



**ICEED 2023**

The 7<sup>th</sup> International Conference on  
Eco Engineering Development (ICEED 2023)

**PROGRAM BOOK**

Jakarta, November 8, 2023 Faculty of  
Engineering  
Bina Nusantara University



# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
Secretariat: Faculty of Engineering, BINUS University  
Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



## TABLE OF CONTENTS

- Welcoming Remarks from Rector of Bina Nusantara University
- Welcoming Remarks from Vice Rector of Research and Technology Transfer
- Welcoming Remarks from Dean of Faculty of Engineering
- Welcoming Remarks from ICEED 2023 Conference Chair
- Keynote Speaker Prof. Pablo La Roche
- Keynote Speaker Prof. Dr. Ir. Oktovian Berty Alexander Sompie M.Eng
- Keynote Speaker Prof. Ir. Dr Mohd Khairol Anuar Bin Mohd Ariffin
- Keynote Speaker Prof. Julian Cox
- Conference Schedule
- Organizing Committee





## WELCOMING REMARKS

### Rector BINUS University



Ladies and gentlemen, professors, keynote speakers:

- **Prof. Pablo La Roche**, Professor of Architecture, Cal Poly Pomona University, USA and Associate Vice President & Sustainable Design Leader, Callison RTKL
- **Prof. Dr. Ir. Oktovian Berty Alexander Sompie**, Rector of Sam Ratulangi University (UNSRAT), Indonesia
- **Prof. Ir. Dr. Mohd Khairol Anuar Bin Mohd Ariffin**, from Universiti Putra Malaysia
- **Prof. Julian Cox**, from University of South Wales, Australia
- As well as Binusian Leaders, authors, presenters, and all respected BINUSIANS

Good morning!

It is my honor, on behalf of BINUS UNIVERSITY, to extend a warm and hearty welcome to all of you as we gather here for the 7th International Conference on Eco Engineering Development (ICEED 2023).

The theme for this year's ICEED is "Eco Engineering Development to Achieve Sustainable Development Goals." This theme underscores our commitment to addressing the pressing global challenges of our time, particularly in the context of environmental sustainability and eco-engineering. It is aligned with BINUS UNIVERSITY's vision: "a World-class university, fostering and empowering society in building and serving the nation".

We firmly believe that to accomplish comprehensive eco-engineering, we must foster solid interdisciplinary research collaboration. It is this collaborative approach that will enable us to move beyond monodisciplinary limitations and work together to find innovative solutions to real-life problems.

Additionally, through these efforts, we can make significant strides towards achieving the United Nations' Sustainable Development Goals, which are essential for better world.

In the spirit of knowledge and collaboration, I encourage all of you to engage in insightful discussions and share your expertise. Let us use this platform to inspire one another, foster creativity, and generate solutions that contribute to a sustainable future. I extend my best wishes for a productive and enjoyable conference today.

In conclusion, I wish everyone a productive day filled with fruitful discussions, significant networking, and a pleasant conference experience. Let us embark on this journey of eco-engineering and sustainable development together.

Thank you for being a part of ICEED 2023.

Jakarta, 8 November 2023

**Dr. Nelly, S.Kom., M.M., CSCA**  
Rector, BINUS University





## WELCOMING REMARKS

## WELCOMING REMARKS

### Vice Rector for Research and Technology Transfer



To the honorable,

- Prof. Pablo La Roche, Professor of Architecture, Cal Poly Pomona University, USA and Associate Vice President & Sustainable Design Leader, Callison RTKL
  - Prof. Oktovian Berty Alexander Sompie, Rector of Sam Ratulangi University (UNSRAT), Indonesia
  - Prof. Mohd Khairol Anuar Bin Mohd Ariffin, from Universiti Putra Malaysia
  - Prof. Julian Cox, from University of New South Wales, Australia,
- distinguished guests, and fellow participants,

I'm deeply honored to welcome you all at the 7th ICEED 2023 with the theme "Eco Engineering Development to Achieve Sustainable Development Goals." This conference is a crucial platform for sharing ideas on sustainable development.

Bina Nusantara University's vision is to foster and empower the society in building and serving the nation, with Eco Engineering Development playing a pivotal role. Eco Engineering Development is vital for achieving SDGs like Affordable and Clean Energy, Responsible Consumption and Production, and Climate Action by combining science and technology for eco-friendly solutions.

This conference facilitates collaboration among experts, accelerating the development of eco-friendly technologies, aligning with our vision of empowering society. By contributing to environmental health and wellbeing as well as increasing environmental awareness, eco engineering development also strengthens communities. Moreover, it inspires the younger generation to engage in sustainable development, showing them significant opportunities in science and technology.

Let's continue promoting innovation and sustainable development to strengthen our nation and society. Thank you for your attention, and may this conference drive positive change. Warm regards to all.

Jakarta, 8 November 2023

**Prof. Dr. Juneman Abraham, S.Psi., M.Si., C.W.P., C.I.R.R.**  
Vice Rector - Research and Technology Transfer  
BINUS University



## WELCOMING REMARKS



### Dean of Faculty of Engineering

H.E. Dr. Nelly, S.Kom., M.M., CSCA, Rector BINUS University  
Vice Rector, Prof. Dr. Juneman Abraham, S.Psi, M.Psi, CIRR  
Vice Rector in Research and Technology Transfer, BINUS University  
All of keynote speakers, all participants, ladies and gentlemen

Good morning, everyone.

Let us first pray to our Merciful God and thank our Almighty God for all His mercies and blessings that have enabled us to come together today in this webinar conference. Welcome to the 7th International Conference on Eco-Engineering and Development (ICEED) 2023. Welcome to the Faculty of Engineering at Bina Nusantara University. It is a great pleasure to have you all at this conference.

Today, the Faculty of Engineering BINUS University is hosting ICEED 2023. This conference brings together academicians, experts, scientists, practitioners, and students with the spirit of disseminating and sharing their ideas and knowledge on related topics. I believe that the contribution papers from the keynote speaker and authors at this conference will come out with the most effective approaches and strategies to synergize human society with its natural environment in a way that benefits both. This annual conference is also the manifestation of our commitment to take part in fostering and empowering society through innovation, technology, and eco-engineering development. We hope the implementation of research results will improve the quality of human life and environment.

Finally, I would like to express my gratitude to everyone, the committee members, who made this seminar possible and successful. To our keynote speakers, all presenters, all our distinguished guests, and all participants, thank you for being here. Welcome and enjoy the conference.

Jakarta, 8 November 2023

**Dr. Ir. Nina Nurdiani, S.T., M.T.**  
Dean of Faculty of Engineering Bina  
Nusantara University

## WELCOMING REMARKS

### Chair of ICEED 2023



Rector of Bina Nusantara University, Dr. Nelly, S.Kom., M.M., CSCA  
Vice Rector, Prof. Dr. Juneman Abraham, S.Psi, M.Psi, CIRR  
Distinguished keynote speakers,  
Presenters, and All participants.

With a thankful heart, it is my pleasure to welcome you to the 7<sup>th</sup> International Conference on Eco Engineering Development (7<sup>th</sup> ICEED 2023). I would like to express my greatest appreciation to your participation, as well as your contribution to the 7<sup>th</sup> ICEED 2023. As the seventh iteration of ICEED that is organized by Faculty of Engineering, Bina Nusantara University, this year's ICEED bears the theme of "Eco Engineering Development to Achieve Sustainable Development Goals". This issue is critical because United Nations targeted the fulfillment of Sustainable Development Goals (SDGs) in 2030. Bina Nusantara University supports completely all actions to achieve the SDGs, where one of them is this 7<sup>th</sup> ICEED 2023.

Some of the selected SDGs are then covered in 7<sup>th</sup> ICEED 2023, under five core topics, namely:

- Sustainable Agriculture and Food (AGF, 29 papers)
- Sustainable Water and Sanitation (WAT, 8)
- Sustainable Energy and Climate Action (ENC, 10)
- Sustainable Industries, Productions, and Socioeconomics (IPS, 58)
- Sustainable Infrastructure, Construction, Cities, and Communities (ICC, 76)

This conference has received 308 submissions. After the review processes conducted by at least two reviewers, they were funneled down to 181 papers accepted for presentation in parallel sessions in today's virtual conference. Besides Indonesia, there are also authors/co-authors from Japan, Thailand, Malaysia, and Philippines. Furthermore, there are also papers industrial/ministrial/NGO/start-up from Hutama Karya, ACSET, BRIN (National Research and Innovation Agency, Indonesia), CIFOR-ICRAF, and New World Together. From the academic side, besides Binus University, we gratefully acknowledge the outstanding participation from 19 national universities in 7<sup>th</sup> ICEED 2023.



# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



We would like to thank all authors, keynote speakers, reviewers, committee, Faculty of Engineering, and Bina Nusantara University leaders for the superb contributions and supports to 7<sup>th</sup> ICEED 2023. The continuous support of IOP Publishing for the publication of the proceedings is greatly acknowledged.

Thank you and best regards,

Jakarta, 8 November 2023

**Assoc. Prof. Ir Dave Mangindaan, PhD, MRSC, AMIChemE, IPM, ASEAN Eng.**

Bina Nusantara University, Indonesia

Conference Chair – 7<sup>th</sup> ICEED 2023



## Keynote Speaker 1

### Buildings for a Climate Positive Future



Prof. Pablo La Roche, Ph.D  
Global Sustainable Design Director Arcadis  
Professor of Architecture & Associate Vice President & Sustainable Design Leader  
Cal Poly Pomona University & Callison RTKL

#### Abstract

Our planet is warming rapidly, and buildings are significant contributors to greenhouse gas emissions. Nature-based and passive design solutions can reduce these emissions, and we can use different tools to measure their impact. This presentation will discuss, through case studies selected from the presenter's practice, research and teaching, the strategies, and tools to reduce emissions from the construction and operation of buildings.

The presentation will include lessons from indigenous knowledge applied to the design of vernacular buildings and a discussion on the design of climate responsible buildings. The process to design sustainable buildings at Arcadis will be presented, with examples of different types of buildings in multiple climates and locations worldwide. This method includes building simulation tools.

Passive cooling systems, which reduce indoor temperatures by transferring heat from a building to various natural heat sinks are discussed with examples from research and practice, some of them including nature-based systems. The solution to climate change should include passive systems, designed to transfer energy by conduction, convection, and radiation from a higher temperature interior heat source to a lower temperature exterior heat sink. These systems are organized in three groups in the presentation: cooling with air, cooling with water, and cooling with the sky. Each of these includes examples from practice and research discussing how they can reduce our impact on climate change while achieving thermal comfort with minimum operating costs. Outdoor comfort strategies are also included.

Ideas and examples on how I teach sustainability in architecture courses is included. This includes introducing sustainability early in the program, including hands-on activities that provide students with unique learning opportunities to go beyond established strategies and methods, and integration of design directly in lecture courses that teach sustainability. I also implement design in lecture courses, where students develop a project to implement concepts learned in lectures. Building physics is also emphasized, with a special emphasis on heat transfer through the building envelope.

The concept of total carbon that includes operational and embodied is introduced with methods of calculating it and implementing in projects.





## Keynote Speaker 2

### Eco-engineered tourism infrastructures on the Pacific Rim: Sedimentation characteristics and changes of water quality due to additional materials in Tondano Lake sediment



Prof. Dr. Ir. Oktovian Bertly Alexander Sompie M.Eng  
Sam Ratulangi University

#### Abstract

The effect and variation of additional material has been measured in Tondano Lake sediment to investigate changes in water quality. Tondano Lake sediment is often used for storage and canal dredging in the vicinity Tondano Lake bay. A canal is useful to drain the surrounding water that is needed. Recently, the progress of agricultural technology and the utilization of natural resources are causing environmental pollution around this area. It has been causing contamination of Tondano Creek sediment. The pollution of Tondano Lake/ Creek means the pollution of irrigation channels, which indirectly affect the existing ecosystems.

A laboratory experiment was carried out to measures the changes in water quality in Tondano Lake/ Creek sediment with additional material variations, such as 30g/L NaCl, 5% CaSO<sub>4</sub>, 20% citric acid, 5% charcoal water hyacinth and 10% charcoal water hyacinth. Small amount of additional materials were added to Tondano Lake/ Creek sediment. Each sample was measured by varying the water content, 500%, 750%, 1000%, 1500%, 2000%, 2500%, 3000%, 4000%, and 6000%. The small amount of the samples were analyzed for NH<sub>4</sub>-N, NO<sub>2</sub>-N, NO<sub>3</sub>-N, PO<sub>4</sub> by an automated water analyzer (Water auto-analyzer, swAAT. BLTEC Japan).

Two weeks after the sediment processes occurred, the data was analyzed. Time sediment thickness curves were presented and the settling pattern curves looked like the definition of settling pattern reported by Imai (1981). A settling rate would be defined for each zone in relation with self weight consolidation for very soft clay (Kondo and Torrance, 2009). The results of this experiment are expected to contribute to the effort for the contaminant remediation of Tondano Lake/ Creek sediment with consideration for the mechanics aspects.

Keywords : Tondano Lake sediment, sedimentation, self weight consolidation, settling rate, water quality



## Keynote Speaker 3

### 3D - Fused Deposition Modelling (FDM) – As One of IR 4.0 Pillars



Prof. Ir. Dr Mohd Khairol Anuar Bin Mohd Ariffin  
University Putra Malaysia

#### Abstract

Since its adoption in 2011 by the German government, Industry 4.0 has been a hot topic that is actively debated in both the industrial and academic worlds as an important concept for the growth of the manufacturing sector. Developed nations all around the world have developed legislation to change their production environments in an effort to get their industries closer to Industry 4.0. Three-dimensional (3D) printing, or additive manufacturing, is one of the pillars for the industry 4.0 can be defined as the technique of creating three-dimensional (3D) goods layer by layer utilizing filament as a material feedstock to form a solid structure. Polylactic acid is one of the most popular extrusion materials for 3D printing because of its special qualities and benefits, which include biodegradability and printing speed. While substantial emphasis has been dedicated to the tweaking of process parameters in order to obtain desired finished product quality, little study has been undertaken to date on enhancing the hardware systems of low-cost 3D printers. The effect of 3D printer is the main topic of this work, with particular attention paid to die angle, nozzle diameter, liquefier design, and parameters to the optimum performance. By altering these components' characteristics from the traditional nozzle, the extrusion process' accuracy and stability can be maximized, producing printed goods of higher quality. Tensile and compressive strengths of the part is utilized as one of the aspects for the part quality. The outcomes demonstrated that the suggested modifications to the nozzle system provide completed goods with enhanced mechanical qualities.

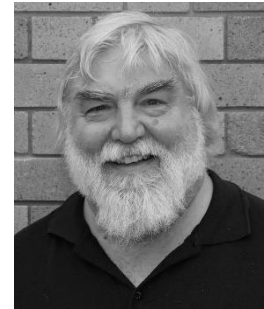
Keywords: Industry 4.0, Smart Manufacturing, 3D Printer, Nozzle design, Polylactic Acid, Fused Deposition Modeling





## Keynote Speaker 4

### Sustainability in the poultry industry, with particular reference to water and energy regeneration in processing



Prof. Julian M Cox  
Associate Dean (International), Faculty of Engineering, UNSW Sydney, Australia

#### Abstract

In Australia, and around the world, broilers are grown for commercial chicken meat production with varying efficiency. There are several points through primary production and processing where steps can be taken to reduce environmental footprint. Australian broiler processing (abattoir) operations are significant in terms of water usage, both input and output, especially in rural communities, where a substantial proportion of national production occurs. An average sized plant processes 75,000 birds per day, using up to 3 megalitres of water/day, of which most becomes wastewater.

Spent process water is traditionally sent to municipal wastewater treatment plants, at substantial cost of the abattoir, where it is usually processed through tertiary treatment and released into inland streams. This puts a significant burden on inland potable water supplies, and treatment systems, being environmentally unsustainable. In a limited number of plants, wastewater is recycled on site, through an end-of-pipe treatment system, which may reflect municipal tertiary treatment or being limited to the use of large anaerobic ponds. The aim of this project was to explore the potential of using in-line water treatment systems to reduce the complexity and cost of traditional treatments, but further, to enhance the environmental benefit of water recycling.

Through engagement with a major poultry producer, and provision of operational data, a triple bottom line analysis was undertaken, showing that in-line water recycling is feasible, if combined with energy recovery. Further, consideration of the legislative and regulatory landscape showed that re-introduction of treated water into selected unit operations is feasible, on a fit-for-purpose basis.

The focus of the study was on the scald tank and the spin chiller, as these two key unit operations involve the greatest volume of water, and consume substantial energy through heating or chilling (respectively). Use of an aluminium ceramic cartridge membrane rig was first trialled offsite with small samples of the waste streams. After these experiments proved positive, a rig was constructed and used in a commercial processing plant on a pilot scale, proximal to each of the two key unit operations.

The pilot experiments demonstrated a quality of filtrate generally fit for purpose for re-introduction into the same unit operations, with the reintroduction at proximity also saving significant energy costs. Full-scale re-use and regeneration is currently being considered for one commercial plant where water and energy costs are highest.





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
 Secretariat: Faculty of Engineering, BINUS University  
 Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
 Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



## THE GENERAL SCHEDULE

### 8 November 2023

Time	Agenda
08:00-08:20	Registration
08:20-08:25	Opening the ICEED 2023 Seminar by MC
08:25-08:30	Indonesia National Anthem “Indonesia Raya”
08:30-08:35	Opening Prayer
08:35-08:40	Opening Speech 1: Rector of BINUS University (Dr. Nelly, S.Kom., M.M., CSCA)
08:40-08:45	Opening Speech 2: Vice Rector for Research and Technology Transfer (Prof. Dr. Juneman Abraham, S.Psi., M.Si., C.W.P., C.I.R.R.)
08:45-08:50	Opening Speech 3: Dean of Faculty of Engineering (Dr. Ir. Nina Nurdiani, S.T. M.T.)
08:50-08:55	Opening Speech 4: Chairman ICEED 2023 (Ir Dave Mangindaan, PhD, MRSC, AMIChemE, IPM, ASEAN Eng.)
08:55-09:00	Photo Session
09:00-09:30	Keynote Speaker Prof. Pablo La Roche Moderator: Religiana Hendarti
09:30-09:40	Q&A session
09:40-09:45	Photo Session and Certificate Awarding
09:45-10:15	Keynote Speaker Prof. Ir. Dr Mohd Khairol Anuar Bin Mohd Ariffin Moderator:
10:15-10:25	Q&A session
10:25-10:30	Photo Session and Certificate Awarding
10:30-10:45	Break 1
10:45-11:15	Keynote Speaker Prof. Dr. Ir. Oktovian Berty Alexander Sompie M.Eng Moderator: Taufik
11:15-11:25	Q&A Session
11:25-11:30	Photo Session and Certificate Awarding
11:30-12:00	Keynote Speaker Prof. Julian Cox Moderator: Ervina
12:00-12:10	Q&A Session
12:10-12:15	Photo Session and Certificate Awarding
12:15-13:00	Break 2 & Ishoma
13:00-14:00	Paralel 1
14:00-14:10	Transition 1
14:10-15:10	Paralel 2
15:10-15:20	Transition 2
15:20-16:20	Paralel 3
16:20-16:30	Transition 3
16:30-17:30	Paralel 4
17:30-17:45	Closing





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Infrastructure, Construction, Cities, and Communities

### ROOM A

Ses- sion	Sche- dule	Track & ID	Title	Author
1	13:00	ICC18	The Usage of Additives on Porous Asphalt	Adelia Dwidarma Nataadmadja and Nadhila Nurul Anjani
	13:10	ICC22	Development of Rainwater Filtration System with Porous Asphalt	Adelia Dwidarma Nataadmadja, Irsantya Lamara Putrilia
	13:20	ICC35	The influence of crystalline technology as concrete admixture on compressive strength and permeability	Aurelius Dario and Riza Suwondo
	13:30	ICC65	The effect of crystalline technology on concrete as coating to improve its durability	Muhammad Ghafiqi Dwiriyadhi1 and Riza Suwondo
	13:40	ICC166	Potential of Bamboo Leaf Ash for Soil Stabilization – Literature Review	E A Kabdiyono , B S Soepandji, N Handika1 , S Wulandari, and F H Sagitaningrum
	13:50	Q&A	Question and Answer	Moderator: Riza Suwondo
2	14:10	ICC20	Cost Analysis and Method Comparison on High-Rise Building Column Formworks by Three Formwork Methods	A B Putra, D O I Putra, G A Sentosa, R A Saputra
	14:20	ICC126	Comparison Analysis for Implementation Time of Column Formwork Using Three Formwork Methods in a Building Project at Bandung Province	A P Zaiman, A B Putra, K B Yustanto, and R Arfan
	14:30	ICC99	Geofoam: A potential for Indonesia's soil problem IV – Update on Geofoam Application	A Gunawan
	14:40	ICC45	Analysis Study of Large Diameter Bored Pile Bearing Capacity	Timothy Julian Winata, Andryan Suhendra
	14:50	ICC46	Analysis Study of Lateral Bearing Capacity and Deformation of Square and Circular Concrete Piles as an Alternative Structure for Infrastructure Projects	Wiwin Pradita, Andryan Suhendra
	15:00	Q&A	Question and Answer	Moderator: Andi Bayu Putra
3	15:20	ICC39	Enhancing Sustainable Public Library: Spatial Relationship Implementation to Foster Optimal Social Interaction	V Calista, G Suharjanto





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



	15:30	ICC41	Sustainable Commercial Flats with Modular Concept in South Jakarta	F Ahmad, G Suharjanto
	15:40	ICC52	Intercultural Adaptation of Chinese Culture to The Elements of City Planning on The North Coast of Java (Case Study: Jin De Yuan and Tay Kak Sie Temple)	Akmalia, S Meliana, S Pramono, R R Rihadiani, and H P Kharisma
	15:50	ICC278	Technology and AI Implementation in Heritage Adaptive Reuse as Strategy for Sustainable and Smart City	Mila Savitri, Friska Amalia
	16:00	ICC159	The Importance of Increasing Public Adoption of Electric Vehicles in Reducing Jakarta's Air Pollution	Masruroh, Tinjung Desy Nursanti, Laksmi Sito Dwi Irvianti, Irencia Limin
	16:10	Q&A	Question and Answer	Moderator: Gatot Suharjanto
4	16:30	ICC208	Passive designs of low-income housing with natural ventilation in tropical region	S Wijaksono
	16:40	ICC172	Social Dimension of the Communal Dining Room Serving Area in the Social Center for the Visually Impaired Wyata Guna Bandung	Deanawati Insani Wasilah, and Seruni Kusumawardhani
	16:50	ICC256	Multifunctional Outdoor Space based on ODA: Realizing Healthy Living Space for Elderly	N Noegroho, Z Khairunnisa
	17:00	ICC258	Relationship between the theory of green architecture and the design of houses that are responsive to the pandemic	D Setiawan
	17:10	ICC269	Analysis and Design of Melia Laundry Cibinong's Customer Tracking and Inventory	Feny B. M. S. Simanjuntak, Franciskus P. H. Napitupulu, Kelvin R. C. Nainggolan, Haikal Andrian, Heri Ngarianto
	17:20	Q&A	Question and Answer	Moderator: Sigit Wijaksono





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
 Secretariat: Faculty of Engineering, BINUS University  
 Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
 Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



## Paralel Session: Sustainable Infrastructure, Construction, Cities, and Communities

### ROOM B

Ses-sion	Sche-dule	Track & ID	Title	Author
1	13:00	ICC19	Utilizing hammer tests and ultrasonic pulse velocity to ascertain the compressive strength of concrete	Irpan Hidayat, Audry Farrel Shang Rahardhani, Gabriellela Aprilyanthi Suhardjo
	13:10	ICC23	Analysis of type X bracing on irregular building structure	Irpan Hidayat, Andryan
	13:20	ICC83	Analysis The Effect of Tidal Waves on Duration of Port Project Using Crashing and Fast Track Method (Case Study: Sanur Port Project)	Ramadhanu Lawa Carottama, Juliastuti
	13:30	ICC85	Accelerating the middle – rise building duration using BIM 4D to reschedule the project	Diva Aditya Moeisra, Juliastuti, Tjatur Haripriambodo
	13:40	ICC40	Comparison of Conventional and Precast Half Slab Work Methods (Case Study: Japfa Office Building Daan – Mogot)	Brilliant Palagian, Putri Arumsari
	13:50	Q&A	Question and Answer	Moderator: Irpan Hidayat
2	14:10	ICC86	Study of deflection of PCI girder bridges using rotation data	M Suangga and A Pranoto
	14:20	ICC146	Comparative Analysis of underconsolidated soil improvement with Pile Raft and Pile Bent Structures on Toll Road Project in Tangerang	I Gede Mahardika Susila, Tri Cahyo Adi Saputro
	14:30	ICC151	The Using of Container For Earthquake Mitigation Shelter In West Jawa	Meilani, William Herrison Liong
	14:40	ICC158	Kepah Shell Waste As A Coarse Aggregate Substitution Material on Concrete Mixture	Meilani, Andreas
	14:50	ICC103	Occupational safety & health risk analysis in formwork in high-rise building projects	Putri Arumsari, Pramuda Arya Satriya, Eri Dwi Wibawa, Annisa Dewanti Putri
	15:00	Q&A	Question and Answer	Moderator: Prof. Made Suangga
3	15:20	ICC70	Apartment with Biophilic Architecture Approach in West Jakarta	Tiwagar, AG Prawata
	15:30	ICC104	Public Art as Generator for Creating the Desirable City	AG Prawata





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
Secretariat: Faculty of Engineering, BINUS University  
Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



	15:40	ICC130	Transformation of National Housing's Layout Design in PERUMNAS Sarijadi Bandung	Dini Cinda Kirana, Savitri Putri Ramadina, Seruni Kusumawardhani, Asri Radhitanti, and Christina
	15:50	ICC141	Apartment with Acoustics Environment Approach in Center Jakarta	R Andean, R Hendarti, B Sakina
	16:00	ICC143	Sustainable Interior Design in Restaurants by Applying Lumajang Locality Elements	E A Soerjono, T I W Primadani
	16:10	Q&A	Question and Answer	Moderator: Albertus Galih Prawata
4	16:30	ICC271	Bridging Cultural Heritage and Sustainable Development: Converging Digital and Conventional Spaces in Museums	Ade Ariyani Sari Fajarwati
	16:40	ICC193	Enlightening Spaces: Optimizing Lighting Design for Elderly Clinic to Promote Good Health and Well-being	Wanda Wijaya, Amarena Nediari, Ade Ariyani Sari Fajarwati
	16:50	ICC150	Effect of the output of heritage designation on visitors' motivation to visit the historic Kompleks Pasar Baru, Jakarta	T A Patria, F Irena, and H Phungpumkaew
	17:00	Q&A	Question and Answer	Moderator: Ade Ariyani Sari Fajarwati







ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
 Sekretariat: Faculty of Engineering, BINUS University  
 Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
 Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



## Paralel Session: Sustainable Infrastructure, Construction, Cities, and Communities

### ROOM C

Session	Schedule	Track & ID	Title	Author
1	13:00	ICC11	The Analysis of Passenger's Facilities Level of Service on Jakarta - Bogor Commuter Line's Stations Using PTV Viswalk	Euardi Prahara, Larasati Putri
	13:10	ICC29	Lane Reduction and Queue Length Relationship on Arterial and Collector Roads	Euardi Prahara, Rio Dandy Arsyad
	13:20	ICC91	Sustainable Measurement of Mental and Physical Workloads of Transjakarta Bus Drivers	Ivan Hartanto and T R Sahroni
	13:30	ICC92	Analysis of Ergonomic Factor Measurement for Transjakarta Bus Drivers	J Liawdy and Taufik
	13:40	ICC98	Assessment of passenger safety risk level on the Transjakarta public transportation system	I A Budiman, K K Kaitaro and T R Sahroni
	13:50	Q&A	Question and Answer	Moderator: Eduardi Prahara
2	14:10	ICC186	Modelling of flow characteristics in the access channel of Bali tourism port using DualSPHysics	H Lucas, M H Aslami, Farell, Ferryanto
	14:20	ICC124	Wave run-up characteristic on armour layer breakwater using the smoothed particle hydrodynamics (SPH) method	Ferryanto, Oki Setyandito, Nizam, Nur Yuwono, Wahyu Trihadi
	14:30	ICC162	Cost and Duration Analysis on the Variation of Soil Improvement Method on Port Development at West Java	G A Suhardjo, O Setyandito, Andryan, Farell, M Y Syahputra
	14:40	ICC168	Railway Infrastructures E-Maintenance Systems: A Literature Review	Nurul Inayah Wardahni, Yusuf Latief
	14:50	ICC37	Air Temperature for Sustainable Airport Infrastructure and Environment	Reza Rahutomo, Alam Ahmad Hidayat, Mahmud Isnain, Bens Pardamean
	15:00	Q&A	Question and Answer	Moderator: M. Hafiz Aslami





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
 Secretariat: Faculty of Engineering, BINUS University  
 Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
 Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



3	15:20	ICC73	Integrated Approach for Early Detection and Prevention of Abnormal Child Growth: A Kansei Design and Quality Function Deployment Study	Y Mariana, Valentino H Kristantoputra, M Pribadi
	15:30	ICC156	Enhancing Indoor Well-being: A Multifunctional Approach to Indoor Living with Plants and Pegboards	Aldyanto H Putra, Y Mariana, Nina T Lestari, Tubagus A Dwinandana
	15:40	ICC144	User Experience Adaptable in IKEA Store for Apartment Living to Improve User Wellbeing	Yunida Sofiana, Amarena Nediari, Hervina Dyah Aprilia
	15:50	ICC145	Strategic Implementation of Biophilic Design to Improve Attention-Deficit/Hyperactivity Disorder (ADHD) Care Facilities Wellbeing	Tiffany Lorayne, Yunida Sofiana, Silvia Meliana
	16:00	ICC279	The Impact of Community Activity Enlivening in Shaping Historical Areas Case Study: Kayutangan Heritage, Malang, Indonesia	Antariksa, Herry Santosa, Jenny Ernawati, Anthea Putri Yasmin
	16:10	Q&A	Question and Answer	Moderator: Yosica Mariana
4	16:30	ICC292	Exploring User Needs for Technology Adoption in Environmental Communities	Fathy Radhia, Dimas Elang Setyoko, Sigit Pandu Cahyono
	16:40	ICC288	Candi Kidal: Typeface Design as Smart Branding - Archaeological Tourism Branding for Malang City	Miranti Nurul Huda, Asri Radhitanti, Priska Arindya Purnama, Ni Putu Anggie Michelle
	16:50	ICC287	Grasping The Essence of The Millennium Development Goals: A Literature Review	Infaroyya Al Karimah Muhamad, Balqis Nadhifatur Rifdah, Aulia Putri Hidayad, Susilo Kusdiwanggo
	17:00	ICC285	Study of Shading Types in Heat Transfer Calculation in High-Rise Building	M S S Purnama, I Yuliasari1, S Aisha
	17:10	ICC274	Identifying children's perception of interior space to the earthquake disaster: A case study of elementary school students in Jakarta	Siti Chadijah, Tika Hanjani, Nazilah Abdullah, and Dewi Kumoratih
	17:20	Q&A	Question and Answer	Moderator: Religiana Hendarti





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Infrastructure, Construction, Cities, and Communities

### ROOM D

Ses-sion	Sche-dule	Track & ID	Title	Author
1	13:00	ICC36	A model for measuring the learning patterns of undergraduate students in utilizing e-learning after the COVID-19 pandemic	Wahyu Sardjono, Anderes Gui, Widhilaga Gia Perdana
	13:10	ICC74	A sustainable blue economy: blockchain and internet of things integration in tourism villages	Sri Sarjana, Sindy Allaam Claudia, Assyifa Tasma Ramadhina, Lilis Suyanti
	13:20	ICC229	Level awareness of stakeholders in the construction industry regarding the green building concept in Indonesia	Caroline Maretha Sujana, Cahya Hadi Wicaksana
	13:30	ICC160	Analysis of the Level of Public Awareness of the Implementation of Green Building in Indonesia	Caroline Maretha Sujana, Cahya Hadi Wicaksana
	13:40	ICC17	Design of the Mobile Application to Reduce the Carbon Track	Sulistyo Heripracoyo, Fathan Zidni Imawan, Leonardus Williem Adikusumo
	13:50	Q&A	Question and Answer	Moderator: Syauqi Abdurrahman Abrori
2	14:10	ICC187	Spatial Acoustic Approach: Sustainable Design Methods in Creative Centre Building	M Herman, J F Bobby Saragih
	14:20	ICC247	Sustainable Playground Design based on Alpha Generation Play Behavior	JF. Bobby Saragih
	14:30	ICC188	High-rise campus building cooling energy share using floor area of spaces	Vivien Soebiyani
	14:40	ICC189	Analysis Adaptability of Creative Class Furniture Layout as a Sustainable Classroom at BINUS University-Jakarta: A case study	Reno Fanthi, Fadhil Achmadi Isdianto, Polin Marsahala Simanjuntak, Rhomina Hestiningtyas
	14:50	Q&A	Question and Answer	Moderator: JF Bobby Saragih
3	15:20	ICC60	Comparison of Retro Marketing in the Heritage building case study : M Bloc Space and the Pos Bloc Space in Jakarta, Indonesia	Yanita Mila Ardiani, Zulfany Erlisa Rasjid, and Supramaniam, Sivakumari





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



	15:30	ICC89	Analysis of the implementation of green building on the Syahdan Campus building based on the Green Building Council Indonesia (GBCI) specifications	Caroline Maretha Sujana, Jeremi
	15:40	ICC160	Analysis of the Level of Public Awareness of the Implementation of Green Building in Indonesia	Caroline Maretha Sujana, Cahya Hadi Wicaksana
	15:50	ICC245	ESG Integration for Infrastructure Development in PPP Toll Road Sector	Evy Steelyana W, Ersya Tri Wahyuni, Zubir Azhar
	16:00	Q&A	Question and Answer	Moderator: Yanita Mila Ardiani
4	16:30	ICC306	The Application of Terawang (Roster) Wall Material on Building Facades in Tropical Climate Areas	nina nurdiani, rivanus dewanto
	16:40	ICC243	Recycled waste programs for sustainable island. Case study: Tidung Island	Vivien Soebiyana, Nina Nurdiani, Welly Wangidjaja, Feronika
	16:50	ICC134	Apartment with Social Interaction Approach in West Jakarta	Michael Tedja, Gabriani Cipsa Radha, and Yanita Mila Ardiani
	17:00	ICC102	Apartment with Social Interaction Approach in West Jakarta	Michael Tedja, Gabriani Cipsa Radha, and Yanita Mila Ardiani
	17:10	ICC138	Analysis of the Effectiveness of Using EPS Sandwich Panel versus Lightweight bricks at Residential Project	Welly Wangidjaja
	17:20	Q&A	Question and Answer	Moderator: Nina Nurdiani





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Industries, Productions and Socioeconomics

### ROOM E

Ses-sion	Sche-dule	Track & ID	Title	Author
1	13:00	IPS28	Analysis and Improvement Recommendation for Mobile E-Commerce Application's User Interface Design Using Usability Testing Method	Fransisca Dini Ariyanti, Stevia Audrey Efriyanto
	13:10	IPS32	Designing PT XYZ's Customer Care Service System Using Failure Modes and Effects Analysis and Quality Function Deployment	Fransisca Dini Ariyanti, Brandon Timotius Santo, Julius Joecelyn
	13:20	IPS136	Concept Of Social Entrepreneurship In The Development Of Creative Economy Tourism In Indonesia (Case Study: Cirendeu Village)	Febri Tri Intan Azhana , Margareth Setiawan, Leni Susanti, Muchamad Rizky Zakaria, Raden Raka Abdul Kamal Syafaat, Nurlita Agustiningsih
	13:30	IPS31	Factors Influencing Indonesian Consumers' Choice of Apparel Products: The Influence of Product Cues, Sustainable Cues, and Gender Differences	M Setiawan, S Setiawan, A Darisman and R Rahmah
	13:40	IPS97	Slow Fashion: Between Environment Sustainability and Business Sustainability	M Setiawan, F T I Azhana, N A Karim
	13:50	Q&A	Question and Answer	Moderator: Fransisca Dini Ariyanti
2	14:10	IPS246	The Impact of the Industrial Revolution 4.0 Transformation on the Circular Economy in Indonesia	Wahyu Sardjono, Anderes Gui, Widhilaga Gia Perdana
	14:20	IPS44	Isometric Digital Tourism Map as Sustainable Development of Bendosari Ecotourism Village	Uzda Nabila Shabiriani , Vincent Frederick Yawan , Eligius Vidhitya Vinotama , and Andhika Pramalystianto
	14:30	IPS53	How to Optimize Promotion Tactics for Sustainable Tourism Product through 360-degree Communication? (Case Study in Poncokusumo, Malang)	G S Putri , I B Ananta , H B Rafiqi , S F Persada , F Elysia , Y T Prasetyo, M N Young
	14:40	IPS137	Efficiency Analysis of The Use of Short-Term Scheduling in Non-Manufacturing Industry: A Systematic Literature Review	Utari Kusuma Putri , Haryadi Sarjono , Danang Prihandoko





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



	14:50	IPS198	Gas Distribution Supply Chain Performance Measurement Using the Supply Chain Operations Reference (SCOR) 12.0 Modeling Approach	A Abdullah, M A F Siregar, M A Faturrozzi, H Sarjono, D V Marina
	15:00	Q&A	Question and Answer	Moderator: Syauqi Abdurrahman Abrori
3	15:20	IPS276	Optimizing Sustainable Truck Unloading Processes Using Single-Channel Single-Phase Queuing Method and Arena Simulation: A Case Study in the Heavy Equipment	Fikri Haekal Ibrahim, Dendhy Indra Wijaya , Danu Hendarman Laduni , Clara Intan
	15:30	IPS177	Implementation of The Six Sigma Method Approach to Improving Mirror Assy Quality: A Case Study Automotive Industry	Dedy Ramadhan1 , Dendhy Indra Wijaya , Fransiska Mulyani
	15:40	IPS304	Sustainable manufacturing through empowering machine tools with IoT innovations: a literature review	Jithin Sundaresan, Michael Siek, Samuel Mahatmaputra Tedjojuwono
	15:50	IPS139	VMI Implementation in Recycle PET Preform for The Beverage Industry	Ivander
	16:00	IPS226	Mystery Box in Shopee's Marketplace: Acceptance on What Offer?	Indah Regita Cahyani, Erni Herawati
	16:10	Q&A	Question and Answer	Moderator: Dendhy Indra Wijaya
4	16:30	IPS123	Applying Halal Logistics, Green & Lean supply chain management in a Pharmaceutical Company	Sartika Rini, Fauzi Khair
	16:40	IPS127	Improvement and analysis of aircraft maintenance flow process using lean manufacturing, PDCA, PICA, and VSM for sustainable operation system	Fauzi Khair, Muhammad Alif Sofyansyah Putra , Irma Rizkia
	16:50	IPS27	Achieving garment industry sustainability: The influence of leader-member exchange and work engagement on affective commitment	Enny Noegraheni Hindarwati, Dian Kurnianingrum, Dimas Rahul Prasetya
	17:00	IPS169	The Influence Of Altruism, Environmental Concern, And Social Influence On Purchase Intention for Eco-Friendly Clothing Products: Study of Gen Z in Greater Jakarta	Banu Rinaldi; Eka Maya Sari Siswi Ciptaningsih, Dionisius Edward Andersean
	17:10	Q&A	Question and Answer	Moderator: Fauzi Khair





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Industries, Productions and Socioeconomics

### ROOM F

Ses-sion	Sche-dule	Track & ID	Title	Author
1	13:00	IPS100	Manufacturing of 18650 Lithium Batteries for Electric Bamboo Scooters	A N F Saputra, A Hanifl , I A Martalogawa, SG Herawan
	13:10	IPS101	Making Laminated Bamboo As A Substitution Of Aluminum In Electric Scooter Frames	Ahmad Hanif, Azqy Nur Farenzy Saputra, Ismail Azizi Martalogawa, SG Herawan
	13:20	IPS95	Silicone-based microfluidics additive manufacturing review	S H Prajitna , C Harito
	13:30	IPS109	Literature review on materials and fabrication methods of 3D printed prosthetic fingers	W S Tan, C Harito , N Chainando , M Martawidjaja , L C Yahya , G K Andhini, and K B Putra
	13:40	IPS170	Potential of Dried Red Palm Leaves as Sheet Interior Material	Chelsea Oktaviani Setiawan , Deanawati Insani Wasilah , and Sandi Noprimum
	13:50	Q&A	Question and Answer	Moderator: Safarudin Gazali Herawan
2	14:10	IPS90	Analysis and Assessment of Passenger Comfort Level in Sustainable Public Bus Transportation System	K K Kaitaro , I A Budiman and T R Sahroni
	14:20	IPS71	MINI ORGANIC WASTE CHOPPER DESIGN WITH ERGONOMIC TECHNIQUES	A Susanto and T Sahroni
	14:30	IPS120	Export policy management approach for strengthening competitiveness of Indonesian SMEs footwear	J S Meliala, F Primadona, M S Andrianto
	14:40	IPS135	Preventive Maintenance for Sustainable Engineering in Shipping Company	K Liman and F Kurniawan
	14:50	IPS264	Quality Control Analysis for Diesel Truck in Automotive Industry: A Case Study PT. Krama Yudha Ratu Motor, Indonesia	HW Sahertian and F Kurniawan
	15:00	Q&A	Question and Answer	Moderator: TR Sahroni





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
 Secretariat: Faculty of Engineering, BINUS University  
 Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
 Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



3	15:20	IPS155	Development of A Sizing System for Men's Pants based on Anthropometric Data for Sustainable Garment Industry	Amir Tjolleng
	15:30	IPS302	A Literature Review: The Linkage Between Economic Growth and Ecology of Urban Area Development in Indonesia	Irfan Maulana Ashgaf and Dominicus Anindita Bagaskara Utomo, Susilo Kusdiwanggo
	15:40	IPS94	Multi-item Production Planning with Price and Lead Time Sensitive Demand	Kumara Dharaka , Era Febriana , Roikhanatun Nafi'ah
	15:50	IPS296	Technological Capability to Adopt Open Innovation: A Case Study	Era Febriana Aqidawati, Roikhanatun Nafi'ah, Kumara Dharaka
	16:00	IPS237	Integrated Employee Performance Measurement to Improve Productivity: A Case Study	R Nafi'ah, E F Aqidawati , H Febrianta, K P Dharaka, N A Pranoto
	16:10	Q&A	Question and Answer	Moderator: Amir Tjolleng
4	16:30	IPS273	Corporate governance, green strategy, and carbon emissions disclosure	Jenita Felicia Candra, Lindrianasari
	16:40	IPS76	Work Motivation Factors on Construction Workers: An Agent-Based Modeling Approach	Jayson Saputra and Fergyanto E. Gunawan
	16:50	IPS277	The Impact of Green Accounting and Integrated Reporting on Financial and Market Performance	Heurica F Dewi, Taufik C Anggara, Lindrianasari
	17:00	IPS272	Foreign ownership, green intellectual capital, and carbon emissions in basic materials sector and the energy companies	Pande Ketut Adinda Dharma Putra, Lindrianasari
	17:10	IPS281	Sustainable Commodities and Currency Dynamics: Unveiling the Impact of Commodity Price Volatility on Exchange Rates	Abraham , Anastasia D P Utami and Mohamad Ikhsan Modjo
	17:20	Q&A	Question and Answer	Moderator: Prof. Lindrianasari







ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Industries, Productions and Socioeconomics

### ROOM G

Ses-sion	Sche-dule	Track & ID	Title	Author
1	13:00	IPS201	Palm Oil Sustainability: Current and Further Potential Research to Adopt Sustainable Development Goals 2030	Muhammad Jamil and Muhammad Asrol
	13:10	IPS305	Recycling coconut shell for interior accessories with smart lights at Ranuyoso Lumajang	WW Putra, TIW Primadani
	13:20	IPS267	ESG Index Resilience Amidst COVID-19 Challenges: Insights from the Indonesian Sustainable Industry Landscape	Elizabeth Noviana, Ke Lee Loot, Mohamad Ikhsan Modjo
	13:30	IPS280	The Strategy of Digital Marketing and Sustainable Industry to Help Sales of PT. Rekacipta Mira Tama During The Pandemic	Catarina Manurung
	13:40	IPS295	Investment feasibility analysis of the application of minimum quantity lubrication (MQL) technology in the transmission case cover machining production line	Tomy Salahudin, Eirinne Carenina de Poerre, Falia Nurnabila, Tota Pirdo Kasih
	13:50	Q&A	Question and Answer	Moderator: Muhammad Asrol
2	14:10	IPS234	Identifying Key Behaviour Patterns that Influence Plastic Bag Refusal Decisions	Mulyani Karmagatri, Chyntia Ika Ratnapuri , Benjamin Casteillo
	14:20	IPS232	Exploring work environment's impacts on employee motivation and turnover intention in the garment industry in Wonogiri, Central Java	N Thoha and F C Maharani
	14:30	IPS301	Does Business Model Innovation Intervene Between Recognition Opportunities and Organizational Capabilities on Sustainability Performance? Evidence From SMEs In Jakarta	Enggal Sriwardiningsih, Lim Sanny, Agung Sudjamoko, Motohiro Kurowaka
	14:40	IPS303	Exploring the perception, knowledge, and behavioral tendency to use eco-friendly products of Generation Z in Tangerang Selatan	Rosidah





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

	14:50	IPS244	Examining the Effectiveness of Marketing Mix Components on Market Acceptance towards Natural Dye Products in Indonesia	Agung Utama, Anita Mustikasari , Endang Hariningsih , Nur Kholifah
	15:00	Q&A	Question and Answer	Moderator: Mulyani Karmagatri
3	15:20	IPS210	Optimizing Routes for Sustainability: A Comparative Analysis of Parcel Distribution Methods in South Jakarta	Firzanah Razita and Fransisca Tiur Basaria
	15:30	IPS223	Comparative analysis on beverage store owners towards sustainable packaging using multicriteria decision techniques	K A E Draculan, B S Santoso , B H Sinawang , W D D Perez, A A N P Redi, Hwi-Chie Ho, J D German
	15:40	IPS222	Harnessing Speech Recognition Technology for Sustainable Productivity: MyMeet an Eco-Engineering Approach to Automated Meeting Notes	Fairuz Iqbal Maulana, Taufiq Hidayah
	15:50	IPS175	Sustainable Advantage Logistics Transportation Services Company impacts from Business Agility, Supply Chain Agility, and Innovation Technology	Rini Setiawati, Intan Eka Fitria, Rifhqi Ichsan Presetya, Dhea Cade Galasantri
	16:00	IPS129	Interconnection of Green Knowledge Management and Sustainable Business Capabilities: An Investigation of the Culinary MSME Sector in the Food Waste Emergency Zone of Indonesia	Muhammad Alfarizi, Rini Kurnia Sari
	16:10	Q&A	Question and Answer	Moderator: Fransisca Tiur Basaria
4	16:30	IPS191	Physical Workload Analysis Using the Work Sampling Method for Sustainable Industry	S Hamali, M F Madani, E P Sari, A Pangestu, D V Marina, Y Jakaria
	16:40	IPS204	Designing a Tea Cafe Startup Using an Artificial Intelligencedriven Visualization Tool for Rendering	C Hariyoko, A Pramono, D Daniswara , A R Ho
	16:50	IPS207	The Use of Generative Artificial Intelligence among Sustainable Entrepreneurs: A Preliminary Analysis	Ari Margiono, Tatum Adiningrum, Agam Syah Putra
	17:00	IPS262	Supply Chain Visibility Model for Sustainable Digital Logistic Company	Sahnaz Ubud, Ignatius Kevin Putra
	17:10	Q&A	Question and Answer	Moderator: Sambudi Hamali





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Energy and Climate Mitigation

### ROOM H

Session	Schedule	Track & ID	Title	Author
1	13:00	ENC13 2	Carbon Emission and Economical Impact of Conversion Yamaha N-Max 150cc into Electric Motorcycle	R Eviendy, M Z Asy'ari, Z L Sukra1 and E Perangianangin
	13:10	ENC51	The Willingness to Purchase Electric Vehicles: A Comprehensive Review	Edi Purwanto and Agustinus Purna Irawan
	13:20	ENC55	Green Mindset and Electric Vehicles: A Systematic Literature Review	Edi Purwanto and Agustinus Purna Irawan
	13:30	ENC10 5	The Influence of Surrounding Tall Buildings on Increasing Energy Use in BRI II Tower Jakarta	T Oktavia, LMF Purwanto, K Arif
	13:40	ENC11 5	Solar Energy in Indonesia: The Implementation of Sustainable Development Goals for Net Zero Emissions	T M Kibtiah, G D P Dewi , A Bainus, M F Abdurrahman , K M Suitela , D R Hasan
	13:50	Q&A	Question and Answer	Moderator M. Zacky Asy'ari
2	14:10	ENC14 2	Hydrological Evaluation Using the Generalized Extreme Value (GEV) Distribution Method at Tamblang Dam, Bali	Christian Cahyono and Gevan Reviandra
	14:20	ENC27 5	Does energy intensity correlate with economic growth and government governance?	E Ernawati, M Syarif, LO Suriadi, R Rosnawintang , and RA Madi
	14:30	ENC17 3	Implementation of Energy Efficiency and Visual Comfort in Malang's Foreign Exchange Office Lighting	N S Aufa, A Pramono, M K Wijaya, A B Mappaturri
	14:40	ENC14 0	Public Flats With Implementation of Cross Ventilation In West Jakarta	M S Adli, R Hendarti, B Sakina
	14:50	ENC29 1	Energy Efficiency through Solar Panelled Mobile Workshop for Vocational Education Teaching Factory	Ruslan, Risa Rumentha Simanjuntak, Muhammad Alif Hidayat
	15:00	Q&A	Question and Answer	Moderator: Christian Cahyono





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
 Secretariat: Faculty of Engineering, BINUS University  
 Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
 Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



## Paralel Session: Sustainable Water and Sanitation

### ROOM I

Session	Schedule	Track & ID	Title	Author
1	13:00	WAT26	Flood Mapping Potential Areas Using HEC-RAS Software (Case Study: Kota Lama of Semarang)	Christian Cahyono and Loviandy Rusli
	13:10	WAT113	Promoting Water Sustainability through Degradation of 4- Nitrophenols by Spirodela polyrrhiza and Rhodococcus sp. Strain PKR-1 Association	Risky Ayu Kristanti, and Yureana Wijayanti
	13:20	WAT152	Flood Mapping Using HEC-RAS and HEC-HMS: A Case Study of Upper Citarum River at Dayeuhkolot District, Bandung Regency, West Java	Tasya Wijaya, and Yureana Wijayanti
	13:30	WAT128	Comparative Studies of Water Conservation Application in Office Buildings in Indonesia and Around the World	R R Firdausa, Y M Ardiani
	13:40	WAT231	The Water Hygiene of Street Food Vendors in Southeast Asia: A Review	Natalia Devi Ayu Restuti Mulyodarsono and Hari Kristopo
	13:50	Q&A	Question and Answer	Moderator: Christian Cahyono
2	14:10	WAT260	Smart Water Management System Using IOT based Sensors	Samuel Mahatmaputra Tedjojuwono and Jovan Dinata Jahja
	14:20	WAT259	IoT-Based HydroM8 Self-Watering Plant: A Design Thinking Approach and Business Model Analysis	Carola Basuki, Chairani Putri Pratiwi, Frederico Godwyn Pratama Dewat Manuetha , Kenny Christiano Alvarez, Nathanael Pandu Winarta , Nicholas Oliver Marvin Susetya
	14:30	WAT289	Environmental ethics analysis of 'La Galigo' in the damage of Bila Walanae River Watershed, South Sulawesi	Sitti Aaisyah, Erni, Muhammad Fahmi Basyhah Fauzi
	14:40	Q&A	Question and Answer	Moderator: Samuel Mahatmaputra





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Agriculture and Food

### ROOM J

Ses-sion	Sche-dule	Track & ID	Title	Author
1	13:00	AGF8	Development of Innovational Brem Bali Products with Probiotics through Immobilization of Durian Skin Flour as a Healthy Alcoholic Beverage	R H B Setiarto, WD Adyeni, L Anshory, A A Wardana
	13:10	AGF218	The Effect of Storage Time in Influencing Pb Metal Content in Canned Food: A Review	Aditya Fuadi and Ata Aditya Wardana
	13:20	AGF3	Formula Optimization and Product Design Analysis of Nougat with Purple Sweet Potato ( <i>Ipomea batatas</i> L), Cowpea ( <i>Vigna unguiculata</i> L.) and Stevia Leaves ( <i>Stevia rebaudiana</i> )	Graciosa Elano Milendia, Priyo Waspodo
	13:30	AGF30	The Effect of Curdlan Hydrocolloid on The Characteristics and Sensory of Non-Gluten Noodles	Emily Angelina and Priyo Waspodo
	13:40	AGF114	The Effect of Red Bean Juice and Butterfly Pea Extract on Flavonoid Content, Antioxidant Activity, and Sensory Quality of Stirred Yogurt	Felisha Airin, Ingrid Suryanti Surono
	13:50	Q&A	Question and Answer	Moderator: Ervina
2	14:10	AGF176	Effects of tilapia bone gelatin addition in broccoli jelly candy towards the protein, fat, fiber, and vitamin C content	Yan Miharti1 and Hari Kristopo
	14:20	AGF194	Utilization of Ginger and Its Waste	D A Sari, N W Saputro, V S Ulfa, S Sukanta, W Wagiono and M Hasyim
	14:30	AGF219	Proximate, total phenolic, carotenoid, antioxidant activity, color, and FTIR analysis of red ginger powders ( <i>Zingiber officinale</i> var. <i>Rubrum</i> ) through the evaporationcrystallization process	M Iqbal, D A Sari, NW Saputro, S Sukanta, M Hasyim
	14:40	AGF214	The evaluation of <i>Indigofera</i> seed production and quality in different environments	E D Sari, L Abdullah , N R Kumalasari and A Fanindi





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
Secretariat: Faculty of Engineering, BINUS University  
Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



	14:50	AGF13 1	Effect heating time and sugar on physicochemical and antioxidant activity of palmyra palm pericarp syrup	Donald John Calvin Hutabarat & Yohanes Daniagi Satiyo Nugroho
	15:00	Q&A	Question and Answer	Moderator: Hari Kristopo
3	15:20	AGF64	Community education approaches for food waste reduction in Indonesia: A systematic review	Angelina, C M Tahara, M Audrey, T Evelyne, V Y San, E Rukmini
	15:30	AGF67	Food Hygiene and Sanitation Knowledges and Practices of Street Food Vendors: A Systematic Review	Tasya Cataluna, Elisabeth Rukmini
	15:40	AGF22 1	Towards a Holistic Understanding: Health Consciousness and Perceived Benefit in Consumer Choices of Hydroponic Products	Mochammad Fahlevi, Mochamad Dandi, Fajar Juanda Matroji, Dimvy Rusefani Asetya
	15:50	AGF24 2	How Do Consumer Awareness, Health Consciousness, and Environmental Concern Drive the Willingness to Buy Hydroponic Vegetables?	Mochammad Fahlevi, Mochamad Dandi, Fajar Juanda Matroji, Dimvy Rusefani Asetya
	16:00	AGF26 1	Integration of Supply Chain Model for Perishable Food Products: Focus on Micro, Small and Medium Enterprises	Sahnaz Ubud, Ignatius Kevin Putra
	16:10	Q&A	Question and Answer	Moderator: Elisabeth Rukmini





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)

Secretariat: Faculty of Engineering, BINUS University

Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343

Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)

## Paralel Session: Sustainable Agriculture and Food

### ROOM K

Ses-sion	Sche-dule	Track & ID	Title	Author
1	13:00	AGF12 1	Nutritional Profile, Antioxidant Activities and Organoleptic Properties of Tempeh Fermented with Additional Butterfly Pea Flower Petals	Paskalia Evangelista and Reggie Surya
	13:10	AGF16 1	Antioxidant Activity and Consumer Acceptance Level of Kombucha Tea With Noni Fruit Extract ( <i>Morinda Citrifolia</i> )	Jennifer and R. Surya
	13:20	AGF11 9	Utilization of banana peel as functional ingredient in pudding: physicochemical and sensory aspects	Elvinna, N F Sadek
	13:30	AGF17 8	Comparison of different methods for evaluating the antioxidant activity of instant Torbangun ( <i>Coleus amboinicus</i> L.) drinks	F S Rusandi, N F Sadek
	13:40	AGF14 8	Application of hesperidin crude extract from Siamese orange peel as an alternative natural antioxidant in the butter making process	Clarissa Vivienne, Wiwit Amrinola
	13:50	Q&A	Question and Answer	Moderator: Reggie Surya
2	14:10	AGF1	Primer Design for Cloning of L-arabinose isomerase Gene from <i>Arthrobacter psychrolactophilus</i> into plasmid pET28a(+)	R. Nirwantono, David Herawan, Salsabila Firdausa, Issa Nuryana, Fina Amreta Laksmi, B. Pardamean
	14:20	AGF28 2	Application of response surface methodology on optimization of textural properties in the development of gelatin-based jelly candy from honey orange ( <i>Citrus nobilis</i> ) and purple passion fruit ( <i>Passiflora edulis</i> Sims)	J W Putri, N D M Romauli and E Julianti
	14:30	AGF21 6	Smart irrigation system: an IoT based approach prototype	Ellis Pax Mapakama and Maria Seraphina Astriani
	14:40	AGF21 7	The Effect of Different Disinfectants for Controlling Salmonella Serotypes on Food Contact Surfaces: A Review	Jasmine Bun and Galih Nugroho





ICEED 2023

# The 7<sup>th</sup> International Conference on Eco Engineering Development

Jakarta, 8 November 2023 (Virtual Conference)  
Secretariat: Faculty of Engineering, BINUS University  
Jl. K.H. Syahdan 9, West Jakarta, Indonesia 11480, +62 (21) 534 5830 ext. 2343  
Website: [engineering.binus.ac.id/iceed/](http://engineering.binus.ac.id/iceed/) | Email: [iceed@binus.edu](mailto:iceed@binus.edu)



	14:50	Q&A	Question and Answer	Moderator: Anzaludin Samsinga Perbangsa
3	15:20	AGF43	The Effect of Cold Press Juice Consumption During Snack Time on Hunger Level and Food Intake Based on Visual Analogue Scale (VAS)	Josephine Gabrielle Halim, Ervina Ervina
	15:30	AGF24	Factors affecting consumers' acceptability of fiber drink products	Ervina Ervina, Cicilia
	15:40	AGF25	The effect of butterfly pea ( <i>Clitoria ternatea</i> L.) and roselle ( <i>Hibiscus sabdariffa</i> L.) powder addition on the physicochemical and sensory properties of white chocolate ganache	F H Pamungkaningtyas, S J Fandy, and J P Septiyanto
	15:50	AGF125	The effects of roselle extract addition on physical properties and organoleptic preferences of sorghum noodles	Evie Wilona Onasie, Evelyne Elvania Abadi, Angela Kristiana, and Diana Lo
	16:00	AGF249	Role of Agriculture on Rural Household Food Security: A Systematic Review from Indonesia	Sherinia Lie Venna, Andreas Romulo
	16:10	Q&A	Question and Answer	Moderator: Ata Aditya Wardana







## Organizing Committee

### Advisory

Prof. Dr. Ir. Harjanto Prabowo, M.M. – Vice President of Binus Higher Education  
Dr. Nelly, S.Kom, MM, CSCA. – Rector of Bina Nusantara University.  
Dr. Ir. Nina Nurdiani, S.T., M.T. –Dean of Faculty of Engineering, Bina Nusantara University.

### General Chair

Prof. Dr. Tirta Nugraha Mursitama, S.Sos, M.M., Ph.D.

Prof. Dr. Juneman Abraham, S.Psi, M.Psi., CWP, CIRR – Vice Rector of Research and Technology Transfer, Bina Nusantara University.

### Conference Chair

Assoc. Prof. Ir. Dave Mangindaan, S.T., M.T., Ph.D., MRSC, AMIChemE, IPM, ASEAN Eng.  
Waste-Food-Environmental Nexus Research Interest Group Leader, Bina Nusantara University.

### Editor in Chief

Assoc. Prof. Ir. Dave Mangindaan, S.T., M.T., Ph.D., MRSC, AMIChemE, IPM, ASEAN Eng.

### Secretary

Michael Isnaeni Djimantoro, S.T., M.T.

### Treasure

Meilani, S.T., M.T.

### Track Directors and Deputy Directors

Assoc. Prof. Ir. Dave Mangindaan, S.T., M.T., Ph.D., MRSC, AMIChemE, IPM, ASEAN Eng.  
Ir. Riza Ainul Hakim Suwondo, S.T., M.Sc., Ph.D  
Safarudin Gazali Herawan, S.T., M.Eng., Ph.D.

Dr. Ir. Harvey Febrianta, S.Pt, M.Si, IPM

Dr. Ir. Juliastuti, M.T.

Amir Tjolleng, S.Si., M.Sc., Ph.D

### Webmaster and Publicity

Assoc. Prof. Ir. Dave Mangindaan, S.T., M.T., Ph.D., MRSC, AMIChemE, IPM, ASEAN Eng.  
Bonny A Suryawinata, S.T., M.Ars.

### Event Program

Michael Isnaeni Djimantoro, S.T., M.T.

Rifqah Raudhatul Firdausa, S.Ars.

### Technical Support

Fitri Anggandari, S.E.

