

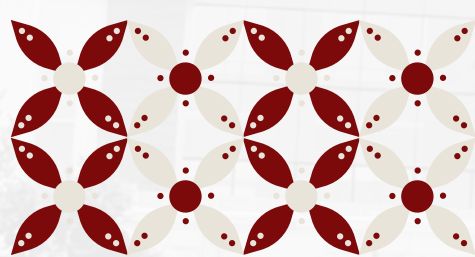
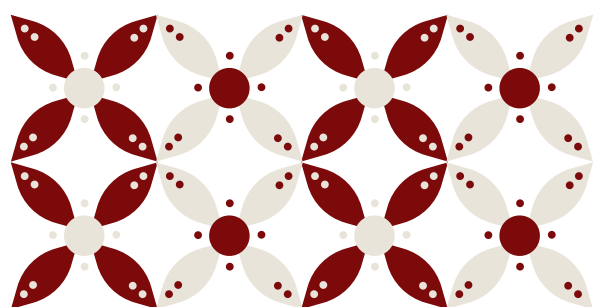


UNIVERSITAS
GADJAH MADA



芝浦工業大學
SHIBaura INSTITUTE OF TECHNOLOGY

SEATUC 20th ANNIVERSARY



PROGRAM BOOK

SEATUC 20th ANNIVERSARY 2025

Southeast Asia Technical University Consortium

Faculty of Engineering, Universitas Gadjah Mada
Yogyakarta, 2025

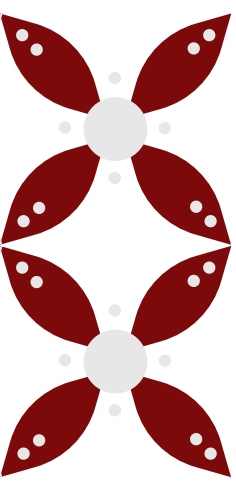


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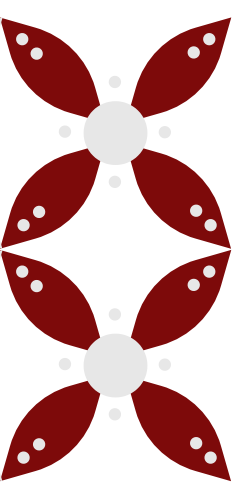
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About SEATUC

The Southeast Asian Technical University Consortium (SEATUC) is a pioneering academic alliance established in 2006 by the Shibaura Institute of Technology (SIT), Japan, with the vision of enhancing multilateral collaboration in science, engineering, and technology across Asia. Today, SEATUC brings together eight leading technical universities from Indonesia, Malaysia, Thailand, Vietnam, and Japan, forming a vibrant network of innovation and exchange.

The consortium includes:

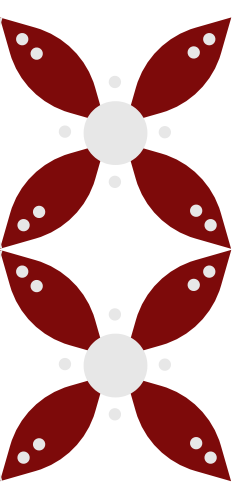
- Universitas Gadjah Mada (UGM) and Institut Teknologi Bandung (ITB) – Indonesia
- Universiti Teknologi Malaysia (UTM) – Malaysia
- King Mongkut’s University of Technology Thonburi (KMUTT) and Suranaree University of Technology (SUT) – Thailand
- Hanoi University of Science and Technology (HUST) and Ho Chi Minh City University of Technology (HCMUT) – Vietnam
- Shibaura Institute of Technology (SIT) – Japan

Each year, SEATUC hosts an international symposium that serves as a platform for research presentation, academic dialogue, and strategic partnership development. These symposia rotate among member institutions, showcasing regional strengths and fostering cross-border collaboration. The upcoming SEATUC 20th Anniversary Symposium, held at Universitas Gadjah Mada in December 2025, celebrates two decades of shared progress under the theme: “Technology-Driven Innovations for a Sustainable and Resilient Society”.

SEATUC’s mission goes beyond academic exchange, it nurtures young researchers, promotes joint research initiatives, and supports student mobility programs that prepare future leaders to tackle global challenges with regional insight and interdisciplinary expertise.

In essence, SEATUC is more than a consortium, it is a community of forward-thinking institutions committed to shaping a sustainable future through collaborative education, research, and innovation.





Welcome Remarks

Distinguished guests, esteemed colleagues, and all participants of the 19th Southeast Asian Technical University Consortium (SEATUC) 20th Anniversary Symposium 2025.

On behalf of Universitas Gadjah Mada and the Faculty of Engineering, it is my great pleasure to welcome you to Yogyakarta and to our campus. We are honored to host this prestigious gathering of scholars, innovators, and leaders from across Southeast Asia and beyond.



SEATUC has long stood as a beacon of regional collaboration, advancing excellence in science, engineering, and technology. This year's symposium continues that tradition bringing together diverse minds to exchange ideas, foster partnerships, and explore solutions to the pressing challenges of our time.

We hope this symposium will serve not only as a platform for academic dialogue and innovation, but also as a space for building enduring friendships and institutional ties. May your time here be filled with meaningful discussions, inspiring presentations, and fruitful collaborations

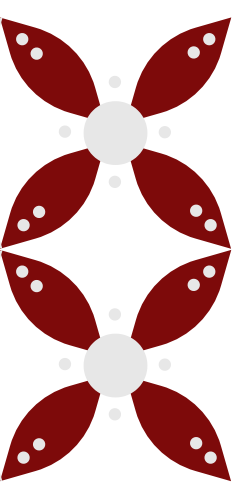
While you are with us, I also encourage you to experience the rich cultural heritage and warm hospitality of Yogyakarta. From its historic temples to its vibrant arts and culinary traditions, our city offers a unique blend of tradition and modernity.

Once again, welcome to SEATUC 20th Anniversary Symposium 2025. We wish you a productive, engaging, and memorable symposium.

Thank you

Prof. Ir. Selo, S.T., M.T., M.Sc, Ph.D., IPU, ASEAN Eng.





List of Speakers



Dr. Hasegawa Tadahiro

Dean of Graduate School of Engineering and Science
Shibaura Institute of Technology



Prof. Dr. Eng. Ir. Herianto, S.T., M.Eng., IPU., ASEAN Eng.

Chairman of SEATUC 2025
Faculty of Engineering, Universitas Gadjah Mada



Dr. Miyoshi Takumi

Deputy of Graduate School of Engineering and Science
Shibaura Institute of Technology



Prof. Kose Toshihiro

Director, Bay Area Open Innovation Center
Multidisciplinary Industry-Academia Collaboration Center,
Shibaura Institute of Technology



Prof. Ir. Alva Edy Tontowi, M.Sc., Ph.D., IPU., ASEAN Eng.

Additive Manufacturing and Biomedical Engineering
Faculty of Engineering, Universitas Gadjah Mada



Prof. Ir. Ali Awaludin, S.T., M.Eng., Ph.D., IPU., ACPE.

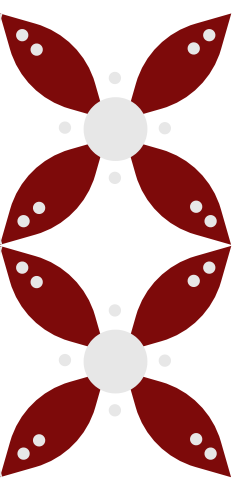
Vice Dean of Research, Community Development, and
Cooperation
Faculty of Engineering, Universitas Gadjah Mada



Chu Manh Hung, Ph.D

Associate Professor in School of Materials and Science and
Engineering
Hanoi University of Science and Technology





Committee

UGM's Steering Committee

Prof. Ir. Selo, ST, MT, M.Sc, Ph.D., IPU, ASEAN Eng. (UGM)

Prof. Dr. Ir. Sugeng Sapto Surjono, ST, MT, IPU., ASEAN.Eng. (UGM)

Prof. Muslikhin Hidayat, ST, MT, Ph.D., IPU. (UGM)

Prof. Ir. Ali Awaludin, S.T., M.Eng., Ph.D., IPU., ACPE (UGM)

Organizing Committee

General Chair

Prof. Dr. Eng. Ir. Herianto, S.T., M.Eng., IPU, ASEAN Eng.

Vice Chair

Prof. Ir. Bertha Maya Shopa, ST., M.Sc., Ph.D., IPU., ASEAN Eng.

Dr. Ir. Ahmad Nasikun, S.T., M.Sc.

Secretariat

Apri Rohmanto, S.S.

Deny Kusumawati, S.Pd.

Ananda Khairunnisa Rusnanti, S.E.

Publication

Dr.Ir. Nur Abdillah Siddiq, S.T., IPP.

Ade Kurniawan, S.T., M.Eng., Ph.D

Dr. Ir. Guntur Dharma Putra, S.T., M.Sc.

Mega Setyowati, S.T., M.Eng.

Technical Program

Doni Agus Wijayanto, S.E., M.M.

Ir. Nurul Alvia Istiqomah., S.T., M.Sc., Ph.D.

Ir. Dawi Karomati Baroroh, S.T., M.Sc., Ph.D., IPM

Cecep Pratama, S.Si., M.Si., D.Sc.

Purwoko, S.I.P., M.A.

Aci Prima Sari, S.P.

Rina Satriani, S.I.P., M.P.P.

Nindya Laksita Laras, S.T.P., M.Eng.

Retno Dwi Wulandari, S.S., M.Sc.

Priyanto

Poster Exhibition

Ilham Zulfa Pradipta, S.T., M.Eng.

Hospitality and Logistic

Suryani, S.E.

Noor Indha Lesmanawati,S.E.

Inggit Utami, S.I.P.

Eni Purwanti,A.Md.

Munaji, S.IP.

Bisri Mustofa

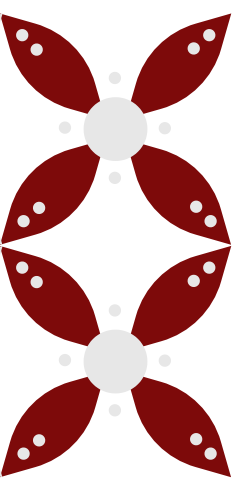
Treasury

Dr. Tri Mulyani Sunarharum, S.T.

Rita Kurniawaty, S.E., M.Sc.

Nawang Siwi,S.E.

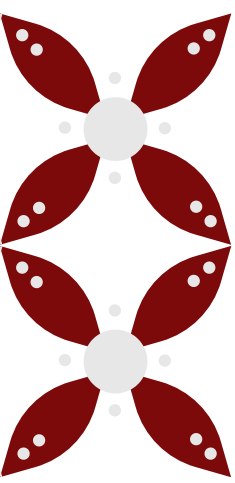




Symposium Schedule

Wednesday, December 3, 2025,
SGLC Auditorium, Faculty of Engineering, UGM

Time (UTC+7)	Agenda
08.00 - 09.00	Preparation and Registration
09.00 - 09.05	Safety Induction
09.05 - 09.10	Opening (MC) and Singing the National Anthem of the Republic of Indonesia
09.10 - 09.15	Opening Speech: Prof. Herianto, Chairman of SEATUC
09.15 - 09.25	Opening Remarks: Dr. Hasegawa Tadahiro (Dean of Graduate School of Engineering and Science, Shibaura Institute of Technology)
09.25 - 09.30	Opening Remarks: Prof. Selo (Dean of Faculty of Engineering, Universitas Gadjah Mada)
09.30 - 10.00	SEATUC Anniversary - 20 Year History of SEATUC by Founder of SEATUC, Dr. Miyoshi Takumi (Deputy of Graduate School of Engineering and Science, Shibaura Institute of Technology)
10.00 - 10.05	Photo Session
10.05 -10.15	Coffee Break
10.15 - 12.00	Workshop Session: 1.Prof. Kose Toshihiro (Director, Bay Area Open Innovation Center, Shibaura Institute of Technology) 2.Prof. Alva Edy Tontowi (Additive Manufacturing and Biomedical Engineering, Faculty of Engineering, UGM)



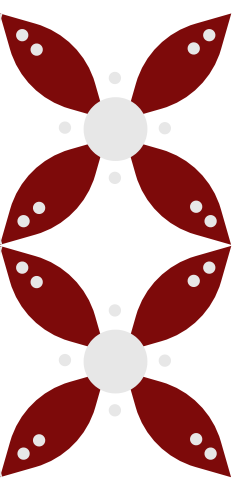
Symposium Schedule

Wednesday, December 3, 2025,
SGLC Auditorium, Faculty of Engineering, UGM

Time (UTC+7)	Agenda
12.00 - 14.00	Break (Lunch) <ul style="list-style-type: none">• Poster Session• WiP Session Poster and WiP Session held at SGLC Plaza (First Floor)
14.00 - 16.00	Technical Session (Schedule available on Parallel Session Schedule)
18.00 - 21.00	Gala Dinner

Thursday, December 4, 2025,
SGLC Auditorium, Faculty of Engineering, UGM

Time (UTC+7)	Agenda
08.00 - 08.30	Preparation and Registration
08.30 - 10.00	Workshop Session: <ul style="list-style-type: none">1. Chu Manh Hung, Ph.D. (Associate Professor in School of Material and Science and Engineering, Hanoi University of Science and Technology)2. Prof. Ali Awaludin (Vice Dean of Research, Community Development and Cooperation, Faculty of Engineering, UGM)
10.00 - 10.15	Coffee Break
10.15 - 12.00	Campus Tour <ul style="list-style-type: none">1. ERIC (Engineering Research and Innovation Center)2. Waste Management Model3. Solar Management Model



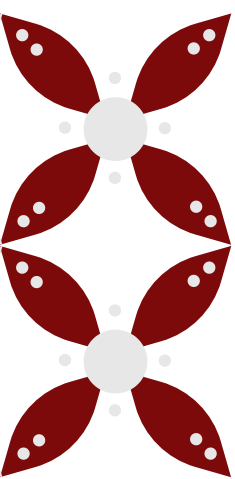
Symposium Schedule

Thursday, December 4, 2025,
SGLC Auditorium, Faculty of Engineering, UGM

Time (UTC+7)	Agenda
12.00 - 14.00	Break (Lunch) <ul style="list-style-type: none">• Poster Session Poster held at SGLC Plaza (First Floor)
14.00 - 15.30	1.Technical Session (Schedule available on Parallel Session Schedule) 2.Steering Committee Meeting (held concurrently with the technical session) 3.WiPS Presentation Schedule at ERIC Building
15.30 - 17.00	Closing Ceremony <ul style="list-style-type: none">1.Announcement of the Next Host2.Paper, Poster, and WiP Awarding

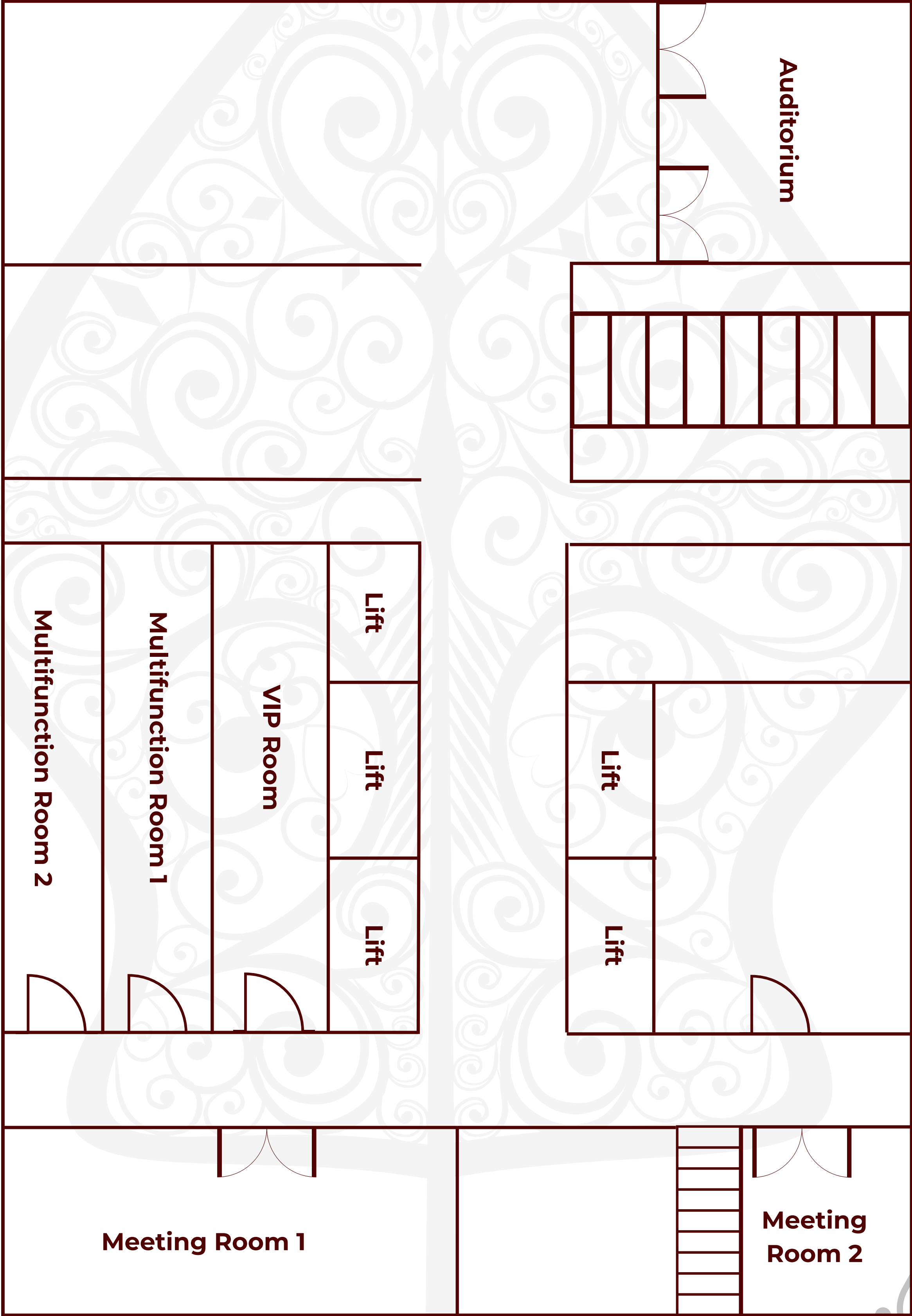
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SGLC Building



Venue Map

SGLC 3rd Floor





Parallel Presentation Schedule

Wednesday, December 3, 2025
Meeting Room 2, SGLC 3rd Floor
Topic : Robotics & Planetary Exploration Engineering
Session Chair: Cecep Pratama, S.Si., M.Si., D.Sc.
Session PiC: Ilham Zulfa Pradipta, S.T., M. Eng.

No	Time (UTC+7)	Paper Title	Presenter
1	14.00 - 14.10	Slope Traversal Recovery on Steep Loose Soil using Beam Extension and Contraction on Steep Terrain	Kenta Sagara
2	14.10 - 14.20	A Study on Skidding Suppression during Travelling Across Slopes Using Multiple Small Light Collaborative Locomotion Rovers	Ren Kamegawa
3	14.20 - 14.30	Study on Traveling Steep Slopes by a Mowing Robot with a Crawler Roll Rotation Mechanism	Yuya Harada,
4	14.40 - 14.50	Study on Slippage during Traversal of Loose Soil by a Lunar and Planetary Exploration Rover with function of Push Pull Locomotion with Independently adjustable Wheelbases and Screw Wheels	Makoto Okuda,
5	14.50 - 15.00	A Study on Enhancing Path-Following Performance with a Lunar Exploration Rover Featuring Independently Telescopic Left and Right Wheelbases	Rintaro Sano
6	15.10 - 15.20	Estimation of Traveling State using Chassis Strain of Planetary Exploration Rover and Evaluation of the Effect of Grouser Shape	Sakurako Mashimo
7	15.20 - 15.30	Quantitative Analysis of Camber-Angled Outrigger Arm for Enhancing Lateral Stability of Crawler Robots on Inclined Terrains	Xuelong Zhang
8	15.30 - 15.40	Push-Pull Locomotion with Rotating Platform for Slope Slip Suppression in Sandy Terrain	Zhirui Bai
9	15.40 - 15.50	Study on Vibratory Penetration Using a Hollow Tool for Lunar Subsurface Exploration	Ryo Oyori
10	15.50 - 16.00	Performance Evaluation of a Single Arm for Active Swimming of a Feather Star-Inspired Robot	Keita Yamazaki



Parallel Presentation Schedule

Wednesday, December 3, 2025

Multifunction Room 1, SGLC 3rd Floor

Topic : Control Engineering, System Dynamics & Human-AI Systems

Session Chair: Dr. Ir. Guntur Dharma Putra, S.T., M.Sc.

Session PiC: Rina Satriani, S.I.P., M.P.P.

No	Time (UTC+7)	Paper Title	Presenter
1	14.00 - 14.15	State and Output Non-Overshooting Analysis and Design for Linear Time-Invariant Systems	Chihiro Kitahara
2	14.15 -14.30	D-type and PD-type Iterative Learning Control Using Two Previous Trial Data	Kosei Mochizuki
3	14.30 - 14.45	Designing a hybrid dynamic vibration absorber with limited information	Junta Goto
4	14.45 - 15.00	Experimental Study on the Design Method for Vibration Characteristics of Automobile Seats	Yosuke Sugimoto
5	15.00 - 15.15	A Semi-Supervised Clustering Framework for Lunar Resource Prediction with Future Integration of Adaptive Strategies	Hiroyuki Takahashi
6	15.15 - 15.30	Quantitative Measurement and Evaluation of Walkable Systems in Smart Cities Based on Virtual Reality and Wearable Biosensor	Shiwei Hu



Parallel Presentation Schedule

Wednesday, December 3, 2025

Multifunction Room 2, SGLC 3rd Floor

Topic : Control Engineering, System Dynamics & Human-AI Systems

Session Chair: Ir. Dawi Karomati Baroroh, S.T., M.Sc., Ph.D., IPM

Session PiC: Nindya Laksita Laras, S.T.P., M. Eng.

No	Time (UTC+7)	Paper Title	Presenter
1	14.00 - 14.15	A Preliminary Study on Developing Virtual Exercise Materials via Collaboration Between Generative AI and Experts	Hiroto Sudo
2	14.15 -14.30	Role of Shared Values in Team Dynamics: A Practical Application of Q Methodology in GX Training	Takumi Kanno
3	14.30 - 14.45	Proposal for a Workshop-based Approach to HR Measures Using Multilayer Social Network Analysis	Fumiya Sato
4	14.45 - 15.00	Reproducing Tourist Behavior in Ishigaki City Using ABM	Chisato Watanabe
5	15.00 - 15.15	Experimental Performance Analysis of a Combined Savonius–Darrieus Vertical Axis Wind Turbine Using NACA 0015 and NREL S809 Airfoils	Elysa Nensy Irawan
6	15.15 - 15.30	Umami enhancer as functional ingredient produced from tomato pomace using foam-mat technology	Orrapun Selamassakul



Parallel Presentation Schedule

Wednesday, December 4, 2025
Multifunction Room 1, SGLC 3rd Floor
Topic : Material Science and Engineering
Session Chair: Ade Kurniawan, S.T., M.Eng., Ph.D
Session PiC: Retno Dwi Wulandari, S.S., M. Sc.

No	Time (UTC+7)	Paper Title	Presenter
1	14.00 - 14.15	BN treatment for hydrogen permselective membranes	Haruki Sato
2	14.15 - 14.30	Effects of salts on permeation through FAU zeolite membranes	Alvin Rahmad Widyanto
3	14.30 - 14.45	Effects Silicon Precursors on the Post-Treatment of MFI Zeolite Membranes	Irmariza Shafitri Caralin
4	14.45 - 15.00	Carbon Dioxide Conversion through Ceramic MembranesCarbon Dioxide Conversion through Ceramic Membranes	Mikihiro Nomura
5	15.00 - 15.15	Influence of Zr Doping on the Structural and Electrical Behavior of CuO Thin Films Deposited Using an RF Magnetron Sputtering Method	Takumi Akiyama
6	15.15 - 15.30	Determination of Bromine Content in Organic Superconductors, λ -(BETS) $_2$ GaBr $_x$ Cl $_{4-x}$ using Energy-dispersive X-Ray (EDX) Spectroscopy.	Aulia Anisa Firdaus
7	15.30 - 15.45	Structural Analysis of Organic Superconductor Family λ -(BETS) $_2$ GaBr $_x$ Cl $_{4-x}$ and λ -(STF) $_2$ GaCl $_4$: X-Ray Diffraction and Density Functional Theory Calculation	Arifa Diana Agustin

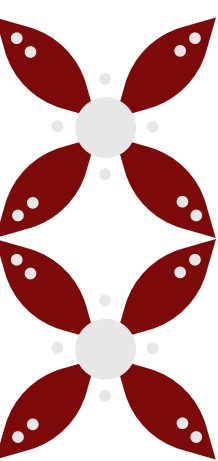


Parallel Presentation Schedule

Wednesday, December 4, 2025
Multifunction 2, SGLC 3rd Floor

Topic : Architecture, Urban Studies & Built Environment
Session Chair: Ir. Nurul Alvia Istiqomah., S.T., M.Sc., Ph.D.
Session PiC: Rina Satriani, S.I.P., M.P.P.

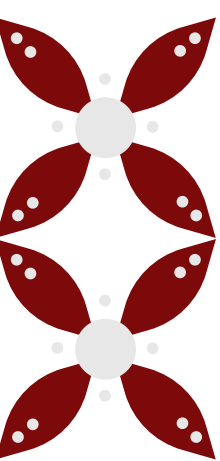
No	Time (UTC+7)	Paper Title	Presenter
1	14.00 - 14.15	Effectiveness of Evacuation Signage for Non-Local Visitors in Tourist Areas During Earthquakes: The Tokyo Skytree Area	Zuming Wei
2	14.15 - 14.30	Insight Perspective of the Owners of the High-Density Shophouses in Khlong-Toei Market Community, Bangkok, Thailand	Tharin Darunaithorn
3	14.30 - 14.45	Evaluation of Protection Performance and Maintenance Timing of Coating Systems for GRC Panels	Ryo Hiratsuka
4	14.45 - 15.00	A Genealogical Approach to Traditional Village Landscapes: The Case of San-Qing Village's Volcanic Stone Architecture	Yuhang Zhou
5	15.00 - 15.15	Architecture of Care Across Territories: Social Recovery and Community Infrastructure in Post-Disaster Settings	Monica Garcia Raxcaco
6	15.15 - 15.30	3D Heritage: Using Photogrammetry to Digitally Preserve Vernacular Architecture in Southern Japan and Northern Thailand	Hussen Mahdi



WiPs Presentation Schedule

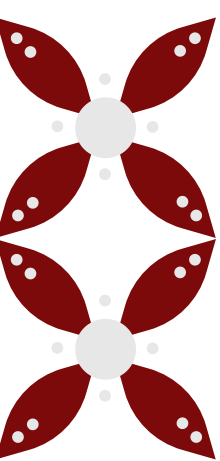
Wednesday, December 4, 2025
B304 Room, ERIC 3rd Floor
Session Chair: TBA
Session PiC: TBA

No	Time (UTC+7)	Paper Title	Presenter
1	14.00 - 14.05	Development of a Brake Mechanism to Reduce Discomfort Experienced by Care Recipients During Deceleration in Manually-Operated Attendant Controlled Wheelchairs	Takahiro Saiki
2	14.05 - 14.10	Evaluation of an Emergency Wake-Up System for Hearing-Impaired Persons	Yuko Egawa
3	14.10 - 14.15	Optimizing VLC specifications for indoor positioning systems	Shinichi Fujimura
4	14.15 - 14.20	Vibration-Based Hazard Warning System for Visually Impaired	Kai Matsuguma
5	14.20 - 14.25	Design Guidelines of Online Supermarket Mobile Apps for Older Adults	Yuto Iwakami
6	14.25 - 14.30	Toward a Practical Framework for Disaster Preparedness and Multicultural Manuals for Foreign Tourists	Hideki Kato
7	14.30 - 14.35	Evaluating Mental Health and Well-Being in Biophilic Open Space Design: A Literature Review in Japanese Urban Contexts	Claire Agbangla
8	14.35 - 14.40	Isolation Patterns and Critical Factors for Post-Flood Living: Focusing on People with Special Needs	Shun Yamanaka
9	14.45 - 14.50	Systematic Review of Spatial Design Approaches Addressing Issues in River Spatial Planning	Yuzuki Sasaki
10	14.50 - 14.55	Study of Changes in the Pore Structure of GGBS concrete by Carbonation	Mikoto Hirostugi



WiPs Presentation Schedule

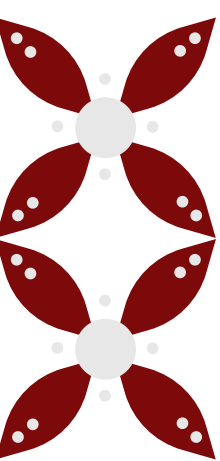
No	Time (UTC+7)	Paper Title	Presenter
11	14.55 - 15.00	Protective Effects of Visible Light Irradiation Against UVB-Induced DNA Damage and Its Regulation of DNA Repair Gene Expression	Nana Kanda
12	15.00 - 15.05	Evaluation of the Protective Effect of Tryptophan-Derivative-1 against Arsenic-Induced Cytotoxicity in Human Skin Cells	Mayu Yoshino
13	15.05 - 15.10	Pathological Analysis of Tissues from Mice with Psoriasis-like Symptoms and Evaluation of NF-κB Activity in Cells Transfected with geneC Mutants	Tsuyoshi Horie
14	15.10 - 15.15	Microbial degradation of Pyrene and Fluorene and Its impact on community structure in seawater from Suruga Bay, Japan	Kota Ashizawa
15	15.15 - 15.20	The endurance effects of drinking water with different mineral compositions but the same hardness on mice	Nagisa Tomioka
16	15.20 - 15.25	Effect of gelatin on hydrolytic enzyme activity in Massilia sp. strain N-3	Raishin Nakamichi
17	15.25 - 15.30	Airborne Bacterial Community Analysis and Microbial Load Measurement	Chihaya Noro



WiPs Presentation Schedule

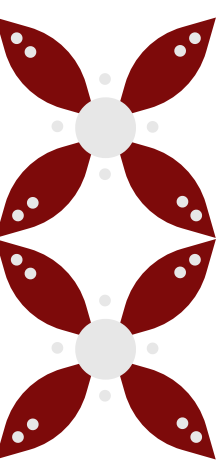
Wednesday, December 4, 2025
B305 Room, ERIC 3rd Floor
Session Chair: TBA
Session PiC: TBA

No	Time (UTC+7)	Paper Title	Presenter
1	14.00 - 14.05	Development of an Aromatic Pollutant Detection Method Using Ring-Cleavage Enzymes	Kazutomo Yamazaki
2	14.05 - 14.10	The Anti-Obesity Effects of Tocotrienols and Their nfluence on Spontaneous Activity in Obese Mice	Hayate Suzuki
3	14.10 -14.15	Verification of the Sympathoactive Effects by a Single Oral Administration of Procyanidin B2	Ashiyu Ono
4	14.15 - 14.20	The effects of drinking water with the identical hardness but different mineral compositions on mice	Wakana Takamatsu
5	14.20 - 14.25	Analyses of heterocyclic compounds degradation by Antarctic soil bacterium strain BS19	Riina Nakano
6	14.25 - 14.30	Drug Repositioning to Overcome Acquired Drug Resistance in Lung Cancer Cells	Masanori Kimura
7	14.30 - 14.35	Effect of Tryptophan Derivative 2 on Melanin Production in Skin	Toshiki Yamamoto
8	14.35 - 14.40	The Effects of Sake Lees Extracts on Obese Mice	Shunei Miyashita
9	14.40 - 14.45	Elucidation of the relationship between intracellular Ca ²⁺ homeostasis breakdown and mitochondria/endoplasmic reticulum during nerve process degeneration	Wakana Kuwabara
10	14.45 - 14.50	Degradation of Plasticizer DEHP and Metabolism Pathway Analysis Using Marine Bacterium Strain KHP1	Miroku Yamada



WiPs Presentation Schedule

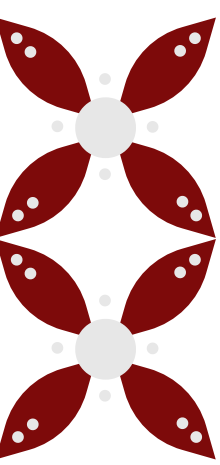
No	Time (UTC+7)	Paper Title	Presenter
11	14.50 - 14.55	Verification of the glucose tolerance-improving effect of (-)-epigallocatechin gallate	Yamato Yoshida
12	14.55 - 15.00	The three-dimensional structure prediction of human bitter taste receptor using the method of AlphaFold3	Takafumi Shimizu
13	15.00 - 15.05	Methane Oxidation in Sediments of a Shallow, Eutrophic Lake in Japan	Shoya Yano
14	15.05 - 15.10	Verification of the Cognitive Enhancement Effects of a Single Oral Dose of Procyanidin B2	Kazunari Takano
15	15.10 - 15.15	Quantitative descriptive analysis for evaluating the sensory properties of polyphenols.	Hitomi Nakamura
16	15.15 - 15.20	Effects of a Single Oral Dose of Procyanidin B2 on Sleep and Wakefulness in Mice	Minoru Shibata



List of Papers, Posters, and WiPs

Papers

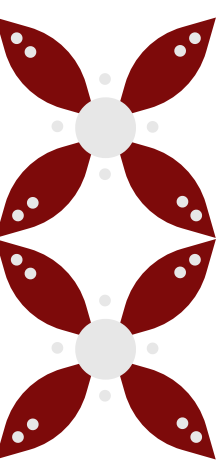
No	Name	Title
1	Kenta Sagara, Daisuke Fujiwara, and Kojiro Izuka	Slope Traversal Recovery on Steep Loose Soil using Beam Extension and Contraction on Steep Terrain
2	Aulia Anisa Firdaus, Togo Yagi, Arifa Diana Agustin, Kanade Yokomori, Taiyo Oka, Dita Puspita Sari, Shuhei Fukuoka, Atsushi Kawamoto, Takao Suzuki and Yasuyuki Ishii	Determination of Bromine Content in Organic Superconductors, λ -(BETS)2GaBrxCl4-x using
3	Hiroyuki Takahashi and Kojiro Iizuka	A Semi-Supervised Clustering Framework for Lunar Resource Prediction with Future Integration of Adaptive Strategies
4	Ryo Oyori, Shotaro Date and Kojiro Iizuka	Study on Vibratory Penetration Using a Hollow Tool for Lunar Subsurface Exploration
5	Yosuke Sugimoto and Akinari Hirao	Experimental Study on the Design Method for Vibration Characteristics of Automobile Seats
6	Arifa Diana Agustin, Aulia Anisa Firdaus, Kanade Yokomori, Taiyo Oka, Shuhei Fukuoka, Atsuhi Kawamoto, Isao Watanabe, Dita Puspita Sari and Yasuyuki Ishii	Structural Analysis of Organic Superconductor Family λ -(BETS)2GaBrxCl4-x and λ -(STF)2GaCl4: X-Ray Diffraction and Density Functional Theory Calculation
7	Ren Kamegawa, Kojiro Iizuka and Daisuke Fujiwara	A Study on Skidding Suppression during Travelling Across Slopes Using Multiple Small Light Collaborative Locomotion Rovers
8	Yuya Harada, Ryu Taniguchi, Xuelong Zhang, Hiroaki Ushikoshi and Kojiro Iizuka	Study on Traveling Steep Slopes by a Mowing Robot with a Crawler Roll Rotation Mechanism
9	Keita Yamazaki and Kojiro Iizuka	Performance Evaluation of a Single Arm for Active Swimming of a Feather Star-Inspired Robot



List of Papers, Posters, and WiPs

Papers

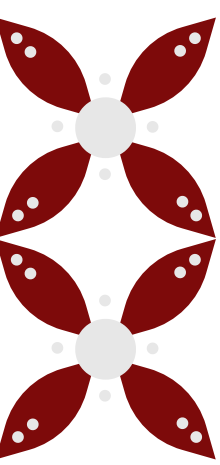
No	Name	Title
10	Sakurako Mashimo, Sae Takano, Kohei Inaba and Kojiro Iizuka	Estimation of Traveling State using Chassis Strain of Planetary Exploration Rover and Evaluation of the Effect of Grouser Shape
11	Xuelong Zhang, Yuya Harada, Ryu Taniguchi, Hiroaki Ushikoshi and Kojiro Iizuka	Quantitative Analysis of Camber-Angled Outrigger Arm for Enhancing Lateral Stability of Crawler Robots on Inclined Terrains
12	Zhirui Bai, Daisuke Fujiwara and Kojiro Iizuka	Push-Pull Locomotion with Rotating Platform for Slope Slip Suppression in Sandy Terrain
13	Rintaro Sano, Tsukasa Mochizuki, Tatsuhiko Suga and Kojiro Iizuka	A Study on Enhancing Path-Following Performance with a Lunar Exploration Rover Featuring Independently Telescopic Left and Right Wheelbases
14	Makoto Okuda, Daisuke Fujiwara and Kojiro Iizuka	Study on Slippage during Traversal of Loose Soil by a Lunar and Planetary Exploration Rover with function of Push Pull Locomotion with Independently adjustable Wheelbases and Screw Wheels
15	Elysa Nensy Irawan, Hinata Ishikawa, Kai Shibuya, Ken-Ichiro Yamashita and Goro Fujita	Experimental Performance Analysis of a Combined Savonius Darrieus Vertical Axis Wind Turbine Using NACA 0015 and NREL S809 Airfoils
16	Shiwei Hu and Ikuro Shimizu	Quantitative Measurement and Evaluation of Walkable Systems in Smart Cities Based on Virtual Reality and Wearable Biosensor
17	Zuming Wei and Hitoshi Nakamura	Effectiveness of Evacuation Signage for Non-Local Visitors in Tourist Areas During Earthquakes: The Tokyo Skytree Area
18	Tharin Darunaithorn and Ikuro Shimizu	Insight Perspective of the Owners of the High-Density Shophouses in Khlong-Toei Market Community, Bangkok, Thailand



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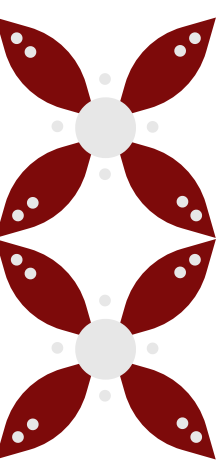
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19	Ryo Hiratsuka, Mikio Kihara and Junko Koga	Evaluation of Protection Performance and Maintenance Timing of Coating Systems for GRC Panels
20	Yuhang Zhou and Ikuro Shimizu	A Genealogical Approach to Traditional Village Landscapes: The Case of San-Qing Village’s Volcanic Stone Architecture
21	Monica Garcia Raxcaco	Architecture of Care Across Territories: Social Recovery and Community Infrastructure in Post-Disaster Settings
22	Hussen Mahdi and Ikuro Shimizu	3D Heritage: Using Photogrammetry to Digitally Preserve Vernacular Architecture in Southern Japan and Northern Thailand
23	Haruki Sato and Mikihiro Nomura	BN treatment for hydrogen permselective membranes
24	Alvin Rahmad Widyanto, Hikaru Matsushige, Yuta Kuribayashi, Yuta Nakai and Mikihiro Nomura	Effects of salts on permeation through FAU zeolite membranes
25	Irmariza Shafitri Caralin, Haruki Kurata, Reina Akiya, Myu Yamauchi and Mikihiro Nomura	Effects Silicon Precursors on the Post-Treatment of MFI Zeolite Membranes
26	Takumi Akiyama and Hiroyasu Ishikawa	Influence of Zr Doping on the Structural and Electrical Behavior of CuO Thin Films Deposited Using an RF Magnetron Sputtering Method
27	Mikihiro Nomura	Carbon Dioxide Conversion through Ceramic Membranes



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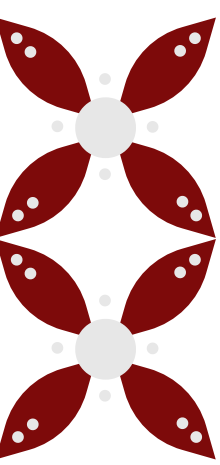
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28	Orrapun Selamassakul, Natta Laohakunjit, Phawinee Srinuan, Nattapon Kaisangsri, Apiradee Uthairatanakij, Ratchadaporn Kaprasob and Chanikan Sonklin	Umami enhancer as functional ingredient produced from tomato pomace using foam-mat technology
29	Chihiro Kitahara and Guisheng Zhai	State and Output Non-Overshooting Analysis and Design for Linear Time-Invariant Systems
30	Kosei Mochizuki and Guisheng Zhai	D-type and PD-type Iterative Learning Control Using Two Previous Trial Data
31	Junta Goto and Guisheng Zhai	Designing a hybrid dynamic vibration absorber with limited information
32	Hiroto Sudo and Yusuke Goto	A Preliminary Study on Developing Virtual Exercise Materials via Collaboration Between Generative AI and Experts
33	Takumi Kanno, Keiichiro Tahara and Yusuke Goto	Role of Shared Values in Team Dynamics: A Practical Application of Q Methodology in GX Training
34	Fumiya Sato and Yusuke Goto	Proposal for a Workshop-based Approach to HR Measures Using Multilayer Social Network Analysis
35	Chisato Watanabe, Taiki Morimoto, Ayu Yui, Kota Yamazaki and Manabu Ichikawa	Reproducing Tourist Behavior in Ishigaki City Using ABM



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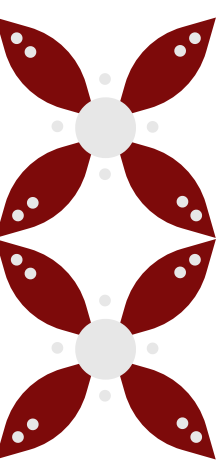
No	Name	Title
1	Sou Kimura, Ryota Ishihara, Akira Ikeda, Andrzej Ireneusz Nowak, Sławomir Pietrowicz and Naoki Ono	Visualization of Marangoni Convection in Linear Flow and Measurement of Liquid Film Thickness
2	Motoki Kanno, Eisuke Yasaki and Naoki Ono	Performance Enhancement of Heat Pipes Using Electrowetting Technique
3	Shunzhi Chang, Toru Sugimoto and Hiroyuki Nakamura	A support system to alleviate difficulties faced by inbound tourists when using Japanese railway tickets
4	Zhipeng Shen and Kenji Hisazumi	Comparing AI-Based Literature Search Tools for Software Engineering Research
5	Hisaaki Kikuchi, Ryo Sugiura, Takumi Katoh and Naoki Ono	Development of Energy Harvesting System Using Seawater Desalination System with Permeate Gap Membrane Distillation
6	Shoki Okunaga and Junko Koga	Fundamental Study on Repair Methods for Burnt Cedar Exterior
7	Tokuto Tatsujima, Taichi Tomizuka, Mikihiro Nomura and Izabela Rzeznicka	Carbon free hydrogen production by using SO ₂
8	Kosei Nakaya, Kyogo Koyama, Fuka Hoshino, Mai Itabashi and Mikihiro Nomura	Development of hydrogen permselective membranes by using novel vapor treatment
9	Haruki Kurata, Irmariza Shafitri Caralin, Reina Akiya, Myu Yamauchi and Mikihiro Nomura	Plasma Treatment of MFI Zeolite Membranes
10	Hiroto Tsuyuki, Yuka Shimizu, Shogo Okuma, Mikihiro Nomura and Izabela Rzeznicka	Methanol synthesis through porous catalytic membranes



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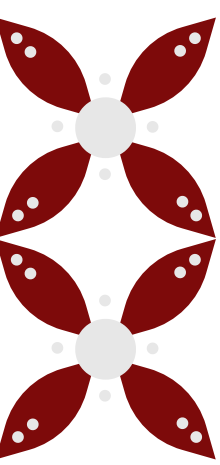
No	Name	Title
11	Yuta Suzuki and Hiroyasu Ishikawa	Thickness-Dependent Photovoltaic Performance of p-CuO/n-Si Heterojunction Solar Cells Fabricated by MOCVD
12	Minh Tien Nguyen and Akinari Hirao	Designing 3D Printed Seat Foam for Comfort by Sitting Simulation Using Finite Element Method
13	Ratchadaporn Kaprasob, Natta Laohakunjit, Apiradee Uthairatanakij, Orrapun Selamassakul and Nattapon Kaisangsri	Application of Canistel Pulp Extract as Natural Food Colorant in Bread
14	Nattapon Kaisangsri, Natta Laohakunjit, Orrapun Selamassakul, Ratchadaporn Kaprasob and Apiradee Uthairatanakij	Extraction and Characterization of Oligosaccharides from Jackfruit Rags Using Ultrasonic-Assisted Extraction



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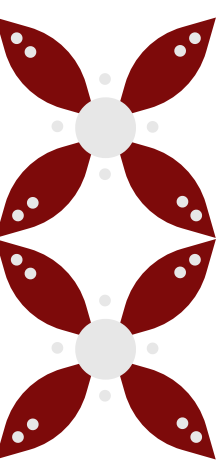
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1	Takahiro Saiki	Development of a Brake Mechanism to Reduce Discomfort Experienced by Care Recipients During Deceleration in Manually-Operated Attendant Controlled Wheelchairs
2	Yuko Egawa, Midori Sugaya and Hiroyuki Nakamura	Evaluation of an Emergency Wake-Up System for Hearing-Impaired Persons
3	Shinichi Fujimura	Optimizing VLC specifications for indoor positioning systems
4	Kai Matsuguma, Yuichiro Kinoshita and Hiroyuki Nakamura	Vibration-Based Hazard Warning System for Visually Impaired
5	Yuto Iwakami, Yuichiro Kinoshita and Hiroyuki Nakamura	Design Guidelines of Online Supermarket Mobile Apps for Older Adults
6	Hideki Kato and Rumi Yatagawa	Toward a Practical Framework for Disaster Preparedness and Multicultural Manuals for Foreign Tourists
7	Claire Agbangla, Hitoshi Nakamura and Serge Ekpodessi	Evaluating Mental Health and Well-Being in Biophilic Open Space Design: A Literature Review in Japanese Urban Contexts
8	Shun Yamanaka and Hitoshi Nakamura	Isolation Patterns and Critical Factors for Post-Flood Living: Focusing on People with Special Needs
9	Yuzuki Sasaki and Hitoshi Nakamura	Systematic Review of Spatial Design Approaches Addressing Issues in River Spatial Planning
10	Mikoto Hirosugi and Takeshi Iyoda	Study of Changes in the Pore Structure of GGBS concrete by Carbonation



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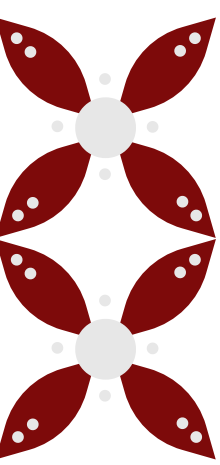
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11	Nana Kanda, Hikaru Iwata, Sayuri Furuno, Nozomi Suga and Ichiro Yajima	Protective Effects of Visible Light Irradiation Against UVB-Induced DNA Damage and Its Regulation of DNA Repair Gene Expression
12	Mayu Yoshino, Ryuto Igarashi, Shizuma Tanaka and Ichiro Yajima	Evaluation of the Protective Effect of Tryptophan-Derivative-1 against Arsenic-Induced Cytotoxicity in Human Skin Cells
13	Tsuyoshi Horie, Mana Eguchi and Ichiro Yajima	Pathological Analysis of Tissues from Mice with Psoriasis-like Symptoms and Evaluation of NF-κB Activity in Cells Transfected with geneC Mutants
14	Kota Ashizawa, Takao Yoshida and Azham Zulkharnain	Microbial degradation of Pyrene and Fluorene and Its impact on community structure in seawater from Suruga Bay, Japan
15	Nagisa Tomioka, Wakana Takamatsu, Natsuki Yoshioka, Syuya Yuzawa, Masahiro Kohno and Koji Fukui	The endurance effects of drinking water with different mineral compositions but the same hardness on mice
16	Raishin Nakamichi and Azham Zulkharnain	Effect of gelatin on hydrolytic enzyme activity in Massilia sp. strain N-3
17	Chihaya Noro and Azham Zulkharnain	Airborne Bacterial Community Analysis and Microbial Load Measurement
18	Kazutomo Yamazaki and Azham Zulkharnain	Development of an Aromatic Pollutant Detection Method Using Ring-Cleavage Enzymes
19	Hayate Suzuki, Shuntaro Richard Kashiwaya, Akihiro Iguchi and Koji Fukui	The Anti-Obesity Effects of Tocotrienols and Their Influence on Spontaneous Activity in Obese Mice
20	Ashiyu Ono, Yuta Osada, Yasuyuki Fujii and Naomi Osakabe	Verification of the Sympathoactive Effects by a Single Oral Administration of Procyanidin B2



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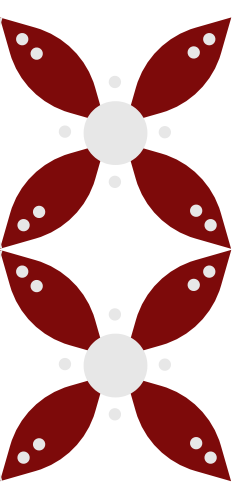
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21	Wakana Takamatsu, Nagisa Tomioka, Natsuki Yoshioka, Syuya Yuzawa, Masahiro Kohno and Koji Fukui	The effects of drinking water with the identical hardness but different mineral compositions on mice
22	Riina Nakano and Azham Zulkharnain	Analyses of heterocyclic compounds degradation by Antarctic soil bacterium strain BS19
23	Masanori Kimura and Ichiro Yajima	Drug Repositioning to Overcome Acquired Drug Resistance in Lung Cancer Cells
24	Toshiki Yamamoto, Haruka Kawamata and Ichiro Yajima	Effect of Tryptophan Derivative 2 on Melanin Production in Skin
25	Shunei Miyashita, Koji Fukui and Riko Okano	The Effects of Sake Lees Extracts on Obese Mice
26	Wakana Kuwabara, Kazuki Houga, Mitsuru Wakuzawa and Koji Fukui	Elucidation of the relationship between intracellular Ca ²⁺ homeostasis breakdown and mitochondria/endoplasmic reticulum during nerve process degeneration
27	Miroku Yamada and Azham Zulkharnain	Degradation of Plasticizer DEHP and Metabolism Pathway Analysis Using Marine Bacterium Strain KHP1
28	Yamato Yoshida, Naoki Iida, Kenshin Iwasa, Akuru Saito, Chiho Kuroki, Yasuyuki Fujii, Kenta Aso, Chika Tagata, Masaki Ichitani and Naomi Osakabe	Verification of the glucose tolerance-improving effect of (-)-epigallocatechin gallate
29	Takafumi Shimizu, Rio Ohno, Yume Kasai, Michihiro Kayama, Kenta Aso, Yasuyuki Fujii, Yoshitomo Suhara, Vittorio Calabrese and Naomi Osakabe	The three-dimensional structure prediction of human bitter taste receptor using the method of AlphaFold3



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31	Kazunari Takano, Sota Tsuchibuchi, Ohta Chika, Yasuyuki Fujii, Yoshitomo Suhara and Naomi Osakabe	Verification of the Cognitive Enhancement Effects of a Single Oral Dose of Procyanidin B2
32	Hitomi Nakamura, Ogata Moeka, Kurumi Onishi, Yasuyuki Fujii and Naomi Osakabe	Quantitative descriptive analysis for evaluating the sensory properties of polyphenols.
33	Minoru Shibata, Kazuki Sakata, Sota Umino, Yasuyuki Fujii, Yoshitomo Suhara and Naomi Osakabe	Effects of a Single Oral Dose of Procyanidin B2 on Sleep and Wakefulness in Mice



Contacts

Mr. Apri Rahmanto

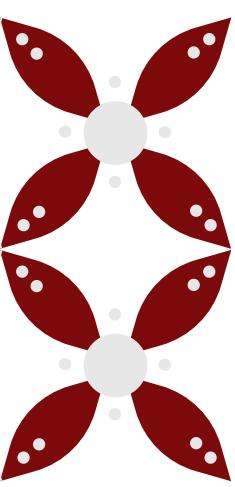
Email : **seatuc.ft@ugm.ac.id**

Mobile Phone/Whatsapp No : **+6282320876159**

Phone : **+62-274-513665**

Faculty of Engineering, Universitas Gadjah Mada

Jalan Grafika 2 Yogyakarta 55281



Miscellaneous

Hotel Information



Gajah Mada University Club (UC) Hotel

Address : Jl. Pancasila No. 2, Bulaksumur, Sinduadi, Depok, Sleman, Yogyakarta 55281

Price : around USD 17/night

Website : www.ugmclub.com

Website : +62 274 563461



MMUGM Hotel

Address : Jl. Colombo No. 1, Karang Malang, Caturtunggal, Depok, Sleman, Yogyakarta 55281

Price : around USD 18/night

Website : www.hotelmmugm.com

Website : +62 274 55798183



ARTOTEL Yogyakarta

Address : Jl. Kaliurang Km 5.6 No. 14, Manggung, Caturtunggal, Depok, Sleman 55281

Price : around USD 36/night

Website : artotelyogyakarta.com

Website : +62 274 6000333



Swiss-Belboutique Yogyakarta

Address : Jl. Jend. Sudirman No. 69, Terban, Gondokusuman, Yogyakarta 55224

Price : around USD 46/night

Website : www.swiss-belhotel.com

Website : +62 274 2921888



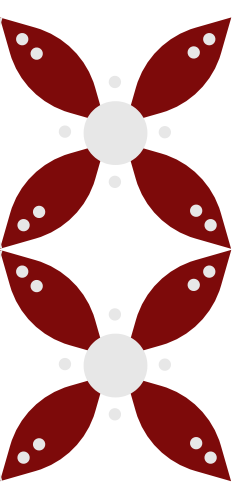
Porta Hotel by Ambarukmo

Address : Jl. Colombo No. 1, Karang Malang, Caturtunggal, Depok, Sleman, Yogyakarta 55281

Price : around USD 50/night

Website : <https://porta.co.id/>

Website : (0274) 5022777



Miscellaneous

Transformation Guide

International Travel to YIA

A

Via Kuala Lumpur or Singapore (Most Convenient)

Fly to Kuala Lumpur (KUL) or Singapore (SIN), then connect directly to YIA

B

Via Jakarta (Most Common)

Fly into Jakarta Soekarno-Hatta (CGK), then connect to YIA

C

Via Kuala Lumpur or Singapore (Most Convenient)

Fly into Bali Ngurah Rai (DPS), then connect to YIA

Local Travel to UGM (From YIA)

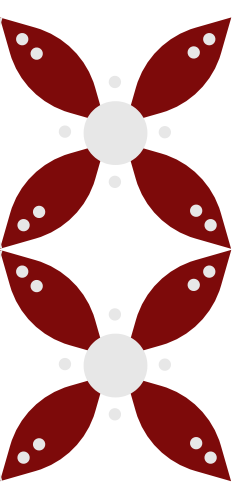
1

Ride-Hailing / Taxi (Most Recommended): Gojek/Grab or Blue Bird Taxi.
Duration 1–1.5 hrs, fare IDR 250,000–350,000.

2

Airport Train + Ride-Hailing (Faster/Lower Cost): YIA → Tugu Station
Duration 40 min, IDR 20,000–60,000.
Then,
Short ride to UGM
Duration 10–15 min, IDR 15,000– 30,000.





Miscellaneous

Transformation Guide

Local Travel to UGM (From Tugu Station)

1

Ride-Hailing / Taxi: **10–15 min, IDR 15,000–30,000**. Motorbike option (GoRide/GrabBike) for solo/light luggage

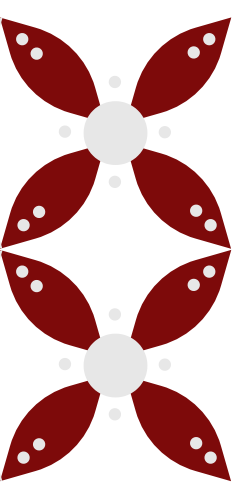
2

Trans Jogja Bus (Budget): Routes 4A/4B to UGM, **very cheap but less suitable with heavy luggage**.

TIPS!

Download Gojek and Grab apps before arrival for smooth booking





Place to Visit



Prambanan Temple

Prambanan is Indonesia's largest Hindu temple complex, known for its impressive ancient architecture, mythological carvings, and strong cultural significance.



Borobudur Temple

Borobudur is an ancient Buddhist monument shaped like a giant mandala, famous for its detailed carvings, hundreds of Buddha statues, and spiritual symbolism.



Ulen Sentalu Museum

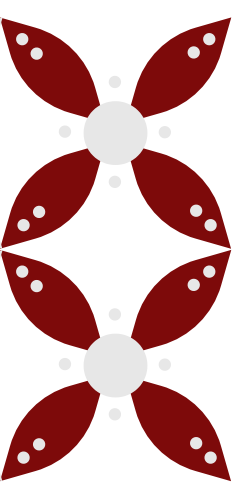
Ulen Sentalu Museum is a beautifully designed museum that preserves and presents the art, culture, and history of Javanese royal families, offering an immersive storytelling experience in a serene mountain setting.



Sendratari Ramayana

Sendratari Ramayana (often called the Ramayana Ballet) is a traditional Javanese performing arts show that combines dance, drama, and gamelan music to tell the story of the ancient epic Ramayana.





Place to Visit



Pindu Cave

Pindul Cave is a scenic underground river where visitors ride on floating tubes through a cave, offering a fun and relaxing adventure experience in Yogyakarta.



Indrayanti Beach

Indrayanti Beach is a well-known beach in Gunungkidul, Yogyakarta, famous for its clear turquoise water, clean white sand, and scenic limestone cliffs. Indrayanti is known for being well-maintained and more developed destination



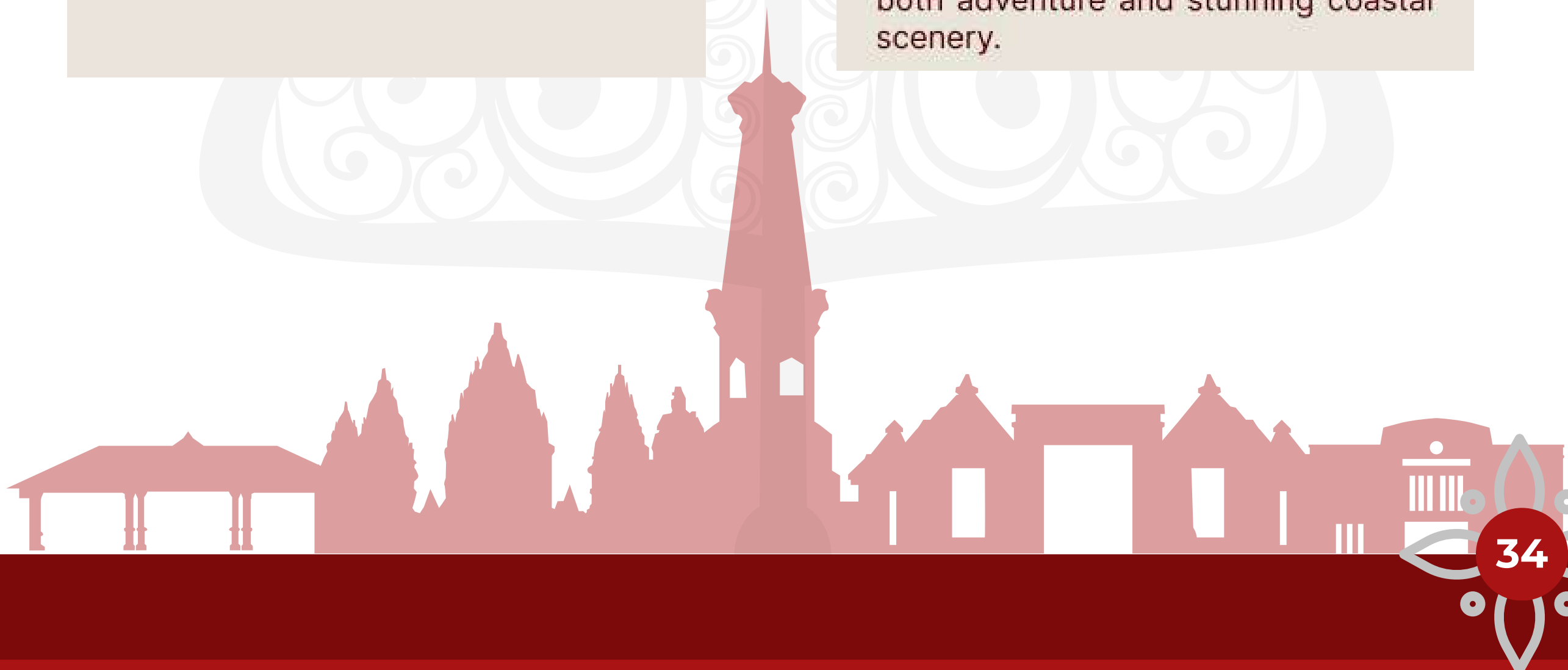
Lava Tour Merapi

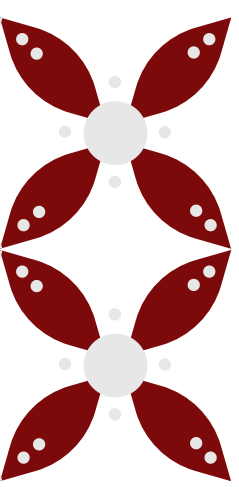
Lava Tour Merapi is an off-road adventure experience on the slopes of Mount Merapi in Yogyakarta, using 4x4 jeeps to explore areas affected by the volcano's past eruptions.



Wagutupit Paralayang

Watu Gupit Paralayang is a scenic cliffside spot in Yogyakarta famous for paragliding and sweeping ocean views, especially at sunset. It's a great place for visitors who want both adventure and stunning coastal scenery.



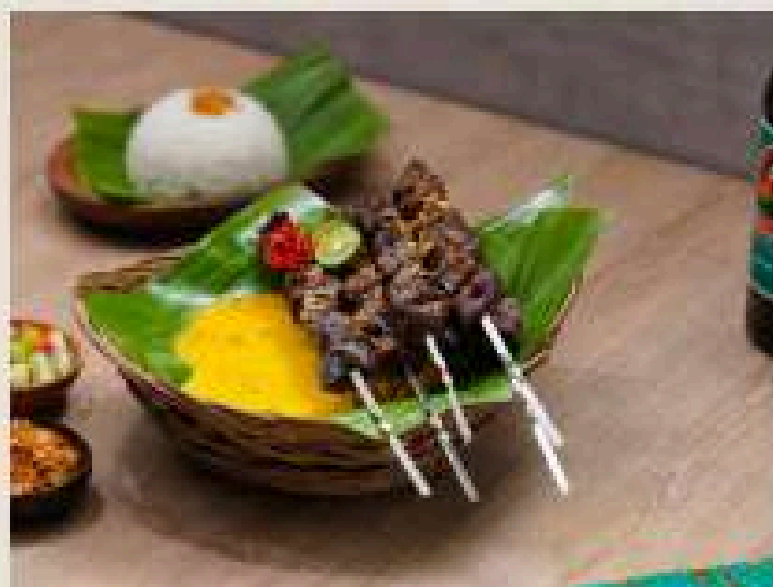


Culinary



Gudeg

Gudeg is a traditional Javanese dish made from young jackfruit cooked slowly with coconut milk and spices until it becomes soft, sweet, and brown in color. It's usually served with rice, chicken, egg, and crispy beef skin (krecek).



Sate Klathak

Sate Klathak is a unique type of satay from Yogyakarta made from goat meat seasoned simply with salt and grilled over charcoal using iron skewers. The iron sticks help cook the meat evenly from the inside, giving it a tender, smoky flavor.



Bakpia

Bakpia is a small, round pastry with a flaky crust and a sweet filling. The most classic version is filled with mung bean paste, but there are many modern flavors like chocolate, cheese, green tea, and durian. It's a popular souvenir from Yogyakarta.



Abon Wajik

Abon Wajik is a Javanese snack made from sticky rice cooked with coconut milk and palm sugar, giving it a sweet, chewy texture. It is often cut into diamond-shaped pieces and has a rich caramel-like flavor.



Javanese Words You'll Hear Everywhere

Matur Nuwun

Thank You

Sami-sami

Your Welcome

Kulo nuwun

Excuse me

Mantap, pol!

Awesome!

Monggo

Please

**Nyuwun
pangapunten**

I'm Very Sorry



SEATUC 20th Anniversary Symposium
Southeast Asia Technical University Consortium

