduling, BIM, resource constraints, real estate

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After agglomeration: changing trends in urban economic growth in the industrial revolution 4.0?

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ABSTRACT

Cutting-edge technologies–IoT, blockchain, artificial intelligence–had shifted the production modes of production and everyday urban life. In Indonesia, platform-based mobility services and e-commerce have emerged since 2015. Anyone can access information and buy products through digital platform without visiting the commercial districts in the cities. These situations present a new and different context compared to the previous decade. Considering the new way of trade that have developed in the last five years, we presumed that spatial economic growth no longer forms an agglomeration pattern. To confirm this hypothesis, firstly: we investigated the economic growth between 2015 and 2019 and focused on trade sectors. Secondly: we performed spatial auto-correlation test to find out the spatial patterns of economic growth. The result showed that the economy tended to grow in disperse pattern. Moreover, cities around the existing agglomeration areas tended to have slower GRDP growth. Meanwhile, the cities in suburban areas tended to have relatively faster GRDP growth. This finding indicated that economic growth in trading sectors was no longer in accordance with urban agglomeration theory. In the last part, this article discusses the consequences of further urbanization process in Industrial Revolution 4.0 era.

Key words

Urbanization, agglomeration, industrial revolution 4.0, East Java

Social Health, Education, Environment, and Economic Development

Tales of Cities: Envisioning Urbanism through Contemporary Indonesian Short Stories

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ABSTRACT

Stories have the capacity to communicate not only about what is, but also about what should be (Rein and Schön, 1977). From folktales and classical stories to modern stories and science fiction, stories do not only powerfully reflect societies, but also our ideals about what could be plausible and desirable futures in the society. The fictional cities provide a glimpse of hope that these worlds might come to reality one day. The use of stories as a model of and for urban planning is not a novel idea (van Hulst, 2012). Matthey (2011) refers to it as 'fictional urbanism,' which focuses on how fiction can be used to envision future cities and the people who will live in.

This paper aims to map stories about urban life, with narratives told in and about cities published in a major Indonesian newspaper. The goal is to expose how short stories are in Indonesian media, which show plausible and desirable futures of Indonesian urban life, and to use those ideas as a reflection for future urban design and planning. The research data was taken from short stories in Kompas newspaper from March 2020 to August 2021, with urban life theme.

Key words

Fictional urbanism, indonesian short stories, urban planning

Social Health, Education, Environment, and Economic Development

Reconstructing The Spatial Design and Functional Factor of A 'Modern' Community Centre in Malaysia

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ABSTRACT

Many people in the present live under a great deal of pressure and tend to protect and isolate themselves from others. These people care only about themselves without taking what matters to others into consideration. This phenomenon mostly occurs in urban areas and is what we call "individualistic". Since these urbanists lack the mutual assistance and have fewer friends, a materialistic nature always comes across with the individualistic condition. The ill society tends to break down the entire system and becomes infirm. The individualistic condition does not allow people to socialize and they end up believing they must solve problems alone. This modernistic thinking blocks the development of the entire community and the local identity is lost to the demands of living. Current public buildings and community facilities in our society are not conducive to promoting pride in them. Malaysia is one of the classic examples of a multi-ethnic society. The country is proud of its multiracial culture which makes it a model for other countries. The ubiquitous community hall in the Malaysian landscape, as it stands now, has long passed its time of usefulness. These halls are labelled with names such as dewan serbaguna, dewan orang ramai or even balai raya. However, as it stands today, the community hall in our midst is nothing more than a large empty space used for games like badminton or ping pong and the occasional event like weddings and political party gatherings. The changing modern Malaysian society demands more of this simple out-dated facility; there must be a place for the various ethnic groups to unite and accomplish some modern needs such as family days, health checks, child's play, music lessons and many more important uses. This paper examines how such spaces can be redesigned to make them truly relevant to the modern Malaysian Community.

Key words
Community centre design, spatial use, modern community

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Social Health, Education, Environment, and Economic Development

Applying Digital Twins to Cancer Care: An Exploratory Study

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ABSTRACT

As technologies and techniques of the Internet of Things and Industry 4.0 advance, it is prudent to examine how these capabilities might be embraced into healthcare contexts. To this effect, this study explores the potential of embracing digital twins into the oncology domain to assist with current challenges where traditional medical techniques are failing to provide optimal clinical outcomes and enable a value-based care approach to ensue.

Cancer, the second leading cause of death globally, exerts tremendous physical, emotional, and financial strain on individuals, families, communities, and health systems. Although many advances have taken place, traditional techniques still fall short of delivering optimal and consistent clinical outcomes; the patient experience is typically low while the cost of care is generally increasing. Many patients are exposed to toxic treatment without clinical benefit and at high cost. In such a context, it is our responsibility to explore the potentials for leveraging newer tools and techniques; hence, this study focuses on exploring the benefits of embracing digital twins (DTs) to assist with better cancer treatment selection and care. A DT, a hallmark of Industry 4.0 and a concept that has developed from engineering, is the generation or collection of data used to develop a precise, virtual copy of a physical animate or inanimate object1. The application of DTs has revolutionised manufacturing and there is no reason to believe similar benefits cannot be promoted in healthcare contexts.

Traditional approaches to cancer care are demonstrating limitations. The evidence-based medicine (EBM) paradigm is largely mechanism agnostic; previously, mechanisms of disease were poorly understood. Therefore, disease mechanisms were not generally a reliable method for optimising treatment selection and outcomes. Recently, there has been a dramatic increase in the understanding of disease mechanisms at a molecular level; in cancer, treatment selection is increasingly on that basis. Given the complexity, redundancy, and resilience of biological systems, the mechanism-based approach will always present significant challenges for clinicians to select optimal treatment. This complexity provides an opportunity to explore potential benefits that could be gained by incorporating DTs in guiding clinician decision-making.

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This exploratory study analyses the extant literature in relevant domains of medical/clinical best practice, information systems, knowledge inquiry, and engineering. To these typically disparate bodies of literature, hermeneutic analysis was employed together with a grounded theory approach. Once insights were synthesised, think aloud focus groups were conducted with clinical and technical domain experts. The single exemplar case of cancer care was chosen. To date, two potential perspectives of DT have been identified as follows: 1) a DT made up of the key characteristics of similar patients based on data in very large real world cancer databases; as we define as a fraternal digital twin; and 2) a DT which is a direct digital copy (or as we define as an identical twin) of the individual's data including demographics of traditional staging genomic data, disease trajectory, and treatment response over time. However, both approaches also have their drawbacks.

Ultimately, the use of DTs in healthcare should support a value-based care paradigm for better clinical outcomes and patient satisfaction. By supporting the generation of phronesis and practical wisdom, the DT could assist the clinician to identify the best treatment decisions for a specific patient, and hence generates better clinical outcomes as well as higher patient satisfaction, and supports value-based care.

References
1. F. Tao and Q. Qi, "Make more digital twins." Nature, vol. 573, no. 7775, p. 490, 2019.

Key words :
Digital twin, cancer

Relationship of Pulmonary TB, Nutritional Status, and Quality of Life With TB-DM Comorbidity

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ABSTRACT

TB-DM comorbidity increases as TB and DM cases. TB cases in Bandung were 9,582 while DM cases were 17,267 cases in 2017. Risk factors for TB-DM comorbidity consist of socio-demographic, economic, behavioral, and clinical factors as well as DM and TB history, TB treatment, and others. This study aimed to determine the relationship of pulmonary TB symptoms, nutritional status, and quality of life of patients with comorbidities of TB-DM in Bandung in 2019.

The study used a case control design with a sample of 45 consisting of 15 cases and 30 controls. To collect the data, this study distributed questionnaires. The data were analyzed in univariate and bivariate (chi-square test).

The results showed that pulmonary TB symptoms had a significant relationship with comorbidities of TB-DM (p value= 0.0039; OR= 4.571, 95% CI: 1,182-17,678), quality of life of the physical domain (p value= 0.034; OR= 9.3333, 95 % CI: 1,080-80,627), quality of life of the psychological domain (p value= 0.023; OR= 6,500, 95% CI: 1,246-33,906), and quality of life of the social domain (p value= 0,034; OR= 9,333, 95% CI: 1,080 -80,627). However, nutritional status (p value= 1,000) and quality of life of the environmental dimension (p value= 0.651) had no relationship with comorbidities of TB-DM.

The results of this study suggested that the public health centers in Bandung should consider conducting two-way screening of TB and DM patients in order to optimally handle TB-DM comorbidities.

Key words

case control, TB, DM, pulmonary TB symptoms, nutritional status, quality of life

Social Health, Education, Environment, and Economic Development

Wayfinding Signage Criteria and Ineffectiveness Factors towards Navigating in Airport

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ABSTRACT

Wayfinding signage is a system that channels information about directions from one area to other locations. Each wayfinding signage has its own criteria to ensure visitors easily understand the messages and follow the navigation. The ineffectiveness of a wayfinding signage system in conveying information has a negative impact on visitors. This review of the literature investigated the important factors that contribute to the failure of wayfinding signage in conveying direction. This included elements and principle of design such as information, language, fonts, color, symbol and sizes. Although the design of the wayfinding signage looks the same, it differs from a place to another. It was found that the use of language, terms and information at the airport is not applicable at other places (e.g., airport use term of departure, arrivals, international, domestics, and transit). The visitors who came to the airport also have different backgrounds and purpose compared to other places. While there are many guidelines to improve navigation system at airport, many are not investigating the flow of designing the wayfinding signage. Effective wayfinding signage is one that can convey clear information and is able to navigate visitors to the destination in an accurate time.

Key words
Criteria, Signage, Wayfinding, Wayfinding Signage

Social Health, Education, Environment, and Economic Development

Building Social Cohesion as a Preventive Measure for Potential Conflicts Between Gated Community and Kampong Settlers

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ABSTRACT

This study aimed to find factors which cause potential conflicts between residents of Gated Community and Kampong settlers. This study used qualitative methods through in-depth interviews, focus group discussions, and a triangulation process. This study was conducted in Bumi Bintaro Permai, which is directly adjacent to a densely populated kampong. Data collected in the form of recordings were transcribed and analyzed. The study found that ignorance and feelings of unfamiliarity creates mutual suspicion between the two parties. Additionally, another source of potential conflict exists in the form of Gated Community walls and fences, which block access to the kampong. The residents of the Gated Community strive for the development of social cohesion by making communication with Kampong residents to build a sense of familiarity and get to know each other. This effort has been proven to be able to eliminate mutual suspicion. Furthermore, the Gated Community also provides shortcut access to the toll road for kampong residents, enabling them to reach the toll road faster and easier.

Key words
social cohesion, conflict, gated community, urban

Social Health, Education, Environment, and Economic Development

Smart Biomaterials: How Smart Can We Go?

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ABSTRACT

In this increasingly modern world society, with the tendency of urbanization, health and cosmetics are highly strategic sectors, in which people are willing to pay big amount of money to support their health and beauty. To this end, the development of biomaterials is the key. Biomaterials should be "smart" enough to increase the quality of life. When first defined in 2004, the term "Smart Biomaterials" refers to materials "that respond to specific cellular signals". However, due to fast research and development progress, the term "smart" is highly relative to a particular point of time. It is, thus safer to express the degree of smartness based on the degree of interaction of the biomaterial with its environment and corresponding biological responses. This interaction degree has been proposed in literature as inert, active, responsive, and autonomous. Furthermore, this level of smartness is inseparable from the biomaterials' surface properties. Here, some strategies to modify biomaterial surfaces and the resulting degree of smartness will be discussed. The discussion also includes the characterization methods and some examples of application in real life.

Key words
Smart biomaterials, health, surface modification

Social Health, Education, Environment, and Economic Development

Improving the Psycho-spirituality of Nurses at Private Hospitals in Makassar City by Measuring the Assessment of Spirituality and Religious Sentiments

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ABSTRACT

Psycho-spirituality is the integrated energy which nurses use to serve their patients. This study aimed to find a clear description of nurses from a psychospiritual perspective in several private hospitals in South Sulawesi. This study took a sample of 150 nurses who worked in the treatment room at Awal Bross Hospital, Stella Maris Hospital, Grestelina Hospital, and Siloam Hospital. The specific purpose of this study was to examine the psycho-spirituality of nurses in providing services to their patients. This study was a comparative analytic study with a cross-sectional multi-site study approach. It applied a standard instrument that had been tested for validity and reliability, namely the Assessment of Spirituality and Religious Sentiment (ASPIRES). ASPIRES was created by R.L. Piedmont and has several scales. The measured scales are religious involvement, religious crisis, universality, prayer fulfillment, and connectedness. These five elements are important parts of human life from a psycho-religious or psycho-spiritual perspective. Nominal data were reported in the form of (n, %) while numerical data were reported as (mean, ± SD). To explore the nurses' spiritual differences based on their demographic characteristics, this study used the One-Way ANOVA test for data that were normally distributed and the Kruskal-Wallis test for data that were not normally distributed. The results of this research can be used as information material for hospitals to improve their service quality by adhering to psychospiritual aspects through the programs offered by the researcher.

Key words
Psychospiritual, spiritual assessment, spiritual transcendence

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The Professional's City: Bintaro Jaya, Tangerang Selatan

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ABSTRACT

This study examines chronologically how Jaya Real Property (formerly known as Bintaro Jaya) company has developed a planned township in Tangerang Selatan (1000 hectares). The study explored the process of the township development and how it became a new city. As one of the first companies to develop the residential areas on a township scale since 1979, the company has achieved sustainable growth and profit in developing the site. The company was also the first to introduce the concept of a 'garden city' in Indonesia and is now represented as 'the Professional's City' to reflect its marketing strategy as the residence of choice for Jakarta's intellectuals and professionals. Amid the competition and pressure from other township developers, the company must adhere to continual innovation and constant changing of the 'development concept'. The study contributes to our understanding of the urban expansion pattern of self-contained edge cities around Greater Jakarta.

Key words

Bintaro, professional city, urban expansion, development process

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Key Factors of Influencing the Performance Improvement of Solid Waste Management in Banyumas District

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ABSTRACT

Municipal Solid Waste (MSW) is a serious issue that is faced in a substantial number of cities in Indonesia. Therefore, the reliable waste management systems are required to solve the waste problems effectively and efficiently. In the last three years, Banyumas District has been able to improve the waste management performance significantly, which implied in the reduction of the trucks transporting waste to the landfill from 132 trucks to 28 trucks. This study discusses the main factors that support the improvement of waste management performance such as the policy and regulation, the vision and the leadership of the District Regent, the community participation, and the role of technology.

Key words

Municipal Solid Waste (MSW), Solid Waste Management, Waste Management Systems.

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POSTER SESSIONS

DAY 1-2 POSTER PRESENTATIONS

Urban Smart Waste Management

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ABSTRACT

Garbage is one of the most difficult problems to manage in urban areas. Garbage may have a negative impact on public health and the environment. Conventional waste management leads to frequent garbage/waste piles on the road side; and garbage trucks that share the same road with other vehicles might negatively affect the traffic flow and human health. This paper provides a concept of the application of the Internet of Things (IoT) to overcome limitations in the conventional waste management. The concept offered here is the utilization of trash cans that have IoT sensors connected to the Long-Range Wide Area Network (LoRaWAN) and have vacuum pipes interconnected below ground level to the garbage collection center in each district. Sensors attached to the trash cans are specifically designed for plastic, glass, and organic waste, so that later, in the final shelter, the three types of waste will be completely separated. The next component Radio Frequency Identification (RFID), is used to open the lid of the trash can through recognition of the e-KTP ID of the garbage owner, so that if there is negligence in sorting the waste, alerts will be sent to the mobile app and the system will record the user's e-KTP ID. Another sensor will detect the full level of the trash can; when the trash can is about to be full, the sensor will trigger the suction valve at the vacuum pipe. The last one is the sensor to detect the full level of the container storage center in the district. This sensor will send an alert to the mobile app of the transport operator if the container is full. The plastic garbage container in the storage center is equipped with a heater so that plastic waste is converted into plastic ore that is ready to be further processed. Similar procedures should also apply to organic waste ending up as compost and to the glass-type waste that may be used for recycling purposes. This concept is expected to help overcome waste management problems in urban areas and to turn garbage/waste into more valuable and useful products.

Key words

environment, health, Internet of Things, LoRaWAN

Compressive Strength Model Prediction of Zero Cement Geopolymer Concrete Using Multiple Regression analysis

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ABSTRACT

Concrete technology is a fast-growing science. In line with the issue of environmental sustainability, and knowledge of concrete technology is directed towards finding cement replacement materials. This is understandable because the cement production process is one of the largest contributors to CO_2 gas in the world. The latest development of concrete technology is the development of non-cement geopolymer concrete. In this non-cement geopolymer concrete, the position of cement in the concrete mixture is completely replaced by fly-ash material by adding an activator which is a chemical mixture of NaOH and Na_2SiO_3. However, the geopolymer concrete mix design method is still not available. This study aims to build a mathematical model of the relationship between the compressive strength of non-cement geopolymer concrete and its constituent materials, which are fly-ash, coarse aggregate, fine aggregate, water, NaOh and Na_2SiO_3. The mathematical model was formed using multiple regression analysis. The mathematical model proposed in this study is $Y = 24.6063 + 0.0154X_1 - 0.0006X_2 + 0.0093X_3 + 0.0775X_4 - 0.0254X_5 + 0.0158X_6$ where Y is compressive strength of concrete, and X_1 until X_6 respectively are the weight of fly ash, coarse aggregate, fine aggregate, NaOH, Na_2SiO_3 and water.

Key words
geopolymer concrete, zero-cement, environmental sustainability, multiple regression

The Accuracy Assessment of the Weather Research and Forecasting (WRF) Model: A Case Study of Tropical Storm Doksuri Over Thailand

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ABSTRACT

Rainfall forecasting is one of the significant keys for urban drainage systems. In the past decade, satellite rainfall has played an important role in rainfall prediction. This study presents the Weather Research and Forecasting (WRF) model to simulate rainfall in Thailand for tropical storm Doksuri during 14th-16th September 2017. The WRF model provides quantitative precipitation forecasts at 5 km×5 km spatial and three-hour temporal resolution. The accuracy of the forecast was evaluated by comparing the WRF model precipitation with precipitation gathered from meteorological stations. The proposed rainfall forecasting using the WRF model could be applied to urban flood management in order to minimize the economic losses of the city.

Key words
WRF model, rainfall, tropical storm

The Assessment of Potential Small Group Business Developed in Three Districts in Jakarta

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ABSTRACT

In general, the goal of this assessment was to identify the feasibility of small businesses that can be developed in groups of the three sub-districts in Jakarta, namely Cakung Timur in East Jakarta, Menteng Tenggulun in Central Jakarta, and Rawa Badak Selatan in North Jakarta. The specific objectives to be achieved from this assessment are 1) to identify types of small business that have been successfully developed in groups, 2) to identify types of small business that have the potential to be developed as group businesses, 3) to identify factors that cause the business to fail. The assessment was carried out in three aforementioned sub-districts by applying a mixture of quantitative and qualitative research methodologies. In the quantitative method, a Household Survey was conducted using a questionnaire involving 255 households in the three selected areas. In the qualitative approach, a series of Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) were conducted. A total of 11 FGDs were participated by 67 participants (3 FGD with women's groups, 3 FGDs with men's groups, 2 FGDs with PKK group, and 3 FGDs with Youth group). In addition, 11 KIIs were conducted with local community leaders and 6 community-based independent organizations. Important data analyzed from the assessment were 1) demographic data, including gender, age, and

education level; 2) socio-economic conditions of the community, including employment, length of work and family income, business ownership, numbers of family members; 3) community understanding of community-based business; 4) experience and potential in developing group-based businesses; 5) government programs related to group-based businesses; and 6) obstacles encountered in group-based enterprises. The results of this assessment showed that the level of education, occupation, and income of the participants were the people from the lower socio-economic class. The results of the assessment indicated that more than half of the participants in the three assessment areas said they did not have a side job. Those who have side jobs work as traders, laborers, household assistants, and other various unskilled temporary workers. Only 14.1% to 34.1% of households have small businesses, such as small motorbike workshops and laundromat businesses. Based on FGDs it was revealed that suffering losses and could not cooperate with business partners were causes of the business not continuing. The result of this assessment also indicated that food stalls are potential businesses in the community, due to the fact that many families prefer to buy food from the neighborhood food stalls rather than to cook.

Key words
Small group-business, small medium enterprise, urban business

The Role of Smart Transport in Managing Implementing Spatial Justice in Developing School Zoning

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ABSTRACT
Education is an important component in supporting national development. One of the efforts that must be made in realizing good and qualify education is providing adequate and fair educational facilities, such as elementary schools. This study was conducted aimming to identify level of elementary school services in Malang City in order to develop a more adequate school zoning. Based on the results of service scale analysis, using service radius of 250 meters for public elementary school which are contained in the 2021 local school zoning policy, it showed that school service coverage in Malang City is only 35% of the city areas. However, in terms of access, students or the community in each sub-districtsin the Malang City area are able to access 6-7 public elementary schools in averages. Therefore, it is necessary to make changes in the service radius of public elementary schools as one of the facilities that must be provided by local governments in order to restrcture the school zoning policy.

A study of Students' Dysfunctional Behavior in An Urban Campus

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ABSTRACT

Dysfunctional behavior is a type of undesired behavior by an organization which leads to negative consequences if it arises in organization. Organization could determine what constitutes dysfunctional behavior in many ways, typically by aligning to common social values of the local society in which the organization is located. In relation to this, urban environments pose special challenges for organizations due to the higher levels of diversity compared to rural areas. These areas often cause residents to have different moral standards from the local society and, later, the organization. This is especially the case for urban millennials in Indonesia, as the different moral references to the organization is exacerbated by the high levels of self-confidence that urban millennials have, as well as their much greater exposure to even more different references of moral values they get as a side-effect of their expertise in using modern technology. This study, therefore, aimed to find out the reasons why students behaved in dysfunctional manner, and what were their opinions and attitudes towards these behaviors. The study was conducted in an urban campus with 197 students from various study programs as the respondents. The data were collected using open-ended questions distributed through online surveys, which were then followed up by focus group discussions in order to obtain more detailed answers. The results showed that the main targets of the students' dysfunctional behavior were the campus itself, lecturing staff, and student-led organizations. The most common reasons for the students did such behavior were disappointment towards the targets and being goaded into doing so by other students. The study also found that students who had committed dysfunctional behavior did not feel guilty despite realizing that their behavior was considered unethical by the targets, as they thought the targets deserved said behavior. This meant that the perpetrators perceived that the behavior was reciprocal in nature; and therefore, acceptable in their perspectives. The results of this study contribute to organizational behavior research, especially in the study of dysfunctional behavior as it provides empirical data to support that revenge is one of the antecedents of dysfunctional behavior.

Impact of Concrete Use on Infrastructure Development

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ABSTRACT

Along with various innovations in concrete mix materials in the construction world, such as the use of rise husk ash, fly ash, plastic seed and other innovations, the use of cement as a concrete binder is still the main choice.This is in line with the precast concrete industry which is increasing rapidly to 50% in 2018 and 2019. The government also supports this through the Ministry of Public Works and Public Housing (PUPR), which proclaimed, in 2015, the capacity of the concrete industry reached 25.45 million tons or about 18.60% of the total value of the national concrete work.According to the strategic plan program of the Directorate General of Construction Development of the Ministry of Public Works and Public Housing (PUPR), the concrete industrial capacity is targeted to reach 41 million tons or 30% in 2019 and will continue to grow to support the development activities in the infrastructure sector. However, in fact, cement as a binder in concrete has various negative impacts on the environment forthe long term such as efficiency in the use of raw materials, since in the manufacture of 1 ton of OPC it takes ± 1.7 tons of raw materials, large energy requirements, heating in the furnace up to ± 1450OC. It is not environmentally friendly because its production emits CO_2 gas. Therefore, this study aims to determine the negative impact of using concrete on buildings in the long term and provide the right solution to reduce this impact. The research method applied literature study obtained from articles, news, and related journals. The data that has been collected was analyzed using descriptive methods. The results of this study did not only show the advantages of concrete which it has good durability, but also it caused damage for the environment. However, it can be minimized by periodic maintenance and the addition of methods in concrete treatment.

Key words

Environment, Cement, Concrete

Identification of Urban Studies' Needs through a Market Survey

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ABSTRACT

As a place of interaction and human activities, a city provides a place of settlement, a centre of economic activity, services, education, government, and tourism. A City shows an

attraction and offers various opportunities for the people who live and work to achieve prosperity, such as increasing financial gains, asset ownership and capital. Multiple efforts were encouraged to present a citymas a suitable place for living and supporting people's activity. Based on these conditions, this study aims to identify needs and knowledge related to citystudies. This study approaches implements a market survey carried out by conducting questionnaires with the target respondents from various works and education of people who live in city areas. The preliminary study results can identify related aspects of city studies needed by multiple professions and people to support city improvement.

Key words
Market survey, urban studies

Determining The Strategic Issue of Sustainable Development by Operating DEMATEL as Supporting Technique of Analysis – A Case of Strategic Environmental Assessment (SEA) on Gresik Municipality – Indonesia

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ABSTRACT
Among toon discourses about practiced technique in conducting Strategic Environmental Assessment (SEA) in Indonesian development planning system, determining the strategic issue is one confusing step for many municipalities. It is common that Interrelation among the social, environmental, economy and governance issues is uncertainly defined. Then, the uncertainty leads to the difficulty in defining the strategic issues should be analyzed further in the relation to municipal development plan. For municipal level, defining the strategic issue is still becomes a devastation in the decision-making process. This paper aim is to demonstrate the application of DEMATEL Technique as the supporting analysis to help the decision maker understanding the interrelation among the issues and determine the strategic one. Here, a case of SEA process of Gresik Municipality is studied, particularly the analysis upon the identified issues by the stakeholders and the SDG's operators. As the paper's outcome, it shows that DEMATEL technique effectively build the logical interrelation map among the important social, economy, environmental, and governance issues. Based upon the interrelation, five strategic issues are determined, that are: ineffective management of

waste, insufficient infrastructure for economy development, escalating number of disaster events, poor sanitation infrastructure, and decrement of people's social and economy security.

Designing a Web Application for Small Enterprise Product Introduction in Urban Area at South Tangerang City, Indonesia

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ABSTRACT

Micro, Small and Medium Enterprises (MSMEs) are an important business for the economic growth in Indonesia. In the pandemic situation where consumers cannot come directly to the seller's place, online business can become a solution for MSMEs. The aim of this research was to design a web application to help MSMEs introduce their products. This application can be accessed from any place via browser by personal computers, tablets, or smartphones. It helps consumers buy products anywhere through the internet. Consumers can interact with sellers to obtain the required information and share it in this application. This study used the Software Development Life Cycle (SDLC) Waterfall method. It provides the approach in sequence starting from requirement analysis, system design, implementation, verification, and maintenance stage. A practical example of a small business that uses this application is the used bicycles business . Through this application, the knowledge of used goods products can be realized for consumers who plan to buy bicycles according to their needs. The novelty of this research is making an application to get the product information preferences of consumer needs and prices of bicycles. The results of the study indicate that consumers have the convenience of determining their needs through the application. Most consumers prefer to choose products based on the suitability of their needs rather than the price. Product introduction through web applications will make it easier for consumers to meet their needs and also for sellers to market their products.

Flood hazard mapping using WRF rainfall and geospatial data in Northern Thailand

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Abstract

Climate change is currently a global issue that increases the risk of extreme weather events, which threatens human survival. Furthermore, natural disaster, especially flood affected by extreme weather, makes urban population more vulnerable and causes the losses of lives and properties over the area. Therefore, this research aims to integrate a rainfall short-range forecast based on the Weather Research Forecasting (WRF) model to produce an urban flood hazard map. The study used the rainfall information during the tropical storm of Sinlaku with geospatial datasets through the Geographic Information System (GIS) in Northern Thailand. The urban flood hazard map can support decision-makers in various phases of disaster management such as monitoring, preparing, and responding to flood as well as enhancing urban resilience.

Key words
WRF model, flood hazard, Geographic Information System

The Self-organizing System of Urban Region: A Review

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ABSTRACT

Self-organization is the concept of a dynamic, adaptive, fuzzy, and non-linear 'way' of planning to adapt with rapid urbanization, social, environmental, and other complex problems in the city. However, the concept about self-organization is far from perfect, especially in multilevel context. This multilevel context discovers the regional urbanization context of multi-teritorial, multi-level, and multi-actor governance. This self-organization concept tries to conceptualize through systematic literature review on how self-organization discovers regional urbanization problems especially in transport infrastructure and urban flow context of self-organizing urban regions.

Effect of Bailout Funds to States Government: Access To Justice And Challenges On Sustainable Development In Nigeria

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ABSTRACT

The Central Bank of Nigeria's moves to cap treasury bills investment unsettles banks. The moves by the Central Bank of Nigeria (CBN) to limit commercial banks' investment in treasury bills and federal government bonds has caused disquiet in the banking industry. The Central Bank of Nigeria reiterated the need to enhance fiscal buffer to shield the country from external shocks and stressed the need to strengthen fiscal buffer in order to improve Nigeria's ability to address potential downturns in the economy as a result of a slowdown on the nation's growth, increased financial fragilities in emerging market, volatility of global crude oil market due to the United States' sanctions on crude oil impact on Iran and Venezuela, along with output cuts by the Organisation of Petroleum Export Countries members where weak and fragile global growth downgraded to 3.5% in 2019 from 3.7% in 2018. In 2015, analysts projected that low oil prices and its attendant negative impact on government earnings will continue to present a challenge for the Nigerian economy. The 2016 budget shows intent to diversify the economy and reduce future impacts of volatile oil prices on the economy; it seeks to significantly empower the private sector to create jobs by reducing taxes for businesses as well as providing subsidized funding for critical sectors of the economy like agriculture and solid minerals. This paper examines the effect of bailout funds to state government and the factors that prevent state governments from achieving a target in line with sustainable development goal 8 which aims to provide decent work and economic growth promotion as well as sustainable and inclusive socioeconomic growth.

Efficiency of mono-stable piezoelectric Duffing energy harvester in resonance domain

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ABSTRACT

Abstract—Among recently developed physical models for nonlinear piezoelectric energy harvesting (PEH) systems, a popular one is based on Duffing oscillations (Mann & Sims, 2009, Daqaq, 2010). In general, the design of nonlinear PEH systems associated with resonances has propelled the current research in a new direction focused on developing accurate and reliable analysis tools. Among the approximate analytical methods, the average method developed by Bogolioubov (Bogolioubov,1961), and Mitropolskii (Mitropolskii, 1967, 2013) had been proven to be an effective tool. Recently, Anh, N. D et al. (2020), Linh, N. N et al. (2021) have generalized the averaging method to mono-stable piezoelectric Duffing energy harvester in secondary resonances. The purpose of this paper is to develop and analyze the efficiency of the Duffing PEH system in the resonance domain including primary and secondary resonances. Qualitative comparisons of resonant effects between linear and nonlinear PEH systems are discussed.

Key words
Efficiency, piezoelectric, averaging method, main, secondary resonances, Duffing harvester

Communication Barriers between Parents and Teachers at Marie Joseph School in the Age of Distance Learning

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ABSTRACT

The pandemic brought a very significant learning change. All levels of education are urged to transform and adapt to the distance learning process. This is not an easy thing to do. Learning takes place through technology-based platforms, such as Google Classroom, Zoom, Microsoft Teams, WebEx and so on. Changes in the learning system affect many aspects, especially communication. Communication between schools and students changes from face-to-face communication to virtual communication. During this distance learning, parents increasingly play a role in assisting the child's learning process. Like it or not, the communication between parents and the school is also getting more intense. In this case, effective communication becomes a very important aspect. Unfortunately, one of the challenges in this distance learning period is the miscommunication that occurs between students, parents, and teachers. To avoid miscommunication that can result in complaints between parents and teachers and for more effective communication, parents and teachers need to understand that there are obstacles in creating effective communication. Therefore, the researchers conducted a study to determine communication barriers between parents and teachers during distance learning. To get significant results that are in line with expectations, the researchers used a comparative research method with a questionnaire instrument. The study was conducted at the Marie Joseph School in South Jakarta, Indonesia and focused on communication barriers between parents and teachers at the kindergarten and elementary school levels. Respondents from this study were 49 respondents consisting of 22 kindergarten and elementary school teachers and 27 parents from kindergarten and elementary school. From the results of this study, it was found that during distance learning, parents and teachers often communicate. The results of the comparison between parents and teachers concluded that there were no communication barriers between parents and teachers during distance learning at Marie Joseph School. From the results of this study, the researchers recommend that the blended learning program be applied at Marie Joseph School. Distance learning with face-to-face meetings can be combined with blended learning because based on the conclusions obtained, there are no communication barriers that occur between teachers and parents or vice versa during distance learning at Marie Joseph School. In addition, schools can also form a parent's committee with measurable programs such as parents community gathering and discussion. Through this committee, parents can share the challenges they face in assisting the children to learn, create a harmonious, comfortable, and productive atmosphere for students, and motivate other parents to contribute and support school activities.

Key words

effective communication, communication barrier, distance learning

Smartphone-based Mobile FTP Server Design

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CODE: P-NH-UMI-32-IND-RUFMAN IMAN

ABSTRACT

The 2019 to 2021 pandemic caused many activities to be carried out from home, including the learning process. During this time, the lecturer's duties include preparing materials and posting them on the campus LMS. In various circumstances, lecturers often experienced difficulty connecting to the LMS server. Thus, there must be a solution to effectively facilitate learning. This study attempted to develop an FTP server design that can be operated by the lecturers using their own equipment in a form of a portable FTP Server design based on Android smartphones. This research applied Borg and Gall's Research and Development approach in developing the model. The obtained model was then tested on a limited basis to simulate the real situation. The finished product is a prototype mobile FTP server which is expected to be an alternative for learning–especially when the FTP server or LMS server cannot be accessed properly. This study conducted the test through localhost, web, and FTP Client. The test results show that the mobile FTP server operated on a smartphone can serve up to 15 concurrent connections from the FTP Client side. This trial's results indicate that this mobile FTP server can be used for small classes (up to 15 students), or larger classes with alternate connections.

Key words
Mobile FTP server, Android smartphone, FTP Client, concurrent connection

The Subjective Well-Being Profiles of Working Mothers in South Tangerang During The Covid-19 Outbreak

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ABSTRACT

This study aims to characterize subjective well-being (SWB; life satisfaction, positive and negative affect) profiles of working mothers in South Tangerang, Indonesia. This research was conducted through a survey. The research participants were 200 working mothers aged over 18 years in South Tangerang. The data collection used a convenience sampling method. The research instruments were adapted from the Scale of Subjective Well-Being for Mother (SSWB-M) and a demographic questionnaire. The results were analyzed using JASP software

version 0.15.0. The results revealed several factors related to the subjective well-being of working mothers and provided information for researchers in the context of urban society.

Building Machine Learning Computing as a Tool to Measure the Characteristics of Prospective Students in Choosing Study Programs

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ABSTRACT
Recognizing one's characteristics to undergo education at the universitylevel is very important. Choosing a study program that matches their characteristics is the beginning of student's success in thaking his studies. Making a wrong choice has a fatal impact on their success in academics, not only getting low grades, but also leading to demotivation. The students definitely do not want this to happen, since education, at this level, is a base to pursuit their career as a professional who is expert in their fields. This study aims to design and develop a machine learning-based computational algorithm whichcan identify the characteristics of prospective students to choose the appropriate study program based on measurements using the Holland and the Big Five Personality theoretical model. The reasoning method used forward chaining as a reasoning model in the field of artificial intelligence. The results were in the form of recommendations of a study program that match to the characteristics of prospective students. However, this recommendation is not an absolute decision.The prospective student has the final decision as they are the object who will undergo the education.

DAY 3-4 POSTER PRESENTATIONS

Development of Maturity Levels of Organizational Process Assets Cost Management for Project Success in Geothermal Exploration Development Companies in Indonesia

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ABSTRACT

Indonesia is believed to have geothermal energy potential of 23,965 MW (Megawatt) or equivalent to 20.28% of the world's geothermal potential. The current condition of geothermal utilization in Indonesia, in the form of installed capacity of geothermal power plants, is about 2,130.7 MW. Utilization of geothermal development in Indonesia faces many challenges, one of which is proven by its low utilization despite having the second largest reserves in the world. Geothermal developers believe that one of the main factors hindering geothermal development is the high upstream risk. One of the factors that hinder geothermal development, which will be discussed in this study, is the limited access to geothermal drilling data, which is a major obstacle for every drilling engineer or researcher in Indonesia who is trying to find ways to optimize geothermal drilling costs. In the past, well costs in Indonesia were rarely published, making it difficult and insufficient data to evaluate well costs to reasonable statistical confidence. Furthermore, geothermal development companies in Indonesia are not motivated to share lessons learned and best practices from geothermal drilling projects to the public, resulting in a lack of development of organizational process assets that are used as benchmarks to optimize exploration costs. By assessing the maturity level of project cost management's organizational process assets in geothermal exploration projects, it is expected to find out the current maturity level and provide a strategy to develop organizational process assets in project cost management in order to increase project success. This research was conducted as a form of developing organizational process assets towards cost planning that can be used as lessons learned in the form of procedures for cost planning for geothermal drilling projects in Indonesia and further to increase the success of geothermal power plant development in Indonesia.

Key words

Organizational process assets, project cost management, maturity level, lessons learned, best practices, geothermal exploration

Community Based Health Service in Pandemic Era: Partnership Practice of Banjarnegara Islamic Hospital in Central Java

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CODE: P-NH-SHE-IND-22-AMALIA INDRATI

ABSTRACT

In the midst of the COVID-19 pandemic which has spread to almost all regions in Indonesia, the government is responding quickly to make national health efforts in eradicating COVID-19 in the country. Access to the health services during the COVID-19 pandemic has increased nationally but in remote, underdeveloped, and border areas is still low. Even though it is written in the 1945 Constitution of the Republic of Indonesia Article 28 H paragraph 1: "Everyone has the right to live in physical and spiritual prosperity, to have a place to live, and to have a good and healthy living environment and have the right to obtain health services." The challenge faced in National Health Development during the COVID-19 pandemic is the inadequate and equitable mobilization of health human resources in every remote area, so that the dissemination of national health data and information is less than optimal. Therefore, it is necessary to empower the community to achieve the success of health development in Indonesia by participation of health volunteers, one of which is managed by the Banjarnegara Islamic Hospital in Central Java, Indonesia. With the health volunteer community of The Plegia and Brayan Ngamal, the people in remote areas in Banjarnegara Regency can obtain adequate health information and services. Up to present the Plegia has 30 members while Brayan Ngamal has 40 members from various social and professional backgrounds. The Plegia is engaged as a volunteer focusing on paralyzed patients, whileBrayan Ngamal is engaged in community social and health with its vision and mission to bring health services closer to people in remote areas that are difficult to reach. With these two health volunteer communities, people in Banjarnegara feel to be helped so they do not get confused about finding and getting trusted health services. With the assistance of The Plegia and Brayan Ngamal, patients can seek treatment at the Banjarnegara Islamic Hospital much faster and more effectively.

Key words

The Plegia, Brayan Ngamal, Health Services, Community-Based

Urbanization and NCDs Geomap in the South-East Asia

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ABSTRACT

South-East Asia is home to 678.1 million people, of which nearly 50 percent lives in urban areas. Of these, 150 million are estimated to be urban poor. Urbanization in the South-East Asia is occurring at a rapid rate, increased from 26% in 1990 to 33% in 2009. In 2020, the national urbanization ranges from a low of 24.23% in Cambodia to 56.64% in Indonesia and 100% in Singapore. By 2050, the percentage of population residing in urban areas is projected to reach more than double in most member states. As one of the impacts, noncommunicable diseases (NCDs) emerge as top killers in the South-East Asia Region, claiming an estimated 8.5 million lives each year. In comparison to the global NCDs, in the South-East Asia NCDs – mainly cardiovascular diseases including heart disease and stroke, diabetes, chronic respiratory diseases, and cancer show a slightly different pattern and impose a major and growing burden on health and development in the region. Our study reveals a preliminary knowledge on NCDs clusters and geomap on the leading cause of illness and death in the South-East Asia: Cluster 1 (Cambodia, Indonesia, Laos, Myanmar, Thailand, Timor Leste, Vietnam) – stroke accounts for most NCD deaths, Cluster 2 (Malaysia, Philippines, Singapore) – the ischaemic heart disease accounts for, and Cluster 3 (Brunei) – diabetes is the primary cause of NCD deaths. Globally, NCD deaths are projected to increase by 15% between 2010 and 2020 with an estimated 10.4 million deaths in the South-East Asia and 48% of all deaths from NCDs in the region are below 70 years of age. The rise of NCDs has been driven by primarily four major risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets, which in turn lead to overweight and obesity, raised blood pressure, raised blood glucose (hyperglycemia), and raised cholesterol (hyperlipidemia).

The scale of premature and preventable deaths from NCDs in the South-East Asia draws a serious public health concern and requires a "whole-of-system approach" including the prevention and control of NCDs. In addition to the health burden, NCDs have serious social and economic consequences particularly for poor disadvantaged populations. Therefore, tackling NCDs calls for a paradigm shift from addressing each NCD separately to collectively addressing a cluster of diseases in an integrated manner, which requires strategic regional collaborations and knowledge sharing to assist in the development of a concerted and targeted response to NCDs in the region.

Key words
South-East Asia, urbanization, noncommunicable diseases, NCDs geomap.

The "21st Century Digital Skills" to Measure Graduate Students' Higher Order Thinking Skills: Its Adaptation into the Indonesian Language

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ABSTRACT

In order to develop a master's program in urban studies with multidisciplinary abilities and 21st-century skills, the research team aimed to adapt an instrument that measures higher-order thinking skills (HOTS) for postgraduate students. In addition, this research aimed to adapt the 21st Century Digital Skills called "Kemampuan Digital Abad ke-21". The adaptation process began with translating the original instrument into Indonesian and compiling it according to the postgraduate students' current condition in Indonesia. This instrument is intended to evaluate the development of postgraduate students' cognitive skills. The respondents of the initial survey in this research were 62 participants with the age range of 21-50 years old, from either monodisciplinary or multidisciplinary graduate students. To measure the instrument's validity, we utilized the item-total correlation validity test. At the same time, the reliability was taken from the Cronbach Alpha's coefficient reliability test. The validity test resulting from 60 items showed 58 items with the excellent item ($r > 0.3$). There were two items with very poor validity scores (0.260 and 0.269) while the Cronbach's Alpha score was 0.964. Thus, the adaptation of the 21st Century Digital Skills into the Indonesian language made a valid and reliable tool to measure the HOTS of graduate students in Indonesia.

Key words
Cognitive skills, Urban studies, Postgraduate students

Temperature Measuring Pole for Urban Facilities After New Normal Covid-19

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ABSTRACT

We have now entered a new normal period after the Covid-19 pandemic; thus, we must prepare ourselves to live side by side with this global virus. Many agencies are competing to prepare and provide facilities that can regulate the movement of each person to reduce the transmission rate of the virus. This research was conducted to provide facilities that are considered capable of helping us to live in this new normal era. The method used in the implementation of this research began with field observations and identification of a person's activities when they want to access a building, then we determined what kind of products that can help someone access a building easier. The obtained result is the design of a temperature-measuring pole that can measure its own temperature so that it can limit the distance between individuals. The pole is designed using materials that can be adjusted according to needs that are in accordance with ergonomic principles.

Open defecation practice and access to latrine assessment in a community-led total sanitation program evaluation in Rajeg Subdistric, Banten, Indonesia

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ABSTRACT

Open defecation is known to be associated with negative health effects, but many communities in Indonesia still have no access to healthy latrine facilities. Open defecation free is a part of the community-led total sanitation program, which is a program for mobilizing communities to eliminate open defecation. This study is a survey focusing on open defecation free households and latrine ownership in Rajeg Subdistrict, Banten, Indonesia in 2019. The results reveal that there is still a gap between the number of latrine ownership and the sustainable development goal target which is 100% of households has access to healthy latrines. Only 87,69% of 18,704 households in the subdistrict has access to healthy latrines (permanent and semi-permanent) and none of the four villages and one ward in the Rajeg subdistrict is open defecation free. People choose open defecation practice instead of using latrines because of habit, lack of money to make latrines, and lack of awareness and knowledge regarding the negative health effects of excreta exposures. Moreover, latrines are

considered new and unimportant. These findings indicate the importance of health education and health promotion regarding sanitation and healthy latrines.

Key words
Assessment, community-led, sanitation

Ethnobotanical Documentation of Medicinal Plants used by the Indigenous Ati Tribes in Panay Island, Philippines

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ABSTRACT

The Negritos are the aborigines of the Philippines comprising more than 25 tribal groups scattered in the major islands of the country and are known in various names. In Panay Island of Western Visayas, they are called Ati and they are recognized as gatherers, sellers, and traders of medicinal plants. This study aims to document the medicinal plants used by the indigenous Ati tribes in Malay, Aklan and in Tobias Fornier, Antique. Semi-structured interviews were conducted to selected key informants to determine the therapeutic use of medicinal plants in ethnomedicine. Different indices such as Use Value (UV), Informant Consensus Factor (ICF), and Fidelity Level (FL) were used to evaluate the plant importance and Jaccard's Index (JI) to determine the similarity of medicinal plants between the two study sites. A total of 152 medicinal plant species distributed in 137 genera and 55 families were used by the Ati to treat 91 diseases in 18 different categories. The family Fabaceae was best represented with 17 plant species, followed by Lamiaceae with 12 species, and Asteraceae with 10 species. The most frequently used plant part was the leaf and the most common method of preparation was decoction. Medicinal plants with the highest UV were Musa x paradisiaca L. (0.64), Blumea balsamifera (L.) DC. (0.57), and Euphorbia hirta L. (0.53). Spondias purpurea L., and Pittosporum pentandrum (Blanco) Merr. have the 100% FL used for oral thrush for the former and postpartum care and recovery for the latter. The difference in climate between the two provinces, the distance, and the rarity of constant communication between the two tribes could contribute to the low relative similarity index (28.97%). The result of this study serves an ethnobotanical basis for pharmacological research and formulation as well preserving cultural heritage and biological diversity.

Key words
Ati, medicinal plants, Panay Island, Philippines

A Study of Students' Dysfunctional Behavior in An Urban Campus

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ABSTRACT

Dysfunctional behavior is a type of undesired behavior by an organization which leads to negative consequences if it arises in organization. Organization could determine what constitutes dysfunctional behavior in many ways, typically by aligning to common social values of the local society in which the organization is located. In relation to this, urban environments pose special challenges for organizations due to the higher levels of diversity compared to rural areas. These areas often cause residents to have different moral standards from the local society and, later, the organization. This is especially the case for urban millennials in Indonesia, as the different moral references to the organization is exacerbated by the high levels of self-confidence that urban millennials have, as well as their much greater exposure to even more different references of moral values they get as a side-effect of their expertise in using modern technology. This study, therefore, aimed to find out the reasons why students behaved in dysfunctional manner, and what were their opinions and attitudes towards these behaviors. The study was conducted in an urban campus with 197 students from various study programs as the respondents. The data were collected using open-ended questions distributed through online surveys, which were then followed up by focus group discussions in order to obtain more detailed answers. The results showed that the main targets of the students' dysfunctional behavior were the campus itself, lecturing staff, and student-led organizations. The most common reasons for the students did such behavior were disappointment towards the targets and being goaded into doing so by other students. The study also found that students who had committed dysfunctional behavior did not feel guilty despite realizing that their behavior was considered unethical by the targets, as they thought the targets deserved said behavior. This meant that the perpetrators perceived that the behavior was reciprocal in nature; and therefore, acceptable in their perspectives. The results of this study contribute to organizational behavior research, especially in the study of dysfunctional behavior as it provides empirical data to support that revenge is one of the antecedents of dysfunctional behavior.

Key words

Dysfunctional behavior, millennial students, revenge, urban campus

Application of Building Information Modeling for Small Contractor Work Processes in the Case Study of a Housing Estate Project

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ABSTRACT

This study developed the Building Information Modeling (BIM) for work processes in a small housing estate project for a contractor in Uttaradit, Thailand. The project comprised one-story reinforced concrete structure housing of Type A and B with the total number of 10 houses. The 3D and 4D BIM were aimed for the construction planning, work preparation, quantity-takeoff, cost estimation, and communication purposes before starting the construction. The BIM models were developed and used during the pre-construction and construction phases as their shop-drawings. The related data collection was conducted during the process. By conducting a research survey and evaluation, BIM showed a better understanding of the project between the owner representative, supervisor, and construction team resulting in less risk for defects, less rework, and reduction of design conflicts. BIM application in the construction project management showed that their construction activities were continually performed with better work processes by improving accuracy, communication, and efficiency.

Key words
BIM, real estate, quantity-takeoff, cost estimate

Phosphorous Recovery from Wastewater Using Struvite Precipitation and Reuse in Plant Growth

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ABSTRACT

There are two related reasons for phosphorus removal and recovery (in the form of orthophosphate) in wastewater. The main source of phosphorus, phosphate rock, has limited availability in the near future and the excess amount of phosphate in late and coastal water causes eutrophication problems in the environment. In this study, recovery of phosphate from wastewater was studied using struvite crystallization technique. Firstly, the concentrations of phosphorus in 40 randomly-collected water samples were determined using the spectrophotometric bismuth-phosphomolybdate complex method. It was found that the phosphorus content was in the range of 0.02 to 41.85 ppm depending on the types and sampling sites of the collected water samples. Secondly, the effects of pH, reaction time, concentrations of magnesium, ammonium ions, and phosphorus on struvite crystallization were studied using model solutions. The formation of struvite crystal was affected by solution pH and maximum phosphate recovery was found to be 98.58% at pH 9.7 for c min reaction time.

Based on the previous data of phosphorus content and sampling sites, six wastewater samples of higher phosphorus content were collected again and phosphorus (orthophosphate) as well as total phosphorus were determined. The total phosphorus and phosphorous in orthophosphate (PO_4- P) were found to be in the range of 498 to 4558 ppm and 449 to 4290 ppm, respectively. The mobile phosphate removal unit was constructed and recovery of phosphorus in the wastewater sample was carried out at the sampling sites. A 6.16 g of struvite power was obtained from 20 L of the wastewater sample. Recovery percentages of phosphate from wastewater were found to be in the range of 82.65 to 82.96%. Qualitative and quantitative identifications of the resultant struvite samples were carried out using XRD, TG-DTA, AAS, EDXRF, and FTIR techniques.

In this work, chili plants (Capsicum minimum Roxb.) were chosen for a pot experiment to study the effect of struvite samples on plant growth. The effectiveness of the struvite samples was revealed by higher increase in the growth factors such as plant height and number of buds, flowers, and fruits compared to the control.

Key words

Struvite, recovery of phosphorus, mobile phosphate removal unit, bismuth-phosphomolybdate

Melting Pot at Fast Growing Urbanization in Bangladesh

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ABSTRACT

The term Melting Pot refers to the assimilation of minorities into the dominant culture; in Bangladesh, it is the mixing of many cultures with Bengali culture. Although the indigenous people of Bangladesh retain much of their cultural identity, they have simultaneously adopted many cultural elements of Bengalis through the passage of time. Historically, Bangladesh has earned the reputation of being at the crossroad of many cultures. This country has always been known as a land of full of nature's bounties as evident from the vast expanses of its lush crop fields, borderlands, hills thickly covered with virgin forests, and innumerable rivers and tribes, making it the world's largest delta. It is also described as "a land of emerald and silver"; "a garden fit for the king"; "a paradise among countries", etc. Anniversaries, fairs, and festivals form a vital part of the social life of ordinary Bangladeshis. We have a rich tradition of art. Classical forms of Indo-Iranian and South Indian origin have been adopted in Bangladeshi dance as an art form. Here, the poets, essayists, story writers, playwrights, and novelists have contributed significantly to enriching the Bangla language and literature. Many tribes are now coming to the urban areas to improve their livelihood; mixing with other cultures makes them fit to move to urban areas. We all know that Indonesia and Nepal provide very good examples of multiculturalism; their cultures, assimilating in urban areas, have made their society smarter and developed. Following these good examples, other nations of ASEANS can adopt such characteristics in their societies to improve in the future.

Key words

Melting pot, ASEAN, characteristics

Waterfront City

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ABSTRACT

Based on the information from several ministries and institutional sources compiled through online media, approximately, half of the516 cities in Indonesia are located on the waterfront. The area of Indonesia consists of more than 17,504 islands and expanses of sea which are rich in natural resources, with a strategic position between two continents as well as two oceans and has a total area of 5,193,250 km²: 1,919,440 km² of land and about 3,273,810 km² of ocean. In fact, based on regional data references, the area of the Republic of Indonesia (land and sea) reaches 8,300,000 km2, with a coastline of 108,000 km. When the wealth of water on land in the forms of rivers, lakes, lakes, and reservoirs is included, the length of the water's edge will increase. No wonder the legendary musician Koes Plus got inspiration for the lyrics of a series of songs called Nusantara in several of his albums. All of these songs describe how diverse the natural resources are; they are not owned by all countries in the world, from plants, animals, geography, the natural charm and content of earth, land surface, water, and air above it. They are described in the lyrics, "… thousands of islands merge into one as Ratna Mutu Manikam…".

One of the uses of waterfront that needs to be empowered and developed is the concept of waterfront- based city development, better known as Waterfront City (WFC). The concept of WFC is not new. Cities in Europe and America have already implemented it. Johor Bahru in Malaysia, Pattaya in Thailand, and Singapore are cities and country in Southeast Asia that have successfully developed the WFC concept. Meanwhile, in Indonesia, the WFC concept is actually not new; however, its implementation has not been planned well and it was only introduced around the 1980s.

Before discussing about the waterfront city concept, we need to remember that the previous cities which were located along the riverside had better productivity and development compared to other cities. This is mainly related to the sea which is the main route of trade transportation, making the seaside area a productive area. In addition, waterfront cities have enormous potential as mass transportation routes, ports, and tourism. The arrangement of waterfront cities in Indonesia is not widely known, especially in waterfront areas

which have a very dense population. The density of settlements is triggered by the difficulty of finding cheap and affordable lands for most low-income people. The waterfront area is attractive for its convenience to obtain water for daily needs such as washing and bathing. Even the banks of large rivers are used as a place for wastewater and garbage disposal which results in water pollution in the downstream area leading to the beach. This condition becomes worse during the rainy season which can cause flooding due to the obstruction of river flow by a buildup of garbage.

Key words
Waterfront, garbage, cities

The Role of IRT Factors in E-Money Acceptance among Urban Generation X

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ABSTRACT
The purpose of this study was to examine the effect of Innovation Resistance Theory (IRT) factors on behavior intention and actual usage of e-money among urban Generation X. The data collection using an e-questionnaire that was distributed to e-money users in the Jakarta Province, Bogor City, Tangerang City, South Tangerang City, Depok City, and Bekasi City, Indonesia. The sampling technique is non-probability convenience sampling. The total sample collected is 96 with educational backgrounds of the respondents including high school (21

percent), Diploma (15 percent), Bachelor (35 percent), Master (24 percent), and Doctorate (5 percent). The research analysis method applied SEM-PLS. The results of the study prove that technology usage, technology value, and traditional variables have a significant effect on behavior intention to use e-money. Moreover, the behavior intention led users to actual usage. On the other hand, technology risk and technology image did not significantly affect behavior intention to use e-money because risk and image were not obstacles for users. Furthermore, even though they were Generation X, 79 percent of them have a higher education background.

Key words

Building A Village With Clean Water And Sanitation As An Effort To Realize Sustainable Development In Leuwibatu Village

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ABSTRACT

Clean water and a proper sanitation are one of the basic human needs. One of the efforts to get the availability of clean water is to build water channels. The availability of facilities must meet health requirements in order to be able to be consumed and the water can be drunk by the community after being processed. Leuwibatu Village has natural resources that have great potential to supply clean water. It can be gained from Curug Dengdeng. Water from Curug flows down through water channels built by local residents. Due to poor management, the water cannot be fully consumed, nor to be drinking water after it has been processed. The condition of the water that come people's homes is always smelly, cloudy and sometimes muddy. In addition to poormanagement, this condition is also caused by mud when it rains which make the dirt that is around the channel is often carried down. This community service activity aims to assist the community in Leuwibatu village in rebuilding proper waterways, as well as providing knowledge on how to manage waterways, maintain water cleanliness and maintain environmental health. Start with with field survey activities, then followed by a Forum Group Discussion (FGD) together with the village, implementation, monitoring, mentoring and evaluation are a series of methods that are carried out as an effort to solve problems. By building a village with clean water and sanitation, it is hoped that sustainable development can be realized in Leuwibat u Village.

Creative Urban District: A Comparative Study of Community Participation Approaches in Three Cities of Thailand

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ABSTRACT

Community based development is the important approach for building creative urban districts in Thailand. Due to the growth of creative tourism industry, old commercial districts in the cities have the potential to become creative destination based on their rich cultural resources. Participatory planning is encouraged for empowering community residents to generate development and action plans. This article investigates community participation approaches in developing creative commercial districts of three cities in Thailand, Chiang Mai, Phuket, and Phitsanulok. A comparative analysis had been conducted to indicate commonalities and differences in mechanisms used to define district identity, build community network, enable actions at local level, and manage disagreements or conflicts in order to achieve the effective community involvement.

A Socio-Economic Case Study On Early Marriage In Ulujadi Sub-District, Palu City, Central Sulawesi

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ABSTRACT

This study aimed to determine the socio-economic conditions and health of women who marry at an early age in Ulujadi sub-district and to find out the factors causing early marriage and the role of the government in tackling early marriage in Ulujadi sub-district. The analysis

used was the descriptive method using a frequency table. The population in this study were children who married at an early age in Ulujadi sub-district. Samples were taken as many 30 respondents. From the results of the study, it can be concluded that children who married at an early age greatly affect the socio-economic conditions and health of women (the wife). There were two kinds of influencing factors, namely social factors and economic factors.

Readability of the "Corona Education Series" Comic by Kemenpppa RI (Level of Readability of Covid-19 Educational Materials by Children Using Cloze Procedure)

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ABSTRACT

The purpose of this study was to describe and find out the level of readability of the "10 Corona Education Series" comic from the Ministry of Women's Empowerment and Child Protection of the Republic of Indonesia using the Cloze Procedure. This research is focused on finding out the readability of information related to Covid-19 published by Ministry of Women's Empowerment and Child Protection of the Republic of Indonesia. The information was transformed into a comic in the form of health education material. The "Corona Education Series" is an educational material that aims to encourage children to take part in maintaining their own safety and health. In understanding the text of the educational series, children cannot be separated from their experiences that influence their perception of the text.. This study is a descriptive quantitative research that applied Shannon and Weaver's information theory which focuses on sending as much as information through existing channels to carry information. The respondents children aged 6-9 years and attended elementary school level. The results of this study are expected to determine the level of readability of the "Corona Education Series" comic among children. This also examined the experiential factor that influence the understanding of the series.

The Use of WhatsApp Group as a Communication Medium for Covid-19 Risks Among Mothers (Case Study of WhatsApp Group STI's Moms During the Pandemic Period)

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ABSTRACT

The purpose of this study was to describe the use of WhatsApp Group (WAG) as a medium for communication about COVID-19 risks among mothers on WAG STI's Moms. This study was conducted to find out how WAG was used by mothers as a medium for exchanging information about Covid-19 risks and risk management for making decisions on self-protection. During the pandemic, WAG plays a significant role as it allows mothers to share stories, personal experiences and viewpoints with each other in real-time. For this reason, this study applied the Uses and Gratification theory as the main concept and was supported by the concept of health risk communication and social media as a communication medium. The novelty that this research offers lies in the implications of using social media during the health crisis of the COVID-19 pandemic in the perspective of risk communication. This study used a case study qualitative research method on WAG STI's Moms. Data collection was carried out by interviewing a number of WAG STI'S Moms members regarding the use of WAG as a communication medium for COVID-19 risks during the pandemic. The results of the study are expected to find out a number of motives behind the use of WAG and the satisfaction of using it as a communication medium apart from the interaction between WAG members.

Key words
WhatsApp Group, Risk Communication, Mother, Covid-19

An Application of Building Information Modeling for Work Processes of Small Contractors in the Case Study of Housing Estate Project

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ABSTRACT

This research developed the Building Information Modeling (BIM) for work processes in a small housing estate project for a contractor in Uttaradit, Thailand. The project comprised of one-story reinforced concrete structure housing: Type A and B with the total number of 10 houses. The 3D and 4D BIM aimed at the construction planning, preparing the works, quantity-takeoff, estimating the cost, and communication purposes before starting construction. The BIM models were developed and used during the pre-construction and construction phases as their shop-drawings. The related data collection were conduct during process. By research survey and evaluation, BIM showed the better understanding of the project between the owner representative, supervisor, and construction team resulting in less risk for defects, less rework, and reduction of design conflicts. The BIM application in the construction project management showed their construction activities were continually performed with better work processes by improving accuracy, communication, and efficiency.

Using Artificial Neural Networks to Predict Concrete Compressive Strength With Back Propagation Algorithm

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ABSTRACT

In the development of internet of things (IoT), the study of artificial neural network is also increased. This study was conducted to determine how accurate the prediction of the artificial neural network on the compressive strength of normal concrete is. This study used the back propagation algorithm as a form of an architectural network for making a predictive model of the compressive strength of concrete. This study used 2 types of data, which are secondary data, which is the composition of normal concrete mixtures and the results of the compressive strength of concrete aged 28 days from previous studies and primary data is a concrete mix design based on SNI 7656:2012 and has been tested in the laboratory to obtain compressive strength of concrete as validation data from secondary data. The test object used in this study was a cylinder with a diameter of 15 cm and a height of 30 cm. There were 2 types of data as training data for artificial neural networks, which are training data and test data. The results of this study indicated that the model can predict the compressive strength of concrete with an accuracy of 98% from the same training data and 76% from the testing data.

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My Name is Aan Fadhilah Rumi. I was born in Tangerang, February 2nd, 2000. Iam currently studying at Universitas Pembangunan Jaya in the Civil Engineering major. My Religion is Islam.

Agustina Hendriati
Dr. Agustina Hendriati, MSc. Educational/Developmental Psychologist and lecturer at the Faculty of Psychology of Atma Jaya Catholic University of Indonesia. Her professional degree was from the Faculty of Psychology, University of Indonesia, her MSc was from Institute of Education – University of London (currently UCL) UK, and her doctoral degree was from Jakarta State University. She has vast experience as consultant for various projects of ILO IPEC/EAST, ILO, Terre des Hommes Netherlands, WVI, Save the Children, etc. on children and education as well as gender related issues.

Agustine Dwianika
A doctoral graduate in economics with an accounting concentration who is pursuing research in accounting and taxation. Has published in reputable international and national journals, and guided students in doing their final project in the field of taxation. Become a reviewer in tax journals belonging to the ministry of finance and editor of national journals indexed by Shinta. Loves learning and teaching, and currently preparing for post doctoral studies. More than 10 years of experience in tax finance research and consulting. Currently focusing on academic activities at Universitas Pembangunan Jaya and as a tax audit specialist at KAP Devid Putra Ardha and Partners. Have a dream to eliminate the distance between education and practice, especially in the field of taxation.

Agustinus Agus Setiawan
I was born in Semarang, August 10, 1977. Completed Bachelor of Civil Engineering from Catholic University Soegijapranata Semarang in 1999. In 2003 I earned a Masters in Engineering from the Institut Technology Bandung, in the Master of Civil Engineering program with a concentration in the field of Structural Engineering. Since 2012 I was a permanent lecturer staff in the Department of Civil Engineering, Universitas Pembangunan Jaya, my research interest is in the field of concrete materials.

Alimah Sekarningrum
Hi, my name is Alimah Sekarningrum. I have completed formal education in the Geodesy and Geomatics Engineering Department at Bandung Institute of Technology. I am currently pursuing a Masters Program in Project Management at the University of Indonesia. I am interested in project management for geothermal projects in Indonesia to promote the use of renewable energy to maintain the sustainability of remote cities by obtaining sufficient electricity supply.

Amalia Rahmaniar Indrati
I am drg. Amalia Rahmaniar Indrati, 27 years old. I am a dentist at Banjarnegara Islamic Hospital. I have been interested in research since I was in college. There were good

experiences when I could get the new knowledge about other things. I have received The Best Speaker Award of Oral Presentation Session - ISCOMS (International Student Congress Of (bio)Medical Sciences) June 2014 in Groningen, The Netherlands. Also, I was the Speaker Finalist of Oral Presentation – in International Congress of OMICS International-5th American Dental Congress 2015 - October 2015 in Philadelphia, USA.

Amita Indah Sitomurni

I work for the late Agency for the Assessment and Application of Technology since 1983. The Agency is now merged with several other research institutions and form a new institution named National Research and Innovation Agency. However, I am still in the same Centre, i.e. Environmental Technology Centre. I studied Colloid Engineering and I join a group in the Centre with research scope covering cleaner production, green chemistry and recently LCA. I sometimes also represent the Centre to National Committee on handling POPs.

Anil Dawan

Dr. (PSDM) Anil Dawan, S.Th, M.Th. Career summary: as a faith & development manager at Wahana Visi Indonesia (WVI) in 2015 to Present, as a consultant at Ministry of Women's Empowerment and Child Protection (KPPPA) in 2019 to 2020, as a HR Consultant at Reconnect Training and Consulting in 2018 to Present, as a lecturer at Narotama University Surabaya in 2012 to 2014 and as a lecturer at STT Efrata Surabaya & STT Doulos Surabaya in 2008 to 2012. Education: Airlangga University Surabaya (UNAIR) Doctor of Human Resource Development, 2017; Graduated Summa Cumlaude; Achieved 4.0 GPA, Duta Wacana Yogyakarta; Master of Theology, 2006; Best Graduated; Achieved 3.6 GPA, STT Alkitab Nusantara Malang; Bachelor of Theology, 1999, Vrije University Amsterdam; The Bridging Gaps Scholarship Program, August – December 2005, Balewiyata Malang; Intensive study of Islam for 3 months, 2001. Consultant/Trainer, humanitarian activist and lecturer. Currently working as Faith & Development Manager at Wahana Visi Indonesia (WVI) and Project Manager of HNC Big Asia Project (2022-2026), F and D Reserve Integration Child-Well Being (2016-2021). Manage Project "Capacity Building Program for Religious Leaders for The Protection of Children-faith". This project started in 2016 and covers areas throughout Indonesia. Engaged in the world of children's education, development of women and religious leaders, and other activities related to faith and development program for over than 15 years. Active as a trainer and speaker among the world of education for children and women for character building, psychosocial and mental health support. Also active in writing opinions and articles in magazines and regional newspapers.

Aphittha Yodying

Miss Aphittha Yodying was born on December 8, 1994 in Thailand. I received my Bachelor's Degree in Geography (Faculty of Agriculture, Natural Resources and Environment) from Naresuan University in 2017. After graduation, I continued with my graduate studies in the field of Disaster Management Program, Faculty of Engineering, Naresuan University and currently a research assistant under the supervision of Associate Professor Dr. Sarintip Tantanee. I have keen interest in the climatic condition and disaster management. Over the years, I have developed the attributes of being patient, diligent in my activities and interactive with colleagues.

Aviana Zhafira Rustandiputri

I am passionate and high willing final stage student of Informatics Engineering at Universitas Pembangunan Jaya. I have good adaptability and be able to listen and accept feedback. Able to work well both on my own initiative and as a part of team.

Azirah Hashim

Professor Dr. Azirah Hashim is attached to the Faculty of Languages and Linguistics, Universiti Malaya. She has held several posts during her career including Executive Director of the Asia-Europe Institute, Director of the Centre for ASEAN Regionalism, Dean of the Humanities Research Cluster and Dean of the Faculty of Languages and Linguistics. Azirah is currently President of the International Association of Applied Linguistics, Humboldt Ambassador Scientist of the Alexander von Humboldt Foundation, Germany and ASEAN Higher Education Expert in the EU SHARE programme on higher education in the ASEAN region.

Bernadetta Kwintiana

Bernadetta Kwintiana is with the Faculty of Computer Science, Electrical Engineering and Information Technology, University of Stuttgart, Stuttgart 70569, Germany. (e-mail: bk.ane@ieee.org).

Bidhari Pidhatika

Bidhari Pidhatika, Universitas Gadjah Mada, Indonesia (B.Sc., 2002), Chalmers University of Technology, Sweden (M.Sc., 2006), ETH Zürich, Switzerland (Ph.D., 2011), Alexander von Humboldt research fellow with Professor Jürgen Rühe, Laboratory for Chemistry and Physics of Interfaces, University of Freiburg (2016-2018). L'Oreal-UNESCO for Women in Science national fellow (2011). Presently, researcher, Center for Leather, Rubber, and Plastics, Ministry of Industry, Republic of Indonesia. Research interests: surface science and technology, thin polymer films, biomaterials, biomedical devices.

Blasius Perang

I am Blasius Perang., I concern on clinical psychology and teaching for five years in the field of nursing school. Aside from it, I serve people for psychological disturbances and help them through hypnotherapy and psychotherapy.

Chairul Maulidi

I am doctoral student at Urban and Regional Planning Dept., Institut Teknologi Bandung, Indonesia. Currently conducting research about transformation of urban spatial structure due to platform ecosystem that undergo changing commercial activities in urban life. Prior to this, I worked as lecturer and researcher at Urban and Regional Planning, Universitas Brawijaya, Indonesia.

Charatdao Kongmuang

Charatdao Kongmuang is a lecturer at Department of Natural Resources and Environment, Faculty of Agriculture, Natural Resources and Environment, Naresuan University, Thailand. Her background is Geography and her research interests focus on Human Geography, Urban

Geography, Geography of Crime, Microsimulation, Small Area Statistics, Postcode Geography, and Flood Vulnerability, and Climate Change.

Chelsya Karuna Handaya

Chelsya Karuna Handaya is an undergraduate psychology student at the Faculty of Psychology at the Atma Jaya Catholic University of Indonesia in Jakarta. She had experience as an HR Consultant and research assistant conducting psychological tests and maintaining participant's databases. She is interested in counseling and assessing psychological tests. Her positive qualities include being responsible, adaptable, committed, and honest. She enjoys quality time with family and friends. She likes to watch movies and exercise with her friends in her free time.

Christal Yohanes Edy Widjaya

My name is Christal Yohanes Edy Widjaya. I am a bachelor graduate from Pelita Harapan University, Department of Architecture. I am currently working as a designer for a coffee shop. Interested in urban studies, particularly in the lives of socially defenseless group within urban scope.

Clara Evi Citraningtyas

Clara Citraningtyas' works, research, and scholarship are generally in the field of education, literature, and culture. Her major research interest is on the pedagogical influence of narratives. For a number of years, she focused on reconstructing Indonesian folktales and evaluating the impact of folktale reconstruction on the advancement of human capital. Her recent published books "Keluarga Zamrud / The Emerald Family" ; "Rekonstruksi Cerita Rakyat Indonesia Modern/Indonesian Modern Folktales volumes 1, 2, 3; "Nilam Kandung", "Membaca dan Menganalisis Sastra Asia"; "Cintarela dan Ibu Tiri yang Baik". Clara is a recipient of prestigious Indonesian government research grants as lead researcher for a number consecutive years (2012 to 2018).

Clara R. P. Ajisuksmo

Clara R.P Ajisuksmo, currently is senior lecturer at the Faculty of Psychology Atma Jaya Catholic University of Indonesia, and Head of Centre for Societal Development Studies AJCUI. She finished her Doctoral degree from University of Tilburg the Netherland and Master of Science on Educational Psychology from State University of New York at Albany USA. Her main interest is on metacognition and self-regulated learning. She also interested on the issue of children and women in disadvantaged communities. She experienced in working as consultant and project leader of various research sponsored by UNICEF, Plan International, World Vision Indonesia, USAID and others.

David Mihigo

My name is David Mihigo, graduated with Distinction at Ardhi University, Dar es Salaam-Tanzania studied Master of Science in Urban Planning and Management, School of Spatial Planning and Social Sciences. I received my Bachelor Degree with Upper Second Class Honors in Land Surveying at Ruhengeri Institute of High Education (INES-RUHENGERI) and Advanced Diploma in Civil Engineering option of Construction Technology at Integrated Polytechnic Regional Center Kigali (IPRC-Kigali).I conducted research on "Location and Accessibility of

Solid Waste Transfer Stations in Rapidly Transforming Neighborhood Case study of Sinza Ward, Dar es salaam-Tanzania". Along the way, I was involved in major activities and organizations which had brought much recognition to the University and DAAD Scholarship Award to undertake master's degree at Ardhi University. I was Site Engineer in MICANOLD LTD during Kinyinya-Kibagabaga Road Construction. Founder of Power of Love/Organization (Non-Profit Organization in Rwanda).I was among participants attended conference on Land Policy in Africa in Addis - Ababa, Ethiopia, FOSS 4G 2018 Conference in Dar es Salaam and Lake Victoria Challenge (Use of drone Technology) Conference held in Mwaza - Tanzania. Additionally I am studied the use of Cargo Drones in Public Health with Dr. Patrick Meier , We Robotics Organization and Two recognized United States of America Universities including MIT as well as Advanced Course in Drones for Development with Indian Flying, Caerobotics and Dr. Ruchi Saxena. I had been involved in community Service with respect to Children, serving as teacher in Nyamata Technical Secondary School from S4 up S6.I like listening to music and Watching movies.

Deni Agus Setyono

I am an urban management specialist. Now I'm working on Urban and Regional Planning Department, Brawijaya University.

Diane Uwera

Diane Uwera is a Rwandan woman, born on the 15th of June 1994 in the Northern Province of the country. She did her undergraduate studies at the University of Rwanda in the BSc. in Estate Management and Valuation. She is currently an academic staff at that same university, and she has recently completed her MSc. in Real estate at Ardhi University, Dar es Salaam, Tanzania. She has experience in valuation, land administration and related fields. Diane is interested in social dimensions of sustainable redevelopment of cities.

Dong Anh Nguyen

Nguyen Dong Anh is a Professor of the Institute of Mechanics, Vietnam Academy of Science and Technology. His interest is focused on nonlinear dynamics with application to engineering problems.

Dzaky Athallah Luqman

I am a final year college student at Universitas Pembangunan Jaya majoring in Informatics Engineering. One of my interests in this major is data analyzing which nowadays becomes a trend. In the college, I join in several organizations to improve my public speaking and human management skills. In this occasion, I'm looking forward to enhance my presentation skill and receiving feedbacks from experts.

Edi Purwanto

Dr. Edi Purwanto is Head of Research Center & Community Service, Universitas Pembangunan Jaya. He is also Assistant Professor in Stratrgic Management at the Departement of Management, Universitas Pembangunan Jaya, Indonesia.

Eka Permanasari

Eka Permanasari, PhD is an Associate Professor in the field of urban design, architecture and Southeast Asian Studies. She has an extensive experience in research and professional in the fields of architecture and urban design both in Indonesia, Australia and Germany. Apart from being active in teaching and research, She is also a professional urban designer. She has led several strategic national projects for Jakarta Government, such as Jakarta Giant Sea Wall, 6 Pilot Projects of Community Centers (Ruang Publik Terpadu Ramah Anak - abbreviated as RPTRA) in Jakarta, the integration of Jakarta MRT and LRT lines and Jakarta TOD urban renewal projects. She has been granted prestigious award and research grants such as 2 years research funding from Nelson Institute for Diplomacy and International Affairs Research Grant, Drake University, USA (2020-2022) for Cross-cultural Community-based Strategies for Sustainable Urban Streams: Lessons from Des Moines and Jakarta.

Elisabeth Rukmini

Experienced Lecturer with a demonstrated history of working in the education management industry. Skilled in Mentoring, Strategic Planning, Data Analysis, Lecturing, Public Speaking, Microsoft Office, and Research. Experienced educational researcher concentration in active learning and higher educational policy. Strong education professional with a Doctor of Philosophy (Ph.D.) focused in Chemistry education from Miami University. In January 2021, I added one more skillset which is Social Impact Measurement. I am a "Level 1 Associate Practitioner." Level 1 Associate Practitioner status is the first step of the SVI Practitioner Pathway, in which Practitioners develop their skills, knowledge and practice in social value, impact management and the practical application of the SVI framework in social impact assessment and Social Return On Investment (SROI). To continue my passion in developing others, I took the certification called Loop Corporate Coaching Certification (LCCC). I am now a certified coach. Happy to help others to reach more.

Endang Pitaloka

Dr. Endang Pitaloka has completed her doctorate education in Human Resource Management from the Doctoral Program in Management Science, Padjadjaran University, Bandung. In addition, she has an educational background and experience in the field of economics. Before becoming a lecturer, she has taken a responsibility as a team leader in the field of Economics and experts from government and private projects. Currently, Dr. Endang Pitaloka, familiarly called by Ibu Oka, is active as a lecturer at the Management Study Program, Universitas Pembangunan Jaya.

Faradilla Chika Arienta

My Name is Faradilla Chika Arienta, as known as Chika, student at Universitas Pembangunan Jaya, Department of Industrial Product Design.

Felia Srinaga

My name is Felia Srinaga and currently serves as an associate professor at Department of Architecture, School of Design at University of Pelita Harapan, Karawaci-Tangerang, Indonesia. I finished my Bachelor degree of education in Architecture Department in Tarumanagara University, Jakarta and earned my Master degree also in Architecture especially in Urban Design from Univesity of Colorado Denver, USA. I also earned my Doctoral

degree in Social and Environment Psychology from University of Indonesia. My research interest is in inclusive urban design, urban public space projects, and city and human behaviour studies.

Fritz Akhmad Nuzir

Dr. Eng. Fritz Akhmad Nuzir, ST, MA, IAI, was born in Metro, Lampung, Indonesia. In 2004 Fritz received his bachelor degree from the Departement of Architecture and Planning, Universitas Gadjah Mada (UGM). Then his master was completed in 2007 at the Master of Landscape Architecture Program, Anhalt University of Applied Sciences, Bernburg, Jerman. Fritz completed his formal education by receiving the degree of Doctor of Engineering (Dr. Eng.) in the year 2016 from The University of Kitakyushu, Japan. During 2017-2019, he was affiliated as policy researcher at the Institute for Global Environmental Strategies (IGES), Japan. He is enlisted as assistant professor in Universitas Bandar Lampung (UBL) until now. Currently, Fritz is the Head of UBL SDGs Center.

Glory Clementine

I am a lecturer in public health who is currently working for the Faculty of Medicine, Universitas Pelita Harapan.

Grecebio Jonathan Alejandro

Full Professor at the College of Science and currently the Director of the Office for Graduate Research, University of Santo Tomas Graduate School. He was a Deutscher Akademischer Austauschdienst (DAAD) and Alexander von Humboldt (AvH) Fellow and has been re-invited in 2015 & 2019 as a Humboldt Visiting Scientist in Germany. His research interests are Molecular Phylogenetics, Systematics & Taxonomy, DNA Barcoding, Biodiversity and Ethnobotany.

Hanif Fitria

I am a student from the civil engineering study program who is doing research on steam curing treatment in concrete. During college I was active in organizations and was the chairman of the association in the 2020/2021 period.

Hari Nugraha

Hari Nugraha is a lecturer in the Department of Product Design at Universitas Pembangunan Jaya.

Hastuti Naibaho

Dr. Hastuti Naibaho has an educational background and work experience in organizational behavior, both at the macro and micro level. She has completed a doctoral degree with a Cumlaude from the Management Science Doctoral Program at Universitas Gadjah Mada, Yogyakarta. In 2021, she also obtained certified human resources professional from the Government. Before becoming a lecturer, she worked in a British company in the field of telecommunications contractor for 7 years at the project control section, in a Japanese manufacturing company for 1 year at the General Affair section, and in a Non-Profit Organization for 1 year at an information data center. Currently, Dr. Hastuti Naibaho works as a Director of Jaya Center for Advanced Learning of Universitas Pembangunan Jaya.

Iin Parlina

Iin Parlina, 34 year old, is a researcher of National Agency for Research and Innovation (BRIN). She earned her Bachelor degree in Chemical Engineering from ITB in 2010, while her master's degree in Biological System Engineering from Washington State University, USA. For 10 years working in BPPT (before merged into BRIN), she has experiences in some national and international projects related to environmental and energy sector especially in biogas.

Johannes Siregar

Currently, he is a lecturer in the Information Systems Study Program, Universitas Pembangunan Jaya. He teaches students to be able to find intelligent solutions in dealing with complex problems through basic understanding of mathematics. In the field of Information Systems, he has an interest in developing Information System Security research related to computer networks. Besides it he also has an interest research in application of information systems to operate optimally which can be use for small and medium industries.

Joshua Wianto

Joshua is a graduate student pursuing master's degree in Educational Psychology in Unika Atma Jaya. Having volunteered for 2 years as an assistant kindergarten teacher, as well as serving for 13 years in youth ministry, he sharpens his skill and passion in directing youths and students becoming better version of themselves through counselling and mentoring. During his undergraduate years in Universitas Pelita Harapan (UPH), Joshua participated in many campus events taking various roles as committee, head of division, as well as head of committee.

Kamonchat Seejata

My name is Kamonchat Seejata, and I am a master's student of Disaster Management at Naresuan University. I received the JICA ADAP-T project scholarship, which allowed me to engage in research assistance and work with my professor on the vulnerability flood-prone area topic. I graduated from the same university with a bachelor's degree in Geography. I have experience and skills in Geospatial analysis as well as I enjoy using my skills to contribute to solving and assisting disaster management.

Kumpon Subsomboon

Kumpon Subsomboon is a Director of the Water Resources Reseach Center and Assistant Professor of Civil Engineering at Naresuan University, Phitsanulok, Thailand. His research interests include BIM in Design, Procurement & Construction, Construction Scheduling & Control, Cost Estimating.

Kyaw Naing

Dr. Kyaw Naing is a visiting professor in the Chemistry Department, University of Yangon, Myanmar with over 35 years expertise of academic and senior leadership and management roles within the Myanmar higher education system. He possesses a DSc. degree from the Hokkaido University, Japan and has particular interest and specialism in Environmental Science and Environmental Analytical Chemistry. As a Georg Forster Research Fellow of the

Alexander von Humboldt Foundation, Mr Naing visited the Institute of Inorganic Chemistry, University of Heidelberg in 1998, 2003 and 2012 and worked as a researcher in the Research Group of Professor Dr. Peter Comba.

Lathifah Alfat

I am a lecturer in the Department of Informatics, Universitas Pembangunan Jaya. After composing thesis research in Machine Learning, I got my Master of Computer Engineering from the Department of Electrical Engineering, the University of Indonesia. While, my Bachelor of Information Technology Engineering in the Department of Electrical Engineering, Diponegoro University after completing final project and publication in Software Engineering of Web Application. My current research interest in Artificial Intelligence, Machine Learning, Data Mining, and Software Engineering is listed in my Google Scholar profile.

Masum Ahmad

I have been Graduated from Bangladesh Agricultural University, Mymensingh during 1984, then Masters in Entomology in 1985, afterwards went to United Kingdom for my PhD work, which completed 1996. During 2002- 2004 I was In Germany for my Post doctoral research work. I joined as Lecturer in the Entomology Department at BAU in 1988, currently working in the same Department as Grade 1 Professor.

Mochamad Moro Asih

My full name is Mochamad Moro Asih. My job is a permanent lecturer, where my birth date is in Jakarta, 17-09-1985.

Mohamad Quzami An-Nuur Ahmad Radzi

I am a postgraduate student from Faculty of Art and Design, Universiti Teknologi MARA, Malaysia. Currently working on progress for thesis writing. My research interest are related to visual study and iconography.

Muhammad Abdul Khaliq

Muhammad Abdul Kholiq is acting director of the Center for Environmental Technology (PTL) at the National Research and Innovation Agency (BRIN), Chairman of Indonesian Biogas Association, Vice Chairman of Asia Pacific Biogas Alliance, and Advisory Board Member of Digital Biogas Cooperation supported by EU. He has more than 15 years professional experiences in several topics on waste and wastewater treatment, biogas technology, bioremediation of oil-contaminated soil, etc. He has strong education background with a Doctoral degree (Dr. -Ing) from University of Saarland in Biochemical Engineering on sustainability assessment of biotechnology processes, Master of Science (M.Sc) from TU Hamburg-Harburg in Process Engineering, and Bachelor degree (Dipl. - Ing) from TH Nuernberg in Chemical Engineering. The subjects his diploma and master thesis were on biogas from organic wastes.

Muhammad Zainal Ibad

Muhammad Zainal Ibad is a lecture in urban and regional planning departement Institut Teknologi Sumatera, Indonesia. He was graduated from Institut Teknologi Bandung in 2017 and got Bachelor and master's degree on Fastrack program (bachelor and master degree in 5

years) in regional and city planning with cumlaude. He is now a PhD student in urban and regional planning in ITB. His research is multilevel self-organization in megaregion planning.

Musa Adamu Eya

My Name is Musa Adamu Eya. Academic Background National Diploma Urban and Regional Planning; Bachelor of Technology Degree Urban and Regional Planning; Master of Technology Urban and Regional Planning; PhD Research Transportation Planning. Academic Lecturer Nasarawa State University Keffi, Nigeria.

Nangkula Utaberta

Nangkula Utaberta is an International Writer, Professor of Architecture and Researcher who has written 26 academic research books of Architecture in Malaysia. Currently he is an Associate Professor at Architecture Department, Universiti Tun Hussein Onn Malaysia (UTHM). Before this post, Nangkula was a Professor and Director of Research Development Centre (RDC), Linton University College (2018-2020), Research Fellow at Halal Product Research Institute (IPPH)-UPM (2018-2020), Head of WARIS Research Group and Associate Professor at Architecture department, UPM (2012-2020), Senior Lecturer at Universiti Kebangsaan Malaysia (2009-2012) and Expert Committee (Pakar Bidang) for Architecture-Dewan Bahasa dan Pustaka Malaysia (DBP)-(2011-present)

Nilmini Wickramasinghe

Professor Nilmini Wickramasinghe(PhD, MBA, Grad DipMgtSt, BSc) is the Professor of Digital Health and Deputy Director of the Iverson Health Innovation Research Institute at Swinburne and the inaugural Professor– Director Health Informatics Management at Epworth HealthCare and honorary digital health professor at Peter MacCallum Cancer Centre and Northern Health. For over 25 years she has been actively, researching and teaching within the health informatics/digital health domain . Professor Wickramasinghe has collaborated with leading scholars at various premier healthcare organizations throughout Australasia, US and Europe and is well published with more than 400 referred scholarly articles, more than 15 books, numerous book chapters, an encyclopaedia and a well established funded research track record and a patent for a health analytics algorithm. Professor Wickramasinghe is the editor-in-chief of two scholarly journals published by InderScience: Intl. J. Biomedical engineering and Technology(www.inderscience.com/ijbet) and Intl. J Networking and virtual Organisations(www.inderscience.com/ijnvo). In 2020 she was awarded an Alexander von Humboldt award for her outstanding contribution to Digital Health.

Nina Efriliana

I am passionate about guidance and teaching. I have excellent communication skills and consistently responsible for my duties. I'm friendly love to maintain good relations with others. I have self-driven, self-confident, proactively helpful, and diligent. Currently I am also a postgraduate student at London School of Public Relations with a concentration in Marketing Communication.

Novie Mauliku

I was a lecture from Public Health Program in Teknologi & Sains of Faculty Jenderal Achmad Yani University.

Nur Liana Kamal Bahari

My name is Nur Liana, i am 37 years old, married, have two kids and live in Selangor. I have an experience in industries before decided to pursuing study in full time mode. I hope I can be an educator in the field of education.

Rachman Sjarief

I have more than 30 years predominantly in Production Planning and Controlling and Human Resources Management. His expertise in Production Planning and Controlling Improvement, Strategic Human Resources Management, Talent Management, Leadership and Labor Relation. I was an internal consultant for Schneider Electric Asia Pacific based in Shah Alam, Malaysia. He was responsible for developing and coaching the new and emerging leaders for Schneider Electric Asia Pacific. I am a Senior lecturer for Universitas Pembangunan Jaya (home based), Universitas Prasetia Mulya and IPMI-MBA in Jakarta, teaching the Bachelor and MBA degrees on Leadership. International Human Resources Management, Organizational Behaviour and Talent Management.

Rahmanto Kusendi

Faculty member lecturer specializing in Social Psychology, Urban Psychology, Environmental Psychology & Work Psychology. Practitioner in Architecture, Engineering, Urban psychology research, Urban research, Project Management, Feasibility services and Experienced with all stages of the development cycle for psychological and architectural projects. Well-versed in several numerous programming. Strong background in educational and community practice.

Renny Indrawati

My name is Renny Indrawati. I am currently working as lecturer in Faculty of Science and Technology, Universitas Ma Chung, Malang, as well as a doctoral student in Brawijaya University (majored in Food Science). I received the undergraduate degree (bachelor in food technology) from Brawijaya University, Indonesia, in 2008. I also have been awarded for a double degree scholarship to pursuit graduate degree in Satya Wacana Christian University, Indonesia (Master in Biology) as well as Kwansei Gakuin University, Japan (Master in International Natural Sciences). My research interest lies in the field of food and health.

Rufman Akbar

I work in the information systems department at the development jaya university. Research interest in the field of human-computer interaction. Apart from being a lecturer, I have worked for an information system consulting company. My research relates to the use of information technology in education or everyday life.

Runi Rulanggi

I am a researcher focused on mental health and education. I have an educational psychology background. The research I have done so far is related to school mental health, e-mental health services, subjective well-being, and inclusivity. I have an aspiration to advance mental health services in Indonesia by strengthening the school components and the supporting system within it. Apart from being a researcher, I am currently also a member of The School

Psychologist Community (Psikolog Masuk Sekolah), which is a community that seeks to provide mental health services for high school students in Central Java, Indonesia.

Safitri Jaya

Safitri Jaya is a lecturer who works at Pembangunan Jaya University. The field of science that is occupied is informatics which is under the faculty of technology and design. His areas of interest are software engineering and artificial intelligence. Some of the works that have been produced and obtained copyright for application engineering in the form of computer programs include an electronic document grouping application developed using the BAN-PT framework, a mechanism for measuring talent interest with the concept of machine learning, a data mining mechanism to find conformity with document standards, and works of art. - other works developed with students in the Informatics study program. As a lecturer, I am very happy to provide assistance to students, especially in preparing software development and engineering projects. Skills in understanding user needs really need to be trained so that they can create various innovations and also creativity.

Sasima Charoenkit

A lecturer and researcher from Faculty of Architecture, Art and Design, Naresuan University, Thailand. My research interests involve urban green planning technology and urban place-making through public space. Merging urban green technology into place-making process to create resilient and meaningful urban spaces is the challenge for my future research.

Shamsuddin Shahid

Dr. Shamsuddin Shahid is an Associate Professor in the Department of Water and Environmental Engineering in the School of Civil Engineering of Universiti Teknologi Malaysia (UTM). He is one of the World's 1000 most influential climate scientists reported by Thomson-Reuters in 2021. He has also been ranked among the World's top 2% scientists in Atmospheric Research by Stanford University in 2020. He is the author of nearly 280 peer-reviewed articles in reputed international journals. He supervised 15 PhD and four postdoctoral research and completed 20 national and international research projects as principal investigator. He is the editors of several reputed journals.

Sitti Rahmawati

My names Dr.Sitti Rahmawati,SE., M.Si, My lecture Faculty of Economic and Business Tadulako University Central Sulawesi. My experience research social science such as health, economic, and my paper presentatation to University Faculty of Boston USA in 2019 the title "silent social conflict and gender related domestic violence toward the central sulawesi Indonesia

Sri Wijayanti

Sri Wijayanti is a lecturer of communication studies at Universitas Pembangunan Jaya. She receive her M.Si and Doctoral in communication studies from University of Indonesia. Sri believe human can't not communicate, therefore communication science is an inter and multidisciplinary, it will always be needed in human life. Her research interest is in the development of narrative persuasion, media studies and textual analysis. She has published some articles and book chapters relate to the topics of communication disciplines.

Suci Marini Novianty

Suci Marini Novianty, lecturer of Communication Studies Department at Universitas Pembangunan Jaya

Surya Gunanta Tarigan

Surya Gunanta is a lecturer of Architecture Department at Universitas Pembangunan Jaya

Sutthichai Prasatketkarn

Sutthichai Prasatketkarn is a master's degree student in the Faculty of Engineering in Construction Management from Naresuan University. Graduated with a bachelor's degree from the Faculty of Civil Engineering from Naresuan University. He has worked in the management of housing projects for 2 years. and worked at the Department of Public Works to control the construction of a dam to protect the bank for 2 years To contact Mr.Sutthichai Prasatketkarn please email sutthichaip59@nu.ac.th

Tegar Alami

I am someone who is interested in computer science, especially its application to agriculture as well as the environment. I am currently undergoing doctoral education in computer science at the Bogor Agricultural Institute with a focus on image processing research in detecting plant pests and diseases.

Theresia Indira Shanti

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