

ATCM 2024

Yogyakarta, Indonesia

**“Innovation in Mathematics
and Mathematics Education
using Technology”**



A joint conference with:
The 7th International Seminar on Innovation
in Mathematics Education (ISIMMED 7)



**UNIVERSITAS
NEGERI YOGYAKARTA**

Competitive, Creative, Innovative



**A Joint Conference on Innovative Technology in Mathematics:
“Innovations in Mathematics and Mathematics Education
Using Technology”**

29th ATCM & 7th ISIMMED

Program Book

December 7-11, 2024,

***Universitas Negeri Yogyakarta*
(Yogyakarta State University)
Yogyakarta, Indonesia**

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A. Map of UNY/YSU



Location of the Loman Park Hotel (1), Rectorate of UNY (2), Faculty of Mathematics and Natural Science/*Fakultas Matematika dan Ilmu Pengetahuan Alam* (FMIPA) (3), and Main Gate of UNY (4).

UNY is located at the north part of the Yogyakarta city. Loman Park Hotel, serving as the main hotel for ATCM & ISIMMED participant, is located near the university's east entrance.

All ATCM & ISIMMED events will be held on UNY. To get the UNY, you may walk across the Affandi Street (in front of the Loman Park Hotel) and get into the UNY complex through the east entrance (next to the post office). However, if you prefer using vehicle, it will be better to go through the main gate of UNY (4).

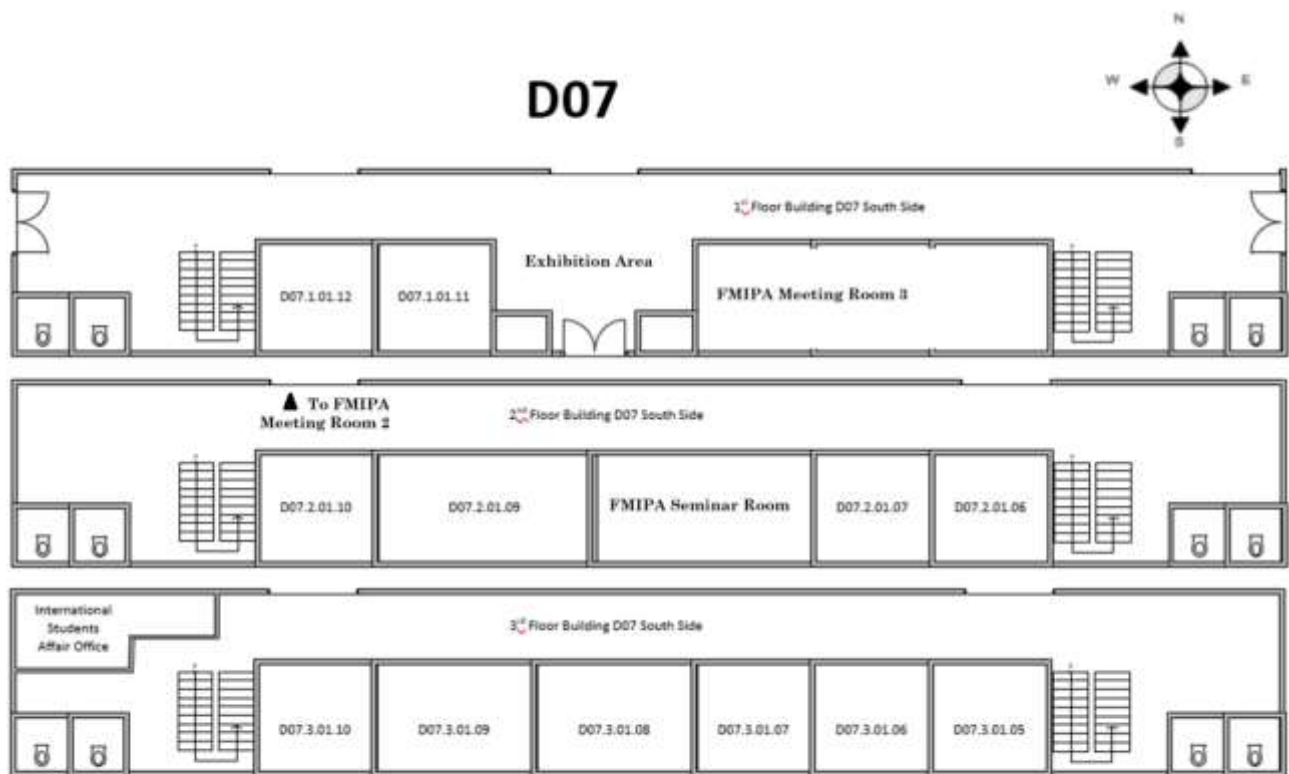
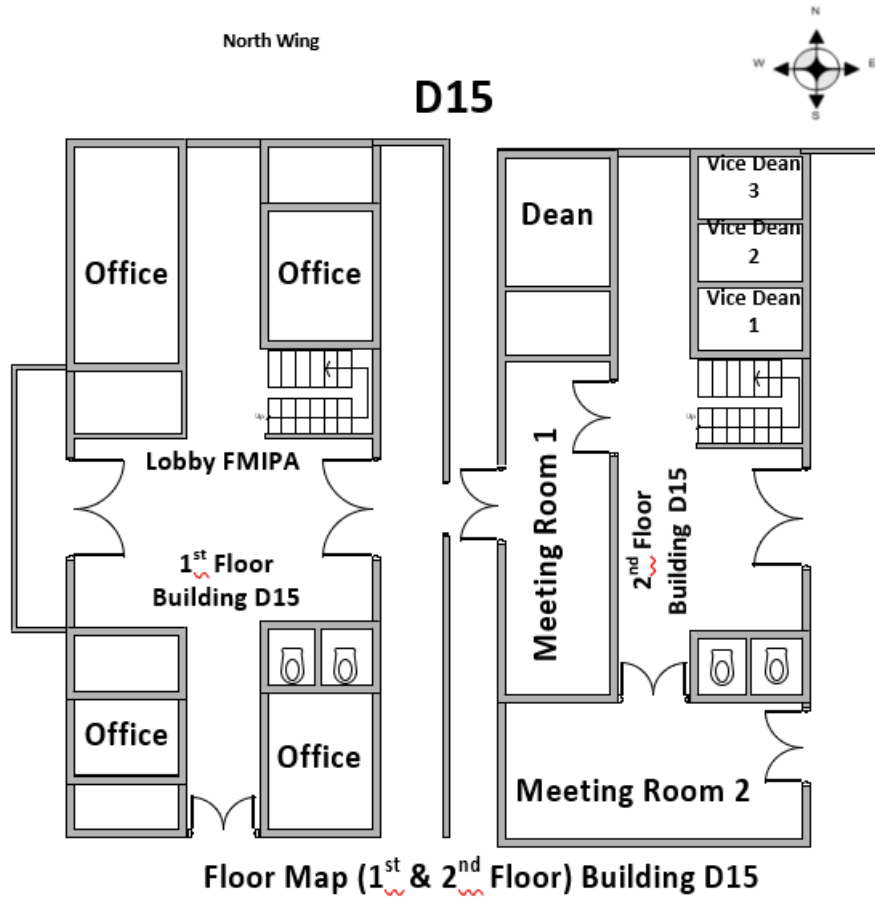
In the Rectorate building:

- You may access the 2nd floor by stairs or elevator.
- The 2nd floor will be used for opening ceremony and the invited speaker session **only in the first half of Day 1**, i.e. 7:30am – 11:50 am on Sunday, December 8th, 2004 (See program Outline, page 10). Note that the second invited speaker session, which held in Room 2, is in the FMIPA buildings (see below).
- During the lunch time (on first day), we will move to the Faculty of Mathematics and Natural Science (FMIPA).
- All sessions after lunch will be located at the FMIPA area.

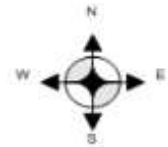
On the Faculty of Mathematics and Natural Science (FMIPA) buildings:

- The 1st floor of D07 building will be used as the Main Room 1 (for Invited Speaker and Closing Ceremony) as well as exhibition area.
- The 2nd floor of D07 building as well as the D15 building will be used as the Main Room 2 (for Invited Speaker), parallel sessions, and lunch area.
- The 2nd floor of IDB laboratory building will be used for workshops (Computer Laboratory 1).
- The 3rd floor of IDB laboratory building will be used for workshops (Computer Laboratory 2).

B. Rooms Map



IDB BUILDING



GROUND FLOOR



SECOND FLOOR



THIRD FLOOR

C. Greetings

Assalaamu'alaikum Warahmatullaahi Wabarakaatuh

Welcome to Indonesia. Welcome to Yogyakarta.

Welcome to Yogyakarta State University.

Welcome to the Joint Conference on Innovative Technology in Mathematics: “Teaching, Learning, and Researching in Mathematics with Artificial Intelligence: Challenges and Opportunities”, organized by the Department of Mathematics Education Yogyakarta State University, Yogyakarta, Indonesia.

This conference is the third joint one for the Asian Technology Conference in Mathematics (29th ATCM) and the International Seminar on Innovation in Mathematics and Mathematics Education (7th ISIMMED of Yogyakarta State University), held at Yogyakarta State University from 7 to 11 of December 2024. The first joint conference was held on December 26 – 30, 2014. The second conference was held on November 20-24, 2018.

This conference is attended by more than 100 participants. They are experts in mathematics, mathematics education, and practitioners, including university lecturers, schoolteachers, and graduate students from 17 countries around the world: Australia, Denmark, China, France, India, Indonesia, Japan, Malaysia, Nigeria, Philippines, Portugal, Singapore, Spain, Taiwan, Thailand, United Arab Emirates, and United States of America.

During the four-day conference, 137 papers are presented. 50 papers are presented virtually, and 87 in-person. Participants also have a chance to attend 7 workshops on computer software during the parallel sessions. The plenary, invited, parallel sessions and workshops are distributed over the days from Sunday, December 8 to Wednesday, December 11. During the conference days, there is an exhibition by the sponsors. Please refer to the Program Outline and Detailed Schedule as your guide to attending the sessions as well as presenting your paper(s).

During the opening ceremony, cultural night in gala dinner, half-day tour, closing and other free times, participants also have a chance to enjoy the Indonesian culture, especially Yogyakarta cultural heritage and to interact with Yogyakarta people. Introductory information about Yogyakarta and its culture can be found at the end of this booklet. Further information can be obtained via the given hyperlinks.

To get the best out of this conference, we recommend that you attend all the available sessions throughout the conference. Let this conference be a platform for you to share and learn from, and network with international colleagues of diverse academic and cultural backgrounds.

Enjoy the conference and your stay in Yogyakarta.

Wassalaamu'alaikum Warahmatullaahi Wabarakaatuh.

On behalf of LOC,

Dr. Retno Subekti. S.Si., M.Sc

D. Conference Information

Transportation from Yogyakarta International Airport (YIA) to Loman Park Hotel (distance 47.5 km):

- By Train: you may use the airport train from the YIA to Yogyakarta station. Please see the guideline from (<https://unyku.id/trainguide>). LOC is providing pick-up service at the Yogyakarta station on December 7th at 11.00 and 14.00 West Indonesian Time (WIB). Yogyakarta station is only 6 km away from the Loman Park Hotel.
- By Taxi: You may hire an airport taxi at the arrival hall (more expensive, about IDR 250.000 to IDR 300.000); online taxi **GoCAR, Grab Taxi**, etc. are also available; estimate time of travel 1 ½ hour. *Alternative: from the airport, go to the Yogyakarta station by train, then use taxi to go to the hotel.*
- By public transport: there is a bus stop (DAMRI) at the airport car parking area; ask for the bus goes to the Jombor's Station (needs transfer to go the hotel); ~ at least IDR 90.000 for the bus only.
- Contact your hotel airport transfer service (they may charge you);

Conference Venues

1. Welcome Reception (**for ATCM committee and participant only**) will be held at the Seminar Room, located at the 2nd floor of the D07 building, FMIPA UNY. The same place will be used for lunch as well as coffee/tea break during the conference. The conference dinner will also take place in this room.
2. Opening ceremony will be held at the Main Meeting Room (*Ruang Sidang Utama*) at the YSU's rectorate building, 2nd floor. Session for Invited Speaker 1 (Room 1) which follow the opening ceremony, will be held at the Main Meeting Room. However, session for Invited Speaker 2 (Room 2) will be held at the FMIPA Meeting Room.
3. After lunch in the first day, invited Speaker (Rooms 1 and 2) will be held at the FMIPA Meeting Room 2 and FMIPA Meeting Room 3.
4. All Parallel Sessions (Rooms 3 – 7) will be held at Building D07 at FMIPA. These rooms are on the same floor with the Meeting Room 3, which means that you will not need to move to another building. Refer to the Maps and the Detailed Program Schedule.
5. Computer workshops will be held at the 2nd and 3rd floor of FMIPA IDB Laboratory Building.
6. Exhibition will be held around south entrance of Building D07 (First floor).
7. Tea Breaks and Lunch will be held at **FMIPA Seminar Room**.
8. The venue for Closing Ceremony will be the **FMIPA Meeting Room 3**.

Registration

Registration for the conference will be at the following times:

- December 7, 2024 (14.00 – 17.00) – **For ATCM participants only**
Participants will register at the Faculty of Mathematics and Natural Science.
- December 8, 2024 (07.30 – 08.30):
Participants will register at the Rectorate of UNY (YSU);
- December 9-11, 2024 (07.30 – 08.30, Wednesday: 07.00 – 08.00):
Participants will register at the Faculty of Mathematics and Natural Science.

Conference entitlements

There are five types of participation of the joint conference of 29th ATCM and 7th ISIMMED. These delegates are entitled to the following.

Component	Participant with registration fee as				
	ATCM/IPC Members	ATCM others	ISIMMED (offline)	ISIMMED (online)	ISIMMED (UNY student)
Attendance to all academic sessions.	✓	✓	✓	✓ (online)	✓
Welcome Reception	✓	✓	✗	✗	✗
Invitation to the Opening Ceremony	✓	✓	✓	✓ (online)	✓
Conference Dinner	✓	✓	✓	✗	✓
Printed abstract book and program book	✓	✓	✓	✗	✗
Access to digital abstract book and program book	✓	✓	✓	✓	✓

Component	Participant with registration fee as				
	ATCM/IPC Members	ATCM others	ISIMMED (offline)	ISIMMED (online)	ISIMMED (UNY student)
Registration kit	✓	✓	✓	✗	✓
Daily tea/snack and lunch during breaks	✓	✓	✓	✗	✓
Yogyakarta half-day tour	✓	*	*	✗	*

*A Yogyakarta half-day tour (see page 26) is available for all offline participants with additional payment of US\$ 23 (Rp 360.000,00). Please inform the LOC in the registration table if you want to join the tour.

Guidelines for paper presenters

1. A total of 25 or 50 minutes is allocated to each paper in the ATCM parallel sessions, and 20 minutes in the ISIMMED parallel session. This includes the time for questions and discussions. All presenters are advised to adhere to the time limit.
2. Presenters are to make themselves known to the session chairpersons about 5 to 10 minutes before the session begins.
3. Every presentation venue is equipped with a data projection system. Presenters are supposed to bring their own laptops and are advised to store their presentations in a flash disk.

Guidelines for session chairpersons

1. Please be at the presentation rooms at least 10 minutes before the commencement of the session to meet the presenters.
2. Please ensure that the equipment is in good working order. There will be either technicians or student helpers around to assist if necessary.
3. Please ensure that the session begins and ends on time. Each presenter should be briefly introduced before the presentation.
4. Please remind all presenters to keep to time.

Guidelines for workshop presenters

1. Please visit the allocated workshop venue in the morning (of the day your workshop is scheduled) to ensure that the necessary equipment or software is working properly.
2. Workshop presenters who wish to provide notes, handouts or other material to their workshop participants should prepare them on their own before the workshop. Conference organizers do not have the facility to do any printing for such purpose.
3. Please ensure that you begin and end your workshop on time.

E. Program Outline

Saturday Dec 7, 2024	Time	Sunday, Dec 8, 2024	Monday, Dec 9, 2024	Tuesday, Dec 10, 2024	Wednesday, Dec 11, 2024
Arrival and Registration of Participants	07.30 – 08.00	Registration	Registration	Registration	Registration
	08.30 – 09.30	Opening Ceremony	Invited Speech (Room 1) Neil Sigmon & Rick Klima	Invited Speech (Room 1) Douglas Meade	Invited Speech (Room 1) Alasdair McAndrew
			Invited Speech (Room 2) Weng Kin Ho	Invited Speech (Room 2) José A. Vallejo	Invited Speech (Room 2) Ma. Louise Antonette De Las Penas, et al.
			Parallel Session 3	Parallel Session 8	
	09.30 – 10.00	Tea/Coffee Break	Tea/Coffee Break	Tea/Coffee Break	Tea/Coffee Break
	10.00 – 10.50	Invited Speech (Room 1★) Wei-Chi Yang	Invited Speech (Room 1) Jen-chung Chuan	Invited Speech (Room 1) Nur Insani, Ph.D.	Panel Session (Room 1) <i>AI and Mathematics/ Mathematics Education</i>
		Invited Speech (Room 2) Prof. Fugo Takasu	Invited Speech (Room 2) Setsuo Takato	Parallel Session 9	
			Parallel Session 4	Hands-on Workshop (Computer Room 1 and 2)	
	11.00 – 11.50	Invited Speech (Room 1★) Keng Cheng Ang	Invited Speech (Room 1) Jean-Jacques Dahan	Parallel Session 10	Closing Ceremony ATCM- ISIMMED 2024 (FMIPA Seminar Room)
		Invited Speech (Room 2) Jonaki Ghosh	Invited Speech (Room 2) Yuan Yuan		
			Parallel Session 5		
	12.00 – 13.00	Lunch Break ☺	Lunch Break ☺	Lunch Break ☺	Lunch and Farewell
	13.00 – 13.50	Invited Speech (Room 1) Mirosław Majewski	Invited Speech (Room 1) Vanda Santos	Parallel Session 11	 Half day tour **
		Parallel Session 1	Parallel Session 6		
14.00 – 14.50	Hands-on Workshops Computer Room 1 and 2	Hands-on Workshop Computer Room 1 and 2	Hands-on Workshop Computer Room 1		
15.00 – 15.30	Coffee/Tea Break	Coffee/Tea Break	Coffee/Tea Break		
15.30 – 16.30	Parallel Session 2	Parallel Session 7	Parallel Session 12		
14.00 – 17.00 Welcome Reception (for ATCM only)	18.30 – 21.00	Welcome Dinner/ Culture Night for All Participants (FMIPA Seminar Room)	IPC Meeting with Dinner (Loman Meeting Room)		

Room 1★ : RSU (2nd floor of Rectorate of UNY) Room 1 : FMIPA Meeting Room 3 (1st floor of D07, FMIPA)

Room 2: FMIPA Meeting Room 2 (2nd floor of D07, FMIPA) ** see conference entitlements

Remarks: 1. Exhibition and Poster Presentation (display) will be done during all sessions from Sunday to Wednesday at the Exhibition Area from 09.00 to 16.00.

F. Detailed Schedule

Day 0. Saturday, December 7th, 2024

...	Arrive at the hotel
14:00-15:00	Registration
15:00-17:00	Welcome Reception (for ATCM Participant and Committee only) Seminar Room, Faculty of Mathematics and Natural Science, Universitas Negeri Yogyakarta

Day 1. Sunday, December 8th, 2024

7:30-8:30	Registration
8:30-9:30	Opening Ceremony (Main Meeting Room, UNY Rectorate Office Building) Zoom Meeting ID: 918 8245 6189 Passcode: atcm2024
9:30-10:00	Tea Break
10:00-10:50	Invited Speech: Room 1 ★, (Chair: Keng Cheng Ang) 22174 Topological Structures Between Two Closed Surfaces Inspired by An Entrance Exam Problem <i>Wei-Chi Yang, Weng Kin Ho, Guillermo Dávila</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
10:00-10:50	Invited Speech by ISIMMED: Room 2, (Chair: Nur Insani) Modeling spatial population dynamics using point pattern approach <i>Fugo Takasu</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024
11:00-11:50	Invited Speech: Room 1 ★, (Chair: Wei-Chi Yang) 22204 Professional Development in Coding and Computational Thinking for Mathematics Teachers <i>Keng Cheng Ang, Marc Yi Fei Yeo</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
11:00-11:50	Invited Speech (Virtual): Room 2, (Chair: Vanda Santos) 22150 Geometrical reasoning through open-ended tasks in a Dynamic Geometry Environment: An analysis through the theory of Variation <i>Jonaki Ghosh</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024
12:00-13:00	Lunch Break 🍽️
13:00-13:50	Invited Speech (Virtual): Room 1, (Chair: Ma. Louise Antonette De Las Penas) 22146 (Video) Understanding Geometric Pattern and its Geometry Part 12 – Octagonal investigations <i>Mirosław Majewski</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
13:00-14:00	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)

	Room 3, (Chair: Warabhorn Preechaporn) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
13:00-13:25	22136 (Virtual) (video) Learning guidance based on analysis of symbolic comprehension <i>Washino Tomohiro, Tadashi Takahashi</i>
13:30-13:55	22118 (Virtual) Enhancing Computational Thinking Skills: Unplugged Activities and Coding for Mathematics Classroom <i>Warabhorn Preechaporn</i>
	Room 4, (Chair: Mark Lester Garcia) Zoom Meeting ID for Room 4: 955 6043 6058 Passcode: atcm2024
13:00-13:25	22188 (Virtual) Development of a Specification Management System for Multidimensional PISA-like Mathematics Items <i>Mark Lester Garcia, Aldrich Ellis Asuncion, Catherine Vistro-Yu, et al.</i>
13:30-13:55	22220 (Virtual) Integrating 3D Modelling into STEAM Education <i>Jozef Hvorecký, Vera Ferdiánová, Angelika Schmod, et al.</i>
	Room 5, (Chair: Afrah Abdou) Zoom Meeting ID for Room 5: 943 3789 4785 Passcode: atcm2024
13:00-13:25	22194 Common Fixed Point Results in Complex Valued b-Metric Spaces with Applications <i>Afrah Abdou</i>
	Room 6, (ISIMMED) (Chair: Thesa Adi S) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024
13:00-13:15	Connectivity Indices of Power Graphs over Dihedral Groups of a Certain Order <i>Arif Munandar</i>
13:20-13:35	Mathematical Model Of The Spread of Dengue Fever In Yogyakarta Involving Wolbachia Mosquito <i>Fitriana Yuli Saptaningtyas; Hartono; Fithri Annisatun</i>
13:40-13:55	Optimizing Development Recommendation Systems: A Case Study of Regional Clusters in Indonesia <i>Sri Andayani; Bambang SH Marwoto; Thesa Adi Saputra Yusri; Fatma Agus Setyaningsih</i>
	Room 7, (ISIMMED) (Chair: Nila Mareta Murdiyani) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024
13:00-13:15	How Students Strategize and Represent in Solving Early Algebra Problem? A Study on Functional Thinking in Primary School Students <i>Andi Sugianto; Rizky Rosjanuardi</i>
13.20-13.35	Enhancing Students' Mathematical Problem-Solving Skills Through a Problem-Based Learning Model within the Context of Education for Sustainable Development <i>Nazwa Syafira Gunawan; Erni Maidiyah; Elizar Elizar</i>
13.40-13.55	The Potential of the Interleaving Method in Mathematics Learning <i>Nila Mareta Murdiyani; Marsigit; Endah Retnowati; Ouhaio Chen</i>
14:00-14:50	Hands-on Workshops
	Computer Room 1, 22170 KeTLMS Workshop <i>Yasuyuki Kubo, Setsuo Takato, Koji Nishiura, Hideyo Makishita, Chieko Komoda, Masumi Kameda, Masaki Suzuki</i> Zoom Meeting ID for Room 1: 949 5937 2781 Passcode: atcm2024

	<p>Computer Room 2, 25001 Introduction to SymPy for symbolic computing and geometry <i>Alasdair McAndrew</i> Zoom Meeting ID for Room 2: 846 514 8866 Passcode: atcm2024)</p>
15:00-15:30	Tea Break
15:30-16:30	<p>Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)</p> <p>Room 3, (Chair: Takuya Kitamoto) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024</p>
15:30-15:55	<p>22178 (Virtual) (video) Mathematical Modelling in a 3D Printing Project <i>Leyre Gilardi, Lucía Rotger-Garcia, Álvaro Nolla, et al.</i></p>
16:00-16:25	<p>22179 (Virtual) E-Learning material creation system that utilizes existing teaching materials <i>Takuya Kitamoto, Masataka Kaneko, Takeo Noda, et al.</i></p> <p>Room 5, (ISIMMED) (Chair:Siti Kholifah) Zoom Meeting ID for Room 5: 943 3789 4785 Passcode: atcm2024</p>
15:30-15:45	<p>The Relationship between Quality of Understanding and Problem-Solving Ability in Mathematics Learning: A Systematic Literature Review <i>Fanni Yunita; Djamilah Bondan Widjajanti</i></p>
15:50-16:05	<p>The Influence Of Mathematics-Based Learning Multiple Intelligences In a Saintific Approach to Mathematical Literacy Ability, Learning Achievement, and Mathematical Disposition Student <i>Raden Muchammad Nurrisal Hasbi Ashshidiqqie, Djamilah Bondan Widjajanti</i></p>
16:10-16:25	<p>Math Anxiety: What and How it Affects Student Conceptual Understanding and Mathematics Literacy <i>Khilmi Nada Imtiyaz; Djamilah Bondan Widjajanti; Siti Kholifah</i></p> <p>Room 6, (ISIMMED) (Chair: Andika Putri Ratnasari) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024</p>
15:30-15:45	<p>Modelling of Fighter Squadron Deployment System to Optimize the Covering of Indonesian Airspace with Set Covering Problem (SCP) Method and P-Median Problem (PMP) Methods <i>Salma El Mutafagqiha Putri Achzabi; Gagat Riano</i></p>
15:50-16:05	<p>Seemingly unrelated spatial regression modeling with earthquake case studies <i>Zhilvia Noviana Ningsih, Ahmad Fuadz Zainuddin</i></p>
16:10-16:25	<p>Does repeating a grade improve student achievement in Mathematics? Evidence from PISA 2022 in Indonesia <i>Kismiantini; Ezra Putranda Setiawan; Andika Putri Ratnasari</i></p> <p>Room 7, (ISIMMED) (Chair: Husna' Arifah) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024</p>
15:30-15:45	<p>Local Culture-Based Concept Understanding Test Questions With The Assistance Of Sketchup: ADDIE Model <i>Meryani Lakapu; Yohanes Ovaritus Jagom; Aloysius Joakim Fernandez; Damaris Lalang</i></p>
15:50-16:05	<p>Productive Failure Method Does Not Work For Novices in Learning Advanced Mathematics <i>Endah Retnowati; Djamilah Bondan Widjajanti; Endang Listyani; Husna 'Arifah</i></p>
16:10-16:25	<p>Adoption of Information Technology on the Cultural Heritage Portal of Indramayu Regency using a Descriptive Study Approach <i>Lusiyana, Mohammad Yani, Robieth Sohiburoyyan, Iryanto</i></p>
08:30-16:30	Exhibitions
18:30-21:00	Welcome Dinner/ Culture Night for All Registered Participants

Day 2. Monday, December 9th, 2024

7:30-8:30	Registration
8:30-9:20	Invited Speech (Virtual): Room 1, (Chair: Wei-Chi Yang) 22122 Cracking the Enigma Code: Beyond the Bombe <i>Adam Downs, Neil Sigmon, Rick Klima</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
8:30-9:20	Invited Speech: Room 2, (Chair: José A. Vallejo) 22173 Learning Experiences: Connecting A-Level Mathematics with Mathematics Used in The Real World via Machine Learning <i>Weng Kin Ho, Zhu Hui Joel Quek</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024
8:30-9:30	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover) Room 3, (Chair: Sepideh Stewart) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
8:30-8:55	22192 (Virtual) Integrating Numerical Linear Algebra into a Proof-based Linear Algebra course using MATLAB <i>Sepideh Stewart, Mike Michailidis, Caleb Judkin</i>
9:00-9:25	22198 (Virtual) Digital Interactive Figures for Linear Algebra: Promoting Observation and Conjecture as Mathematical Activity <i>Ryan Peffer, Sepideh Stewart, Judi McDonald</i>
	Room 5, (ISIMMED) (Chair: Siti Kholifah) Zoom Meeting ID for Room 5: 943 3789 4785 Passcode: atcm2024
8:30-8:45	Apos Theory-Based Learning: Impact on Mathematical Problem-Solving Skills <i>Riki Yohan Nur Permadi; Agus Maman Abadi</i>
8:50-9:05	Self-Regulated Learning and Mathematics Anxiety: Theoretical Study And Implications in Mathematics Learning fFor The Digital Era Generation <i>Tiara Jovita Wiji Lestari; Djamilah Bondan Widjajanti; Siti Kholifah</i>
9:10-9:25	Mathematical Disposition: Its Role in Improving Learning Achievement in the Digital Era <i>Citra Arifia Novi Ananta; Djamilah Bondan Widjajanti; Siti Kholifah</i>
	Room 6, (ISIMMED) (Chair: Rofi Amiyani) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024
8:30-8:45	Developing confidence in learning mathematics from anxiety to actualization <i>Novita Indriyati; Djamilah Bondan Widjajanti; Siti Kholifah</i>
8:50-9:05	Students mathematical critical thinking in STEM-based learning <i>Risnanosanti</i>
9:10-9:25	Implementation of Differentiated Mathematics Learning: A Case Study in an Inclusive Classroom with Deaf Students at Tumbuh Senior High School Yogyakarta <i>Rofi Amiyani; Bayu Adhiwibowo</i>
9:30-10:00	Tea Break and Poster Session: 22189 KeTCindyJS and KeTLMS --Various Applications in Mathematics Classes <i>Yasuyuki Kubo, Masaki Suzuki</i> 22199

	<p>SIS Point Pattern Dynamics with movements of points <i>Yumisa Kabe</i> 24001 Empowering Rural Mathematics Education through the Mathematics Course Stack <i>Tang Jianlan, Qiu Wanli, Sun Jiayue, Huang Haiping</i></p>
10:00-10:50	<p>Invited Speech: Room 1, (Chair: Yuan Yuan) 22144 Heptahedra each having a pair of parallel faces and their applications in Sangaku constructions <i>Jen-chung Chuan</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024</p>
10:00-10:50	<p>Invited Speech: Room 2, (Chair: Alasdair McAndrew) 22168 Development of a Question Distribution and Answer Collection System for Mathematics Classes Using Only One Line of Text <i>Setsuo Takato, Hideyo Makishita</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024</p>
10:00-11:00	<p>Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)</p>
	<p>Room 3, (Chair: Alfiyah Aini Hanifah) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024</p>
10:00-10:25	<p>22117 (Virtual) (video) Engaging Future Secondary Teachers in Technology Experiences <i>Marshall Lassak</i></p>
10:30-10:55	<p>22193 The Effect of Using Educational Robotics in Learning Physics Material on the Relationship Between Work and Energy on The Development of Computational Thinking Skills <i>Cucuk Wawan Budiyanto, Kristof Fenyvesi, Alfiyah Aini Hanifah, et al.</i></p>
	<p>Room 4, (Chair: Hideyo Makishita) Zoom Meeting ID for Room 4: 955 6043 6058 Passcode: atcm2024</p>
10:00-10:25	<p>22153 (Virtual) Connecting Trigonometry to Its Geometric Roots: An Introduction to Trigonometric Values <i>Niroj Dahal, Binod Prasad Pant, Bal Chandra Luitel, et al.</i></p>
10:30-10:55	<p>22141 (Virtual) Classroom Practices with RLA to Promote Inquiry-Based Learning <i>Norie Aoki, Hideyo Makishita</i></p>
	<p>Room 6, (ISIMMED) (Chair: Indira Ihnu Brilliant) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024</p>
10:00-10:15	<p>Psychological Analysis of Students' Perception in Mathematics Learning <i>Zulfa Roudhatul Mandhasari; Djamilah Bondan Widjajanti; Siti Kholifah</i></p>
10:20-10:35	<p>Comparison Analysis of Spatiotemporal and Cross-Sectional Approaches using Fuzzy C-Means Algorithm in Clustering Sexual Violence-Prone Areas in Yogyakarta <i>Vivi RR Rianto, NH Waryanto</i></p>
10:40-10:55	<p>Combination of Momentum and Mean-Variance Strategies in Stock Portfolio Optimization <i>Retno Subekti; Indira Ihnu Brilliant; Muhammad Goldy</i></p>
	<p>Room 7, (ISIMMED) (Chair: Muhammad Irfan) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024</p>
10:00-10:15	<p>(Virtual) Indonesian and Nigerian Elementary School Teachers' Experiences of Overcoming Mathematics Teaching Anxiety: A Comparative Study <i>Jamiu Temitope Sulaimon and Muhammad Irfan</i></p>

10:20-10:35	(Virtual) Design of Digital Literacy Scale in Mathematics Learning for Junior High School Students: Validity and Reliability Study <i>Nur Lailatul Azizah; Janrino JR Fanggidae; Ariyadi Wijaya; Wahyu Setyaningrum</i>
10:40-10:55	Cognitive Loads Analysis on Mathematics Learning Media: Text Book and Interactive Simulations <i>Arum Nur Wulandari, Imam Sujadi, Ira Kurniawati, Riki Andriatna, Yuli Bangun Nursanti</i>
11:00-11:50	Invited Speech: Room 1, (Chair: Jen-Chung Chuan) 22154 Illustrating the Pre-Conjecture Phases of Experimental Research mediated by Dynamic Geometry: How Generalization Can Generate a Multitude of Highly Plausible Conjectures About Semi-Regular Polygons <i>Jean-Jacques Dahan</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
11:00-11:50	Invited Speech: Room 2, (Chair: Vanda Santos) 22172 The Development of Fraction Virtual Manipulatives and Their Applications to Low-achieving Elementary School Students <i>Yuan Yuan</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024
11:00-12:00	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover) Room 3, (Chair: José Manuel Dos Santos) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
11:00-11:25	22206 Preparing Math Teachers for the Future: Analysing the Use of Technology in a Master's Program <i>José Manuel Dos Santos, Jaime Carvalho e Silva, Zsolt Lavicza</i>
11:30-11:55	22185 Online learning incorporating a mathematics online test system and a dynamic geometry system <i>Chieko Komoda, Yasuyuki Kubo, Satoshi Yamashita, et al.</i>
11:00-11:25	22158 Some Poncelet invariants for bicentric hexagons <i>Grant Keady, Alasdair McAndrew</i>
11:30-11:55	22162 Exploring Conic Sections through Desmos Artworks: Where Math, Art, and Technology Combine <i>Maria Digi Anna Mance-Avila, Maria Alva Aberin</i>
11:00-11:15	(Virtual) A Coincidence Point Theorem of Pointwise Contraction Mappings in Generalized Modular Metric Space <i>Lusi Harini; Agus Maman Abadi; Karyati</i>
11:20-11:35	(Virtual) Hybrid CNN-BiLSTM Model for Forecasting Rice Price Fluctuations in Indonesia <i>Aulia Hasanah Nur Rahman; Gungum Darmawan; Budhi Handoko</i>
11:40-11:55	The Role of Teaching Materials in Improving Students' Mathematical Problem Solving Abilities: Does It Have an Influence? <i>Fitri Nur Asanti</i>
	Room 7, (ISIMMED) (Chair: Hanan) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024

11:00-11:15	(Virtual) How Could Teacher Professional Program Students design Numeracy Assessments? <i>R. Rosnawati; Ariyadi Wijaya; Tuharto; Caturiyati</i>
11:20-11:35	(Virtual) Item Analysis of Mathematics Middle Assesment at Junior High School <i>Hanan; Kana Hidayati</i>
11:40-11:55	Emotional Intelligence and Adversity Quotient in View of Students' Mathematical Problem-Solving Skill <i>Nurul Bayyinah, Retno Subekti</i>
12:00-13:00	Lunch Break 🍴
13:00-13:50	Hands-on Workshops
	Computer Room 1, 25002 Desmos Artwork Workshop <i>Maria Digi Anna Mance-Avila, Maria Alva Aberin</i> Zoom Meeting ID for Room 1: 949 5937 2781 Passcode: atcm2024
	Computer Room 2, 22149 Challenge facing mathematical experiments since 1995 <i>Jen-chung Chuan</i> Zoom Meeting ID for Room 2: 846 514 8866 Passcode: atcm2024
13:00-13:50	Invited Speech: Room 1, (Chair: Jonaki Ghosh) 22196 The Tangram: A Timeless Puzzle in Modern Education <i>Vanda Santos</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
13:00-14:00	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)
	Room 3, (Chair: Ming-Gong Lee) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
13:00-13:25	22210 Applications of GPT and Copilot in Tourism Courses: A Case Study in Chung Hua University <i>Ming-Gong Lee, Che-Yuan Yang</i>
13:30-13:55	22159 A case study of the creation of questions for a math e-learning system STACK using GeoGebra <i>Yasuyuki Nakamura</i>
	Room 4, (Chair: Hitoshi Nishizawa) Zoom Meeting ID for Room 4: 955 6043 6058 Passcode: atcm2024
13:00-13:25	22164 Impact on Student Learning Outcomes in Mathematics using GeoGebra <i>Werachai Pattanapiboon, Hitoshi Nishizawa</i>
13:30-13:55	22207 Challenges and Perceptions of Mathematics Teachers Towards Digital Textbook Adoption <i>Tommy Tanu Wijaya, Yiming Cao, Xinxin Li</i>
	Room 6, (ISIMMED) (Chair: Thesa Adi Saputra Y) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024
13:00-13:15	(Virtual) Application of Exponential Generalized Autoregressive Conditional Heterocedasticity for Estimating Sharia Stock Risk <i>Arnetta Dola Febyana; Retno Subekti</i>

13:20-13:35	(Virtual) Determining Minimum Sample Size for a Stable Classification Performance with Rare Events Data Using RE-WLR: A Case Study on Student Study Success <i>Asma Khoirunnisa; Heri Retnowati; Muhammad Lintang Damar Sakti</i>
13:40-13:55	Addressing Interactivity Challenges in Network-Based Media for Mathematical Competence <i>Sri Andayani; Djamilah Bondan W; Thesa Adi Saputra Y</i>
	Room 7, (ISIMMED) (Chair: Rofi Amiyani) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024
13:00-13:15	Literature Review: “Learning Design with Worked Examples in Reducing Cognitive Load in Mathematics Learning” <i>Sumarni Susilawati</i>
13:20-13:35	Bibliometric Analysis of Learning Design Trends Based on Animated Videos to Achieve Problem Solving Skills in Comparison Materials <i>Afifah Ainun Nadjla</i>
13:40-13:55	Math Anxiety and Adversity Quotient: How Does It Affect Students' Mathematical Problem-Solving Skills? <i>Yuni Apriani; Ali Mahmudi</i>
14:00-15:00	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)
	Room 3, (Chair: Russel Carlson) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
14:00-14:25	22190 Constructing Multi-layered Acrylic Tiling Models Using Laser Engraving and Cutting <i>Mark Loyola, Ma. Louise Antonette De Las Peñas, Mark Tomenes</i>
14:30-14:55	22195 AI, Tensors, and Math Homework <i>Russel Carlson</i>
	Room 5, (ISIMMED) (Chair: Muhammad Irfan) Zoom Meeting ID for Room 5: 943 3789 4785 Passcode: atcm2024
14:00-14:15	Analysis of the RME Approach Integrated with GeoGebra Based on a Literature Review Study <i>Asrina Mulyati; Yunita Nurpriya Sari; Merryanti</i>
14:20-14:35	Mean Learning with Problem Based Learning to Improve Students' Problem Solving Ability- <i>Lina;Angraeni</i>
14:40-14:55	The Effect of Positive Affirmation in Worked Example-Base Mathematics Learning on Transfer Ability, Cognitive Load, and Mathematical Anxiety <i>Noka Setya Maharani; Endah Retnowati</i>
	Room 6, (ISIMMED) (Chair: Rizky Nur'aini) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024
14:00-14:15	Selection of Optimal Knot Points and Oscillation Parameters Using Generalized Cross-Validation (GCV) and Unbiased Risk (UBR) Methods in Semiparametric Regression with Mixed Estimator of Truncated Spline and Fourier Series <i>Askin Nur Habibah; I Nyoman Budiantara; Jerry Dwi Trijoyo Purnomo</i>
14:20-14:35	Nonparametric Regression Estimation for Panel Data Using a Mixed Truncated Spline and Fourier Series <i>Ni Komang Jeni Frika Yanti; I Nyoman Budiantara; Vita Ratnasari</i>
14:40-14:55	A Semiparametric Regression for Modelling Life Expectancy : Spline Truncated and Fourier Series Estimators <i>Firda Fadri ; Kiswara Agung Santoso ; Sandya Nur Indrawati Karsan</i>
	Room 7, (ISIMMED) (Chair: Andika Putri Ratnasari) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024

14:00-14:15	Parameter Estimation of Zero Inflated Bivariate Ordered Probit Model with Brendt, Hall, Hall, and Hausman Iteration Approach <i>Andriano; Purhadi; Ismaini Zain</i>
14:20-14:35	Multiresponse Nonparametric Regression Modeling with Mixed Estimator of Truncated Spline and Kernel <i>Aris Aswadi; I Nyoman Budiantara; Ismaini Zain</i>
14:40-14:55	Confidence Interval For Parameter Of Biresponse Fourier Series Nonparametric Regression Model <i>Aulia Rahmah Ramadlana; I Nyoman Budiantara; Ismaini Zain</i>
15:00-15:30	Tea Break and Poster Session
	22189 KeTCindyJS and KeTLMS --Various Applications in Mathematics Classes <i>Yasuyuki Kubo, Masaki Suzuki</i> 22199 SIS Point Pattern Dynamics with movements of points <i>Yumisa Kabe</i> 24001 Empowering Rural Mathematics Education through the Mathematics Course Stack <i>Tang Jianlan, Qiu Wanli, Sun Jiayue, Huang Haiping</i>
15:30-16:30	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)
	Room 3, (Chair: Hideyo Makishita) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
15:30-15:55	22175 (Virtual) Automated reasoning tools for dealing with elementary but intriguing geometric loci <i>Tomas Recio, Carlos Ueno</i>
16:00-16:25	22177 On a Study of Improvements of the Quadratic Curves Addition Method: Consideration of Theorem 8 <i>Hideyo Makishita</i>
	Room 4, (Chair: Marc Helton Sua) Zoom Meeting ID for Room 4: 955 6043 6058 Passcode: atcm2024
15:30-15:55	22183 (Virtual) Research on the Use of Dynamic Geometry via Blended Learning <i>Šárka Voráčová</i>
16:00-16:25	22181 (Virtual) Towards a conceptual framework for integrating mathematical digital competencies in digital project-based learning of mathematics <i>Marc Helton Sua, Lester Hao</i>
	Room 5, (Chair: Reggie Nalupa) Zoom Meeting ID for Room 5: 943 3789 4785 Passcode: atcm2024
15:30-15:55	22184 (Virtual) An Initial Analysis on the Reliability of Using Chatbots in Solving Word Problems in Probability <i>Reggie Nalupa, Lester Hao</i>
16:00-16:25	22201 (Virtual) GeoGebra for Visualizing Mathematical Concepts: Teachers' Narratives on Use of It for Conceptual Learning <i>Binod Prasad Pant, Niroj Dahal, Bal Chandra Luitel</i>

	Room 6, (ISIMMED) (Chair: Lusi Harini) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024
15:30-15:45	Bifurcation in Crop-pest-natural enemy Model with Holling Functional Responses and considering Logistic Carrying Capacity <i>Dian Savitri;Abadi;Hasan Panigoro;Emli Rahmi;Mifta Kharisma Dewi;An Nisa Salsabila</i>
15:50-16:05	High School Students' Self-Regulation through Integration of Design Thinking with STEAM Project Based Learning in Mathematics Learning <i>Emas Marlina</i>
16:10-16:25	The Role of Technology in Enhancing Thinking-Based Learning <i>Luthfiah Azizah; Saskia Tomigolung; Nurul Kumalasari; Kuswari Hernawati</i>
08:30-16:30	Exhibitions
18:30-20:30	IPC meeting

Day 3. Tuesday, December 10th, 2024

7:30-8:30	Registration:
8:30-9:20	Invited Speech Room 1: (Chair: Weng Kin Ho) (Virtual) 22213 Calculus Is Everywhere: A Proof by Example <i>Douglas Meade</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
8:30-9:20	Invited Speech Room 2: (Chair: Jen-chung Chuan) 22214 Automated generation of solved problems for self-study- <i>José A. Vallejo</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024
8:30-9:30	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)
8:30-9:30	Room 3 (Chair: Setsuo Takato) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
8:30-8:55	22129 (Virtual) Digital Human Resource Development and Mathematics Education <i>Norie AOKI, Hideyo MAKISHITA</i>
9:00-9:25	22125 Development of methods for interactive classes using KeT-LMS <i>Koji Nishiura, Setsuo Takato</i>
	Room 5 (ISIMMED) (Chair: Syarif Hidayatullah) Zoom Meeting ID for Room 5: 943 3789 4785 Passcode: atcm2024
8:30-8:45	(Virtual) Artificial Intelligence in Mathematics Instruction: Challenges and Opportunities for Enhancing Student Learning <i>Maulana Al Aziz Harahap; Aan Hasanah</i>
8:50-9:05	(Virtual) Analysis of ATugmented Reality Utilization in Mathematics Learning Towards the Era of Society 5.0 <i>Syarif Hidayatullah; Kuswari Hernawati</i>
9:10-9:25	Literature Review: Ethnomathematics E-Module as a Solution to Increase Students' Interest in Learning <i>Sri Sance Samberi</i>
	Room 6 (ISIMMED) (Chair: Ni Luh Ayu Gita) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024

8:30-8:45	Transforming Mathematics: Integrating Digital Technologies in Teaching and Learning <i>Tara Segaria, Kuswari Hernawati</i>
8:50-9:05	(Virtual) Differentiated Learning: optimization assisted by an interactive platform-based E-LKPD <i>Tri Andriyani, Ni Luh Ayu Gita Saraswati, Marlina Septiana; Kuswari Hernawati</i>
9:10-9:25	Systematic Literature Review: Using Google Classroom Media in Maths Learning to Improve Learning Outcomes <i>Yuliana Dewi, Kuswari Hernawati</i>
Room 7 (ISIMMED) (Chair: Elsa Fahira) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024	
8:30-8:45	(Virtual) The Use of Technology-Based Learning Media in Improving Students' Understanding of Mathematics Concepts: A Systematic Literature Review <i>Elsa Fahira; Anis Afifah Kurniati; Kuswari Hernawati</i>
8:50-9:05	(Virtual) Systematic Literature Review: Improving Mathematical Literacy Skills Through Quizizz Learning Media on Learning Outcomes <i>Irma Amelia; Tatang Herman</i>
9:10-9:25	Utilization of Animation-Based Learning Videos with the Animaker Application in Mathematics Learning <i>Katwan Nurwahyuni; Hani Yupita Salwa, Kuswari Hernawati</i>
9:30-10:00 Tea Break and Poster Session	
22189 KeTCindyJS and KeTLMS --Various Applications in Mathematics Classes <i>Yasuyuki Kubo, Masaki Suzuki</i> 22199 SIS Point Pattern Dynamics with movements of points <i>Yumisa Kabe</i> 24001 Empowering Rural Mathematics Education through the Mathematics Course Stack <i>Tang Jianlan, Qiu Wanli, Sun Jiayue, Huang Haiping</i>	
10:00-10:50	Invited Speech by ISIMMED: Room 1 (Chair: Ezra Putranda Setiawan) Leveraging Machine Learning Algorithm to Uncover Insights into Student Performance: a Comparative Analysis of International and National Assessment Across Different Countries <i>Nur Insani</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
10:00-11:00	Parallel Session. Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover) Room 3 (Chair: Edward Boone) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
10:00-10:25	22165 Technology Integration Frameworks in Geometry Education: A Synthesis of Recent Research <i>FNU Pujiyanto</i>
10:30-10:55	22116 Bayesian Sequential D-Optimal Sampling Designs for Fractional Partial Differential Equations <i>Edward Boone, Ryad Ghanam</i>
Room 6 (ISIMMED) (Chair: Bertha Oktavika Sembiring) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024	
10:00-10:15	Technology Digital Integration Math Learning: Digital Competence in Mathematics and Digital Competence in Mathematics Teaching - <i>Anjarwati; Kuswari Hernawati</i>
10:20-10:35	(Virtual) Digital Technology Role in Managing the Emotional Risk in Mathematics Learning <i>Bertha Oktavika Sembiring; Sugiman; Hadi Nur Rahman</i>

10:40-10:55	Improving Realiability Forecasting Oil Price on Two Common Calenders by XGBOOST - <i>Gumgum Darmawan;Defi Yusti Faidah;Gatot Riwi Setyanto;Mutiara Hanifah;Aulia Hasanah Nur Rahman</i>
	Room 7 (ISIMMED) (Chair: Ahmad Yani) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024
10:00-10:15	(Virtual) Development of Android-based AEBR (Educational Application for Building Spaces) on the Material of Building Spaces <i>Ahmad Yani; Mey Liasta Trihastina Br Tarigan; Kuswari Hernawati</i>
10:20-10:35	(Virtual) Literature Review and Teaching Practice Recommendations: Integrating Desmos Technology in Teaching and Learning Mathematics <i>Anggun Siska Hamidah; Marta Lucitania Wicahya; Kuswari Hernawati</i>
10:40-10:55	(Virtual) Forecasting the stock price of PT. Telekomunikasi Indonesia (TLKM) Using ARFIMA-GARCH Model <i>M. Al Haris; Nufita Nurohmah; Prizka Rismawati Arum; Saeful Amri</i>
10:00-10:50	Hands-on Workshops
	Computer Room 1 22211 Leveraging “Asynchronish” Learning to Foster Belonging in Online Mathematics Education- <i>Dennis DeBay, Josie Smith</i> Zoom Meeting ID for Room 1: 949 5937 2781 Passcode: atcm2024
	Computer Room 2 22504 TI-Nspire CX CAS Premium Teacher Software Workshop (Construct semi-regular polygons circumscribed to a given ellipse) <i>DAHAN Jean-Jacques</i> Zoom Meeting ID for Room 2: 846 514 8866 Passcode: atcm2024
11:00-12:00	Parallel Session Presentations (Each paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)
	Room 3 (Chair: Muhammad Husein Arafat) Meeting ID: 934 2373 0830 Passcode: atcm2024
11:00-11:25	22157 The Role of Educational Robotics in Integrated STEM Learning Towards the Formation of 21st Century Skills <i>Muhammad Husein Arafat, Cucuk Wawan Budiyanto, Rosihan Ari Yuana, et al.</i>
11:30-11:55	22191 The Effect of Using Educational Robotics in Delivering Student Geometry Materials on the Development of Computational Thinking Skills <i>Cucuk Wawan Budiyanto, Kristof Fenyvesi, Nur Isnaini Hanifah, et al.</i>
	Room 5 (ISIMMED) (Chair: Adella Irma Wiyanti) Zoom Meeting ID for Room 5: 943 3789 4785 Passcode: atcm2024
11:00-11:15	(Virtual) The role of self-regulated learning and self-efficacy in learning mathematics based on digital technology in the industrial era 4.0 <i>Putri Rayani; Djamilah Bondan Widjajanti; Rofi Amiyani</i>
11:20-11:35	(Virtual) Bibliometric Analysis Of Interactive Presentations In Mathematics (2000-2024) <i>Adella Irma Wiyanti; Jean Gloria Kamara; Kuswari Hernawati</i>
11:40-11:55	Selecting of Optimal Knot Points and Oscillation Parameters with Cross-Validation (CV), Generalized Cross-Validation (GCV), and Unbiased Risk (UBR) in Nonparametric Combined Estimators Truncated Spline and Fourier Series- <i>Shinta Istibsyaroh Umami; I Nyoman Budiantara; Jerry Dwi Trijoyo Purnomo</i>
	Room 6 (ISIMMED) (Chair: Nina Andrian) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024
11:00-11:15	(Virtual) The Effect of Environment, Social Support and Enthusiasm on Mathematics Learning Achievement <i>Luthfiana Sholihati Hasanah; Djamilah Bondan Widjajanti; Rofi Amiyani</i>

11:20-11:35	(Virtual) The Effectiveness of Learning Using Problem Based Learning Model on Numeracy Literacy and Self-Efficacy of Students <i>Nina Andriani; Syukrul Hamdi; Wahyu Setyaningrum</i>
	Room 7 (ISIMMED) (Chair: Ilham Rizkianto) Zoom Meeting ID Room 7: 976 0547 7176 Passcode: atcm2024
11:00-11:15	(Virtual) Exploration of Students' Mathematical Ability Levels: A Review of Adversity Quotient Types <i>Johannes Gultom; Mathilda Susanti; Hadi Nur Rahman</i>
11:20-11:35	(Virtual) Improving analytical geometry learning achievement through a differentiated learning approach based on students' initial readiness <i>Kuswari Hernawati, Himmawati PL, Atmini Dhoruri, Ilham Riskianto</i>
11:40-11:55	Development of Inferential Statistical Literacy Test Instrument for Students in Conducting Hypothesis Testing <i>Iesyah Rodliyah; I Ketut Budhayasa; Siti Khabibah</i>
12:00-13:00	Lunch Break 🍽️
13:00-14:00	Parallel Session Presentations (Each paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)
	Room 3 (Chair: Malini Nageswaran) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024
13:00-13:25	22215 Enhancing Visible Learning in Mathematics through AI-Powered Formative Assessment and Feedback <i>Malini Nageswaran</i>
13:30-13:55	22216 Mindfulness-Based Approaches to Digital Math Assessments <i>Nor Rashina Hayrat Ali</i>
	Room 4 (Chair: Jean-Jacques DAHAN) Zoom Meeting ID for Room 4: 955 6043 6058 Passcode: atcm2024
13:00-13:50	22210 Painting, Geometry: Infinity <i>Michl Carral</i>
	Room 6 (ISIMMED) (Chair: Isna Sofiatun) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024
13:00-13:15	(Virtual) Mathematical Resilience and Student Problem Solving in Mathematics Learning: Is There a Relationship? <i>Diah Nur Hidayati; Ali Mahmudi</i>
13:20-13:35	(Virtual) Systematic Literature Review: Patterns of STEM Integration in Indonesian Mathematics Learning <i>Isna Sofiatun, Ariyadi Wijaya, Hadi Nur Rahman</i>
13:40-13:55	Research Trends about Ubiquitous Learning and its Relevance in Mathematics Education <i>Tanti Listiani; Dhoriva Urwatul Wustqa; Kuswari Hernawati</i>
	Room 7 (ISIMMED) (Chair: Hadi Nur Rahman) Zoom Meeting ID for Room 7: 976 0547 7176 Passcode: atcm2024
13:00-13:15	(Virtual) Metacognitive Strategies in Problem-Based Learning: What They Are and How to Implement Them <i>Salsabila; Djamilah Bondan Widjajanti</i>
13:20-13:35	(Virtual) Quality of mid-semester assessment questions in mathematics at Public Junior Secondary School 3 (SMPN 3) Yogyakarta <i>Hanan</i>
13:40-13:55	Developing Students' Self-efficacy in Learning Mathematics through Brain-Based Learning <i>Dian Endang Lestari; Djamilah Bondan Widjajanti</i>
14:00-14:50	Hands-on Workshops

	<p>Computer Room 1 25003 Understanding Different Topological Structures from a Layman's Point of View <i>Weng Kin Ho, Wei-Chi Yang</i> Zoom Meeting ID for Room 1: 949 5937 2781 Passcode: atcm2024</p>
15:00-15:30	Tea Break and Poster Session
	<p>22189 KeTCindyJS and KeTLMS --Various Applications in Mathematics Classes-- <i>Yasuyuki Kubo, Masaki Suzuki</i></p> <p>22199 SIS Point Pattern Dynamics with movements of points <i>Yumisa Kabe</i></p> <p>24001 Empowering Rural Mathematics Education through the Mathematics Course Stack-- <i>Tang Jianlan, Qiu Wanli, Sun Jiayue, Huang Haiping</i></p>
15:30-16:30	Parallel Session: Presentations (Each contributed paper presentation slot is 25 minutes unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)
	<p>Room 3 (Chair: Gily Aguilos) Zoom Meeting ID for Room 3: 934 2373 0830 Passcode: atcm2024</p>
15:30-15:55	<p>22217 (Virtual) Understanding the Graphical Representation of the Derivative through the Dynamic Digital Technology GeoGebra <i>Gily Aguilos, Maria Alva Aberin</i></p>
16:00-16:25	<p>22219 (Virtual) Conics in virtual reality <i>José L. Rodríguez</i></p>
	<p>Room 6 (ISIMMED) (Chair : Endah Retnowati) Zoom Meeting ID for Room 6: 981 4615 6137 Passcode: atcm2024</p>
15:30-15:42	Contextualized Problem-Solving Design with the Help of Interactive Visual Media <i>Rianti</i>
15:42-15:54	A Faded Example Task to Develop Algebraic Thinking Skills <i>Fathurrahman Azhari Putra; Hartono</i>
15:54-16:06	Designing testlet model mathematical literacy questions on measures of central tendency material <i>Yoyada Nufninu</i>
16:06-16:18	Design of PISA-Like Mathematics Problems for Learning Change and Relationship in Mathematical Literacy <i>Vidia Amalia Adjis</i>
16:18-16:30	Algebra Problem Design: Strategies to Facilitate the Transition from Arithmetic Thinking to Algebraic Thinking <i>Dwi Syifa Kusumawati</i>
16:30-16:42	Isomorphic Questions on a Three-Tier Test to Identify Students' Misconceptions on the Topic of Ratio and Proportion: Procedure and Examples <i>Isni Qothrunnada; Djamilah Bondan Widjajanti</i>
16:42-16:54	The Association of Self-Regulated Learning with Quality of Understanding in Mathematics <i>Sasqia Ulimaz Maghfiroh; Djamilah Bondan Widjajanti</i>
16:54-17:06	Designing Contextual Mathematics Problems from Descriptive to Depictive on the Probability <i>Julia Utami Kesuma</i>
17:06-17:18	Task Design Based On Students' Creative Mathematical Thinking Criteria On Arithmetic <i>Musthofa Ulinnuha</i>
17:18-17:30	Learning Design: Integration of Problem Solving and Problem Posing to Improve Students' Mathematical Creativity in SPLSV <i>Riski Anan Tama</i>
17:30-17:42	Infographic Posters to Empower Growth Mindset in Mathematics Learning- <i>Novi Eriyantika</i>
17:42-17:54	The Conceptual Framework of Learning Trajectory within Educational Games to Augment Mathematization Processes in Three-Dimensional Space <i>Uluwatuz Zulfa</i>

17:54-18:06	Problem Solving Questions Using Working Backwards Strategy <i>Cahyanti Aditama</i>
18:06-18:18	Design of Math Story Problems with Solve It Instructional Strategy on System of Linear Equations Three Variables in Inclusive Classrooms <i>Wina Octaviani</i>
18:18-18:30	The Role of Multimedia Learning in Enhancing Mathematical Literacy: A Systematic Literature Review and Bibliometric Study <i>Indra Kurniawan</i>
18:30-18:42	Leveraging Artificial Intelligence in Instructional Design for Mathematics Learning: A Bibliometric and Systematic Literature Review <i>Arista Wibowo</i>
18:42-18:54	Role Playing Game (RPG) in Mathematics Learning for Fostering Student's Growth Mindset <i>Muhammad Fajar Romadhoni</i>
18:54-19:06	Case Study on the Discovery of Epistemological Obstacles when Students Learn the Concept of Probability of an Event <i>Benny Anggara; Ewin Winayah</i>
08:30-16:30	Exhibition

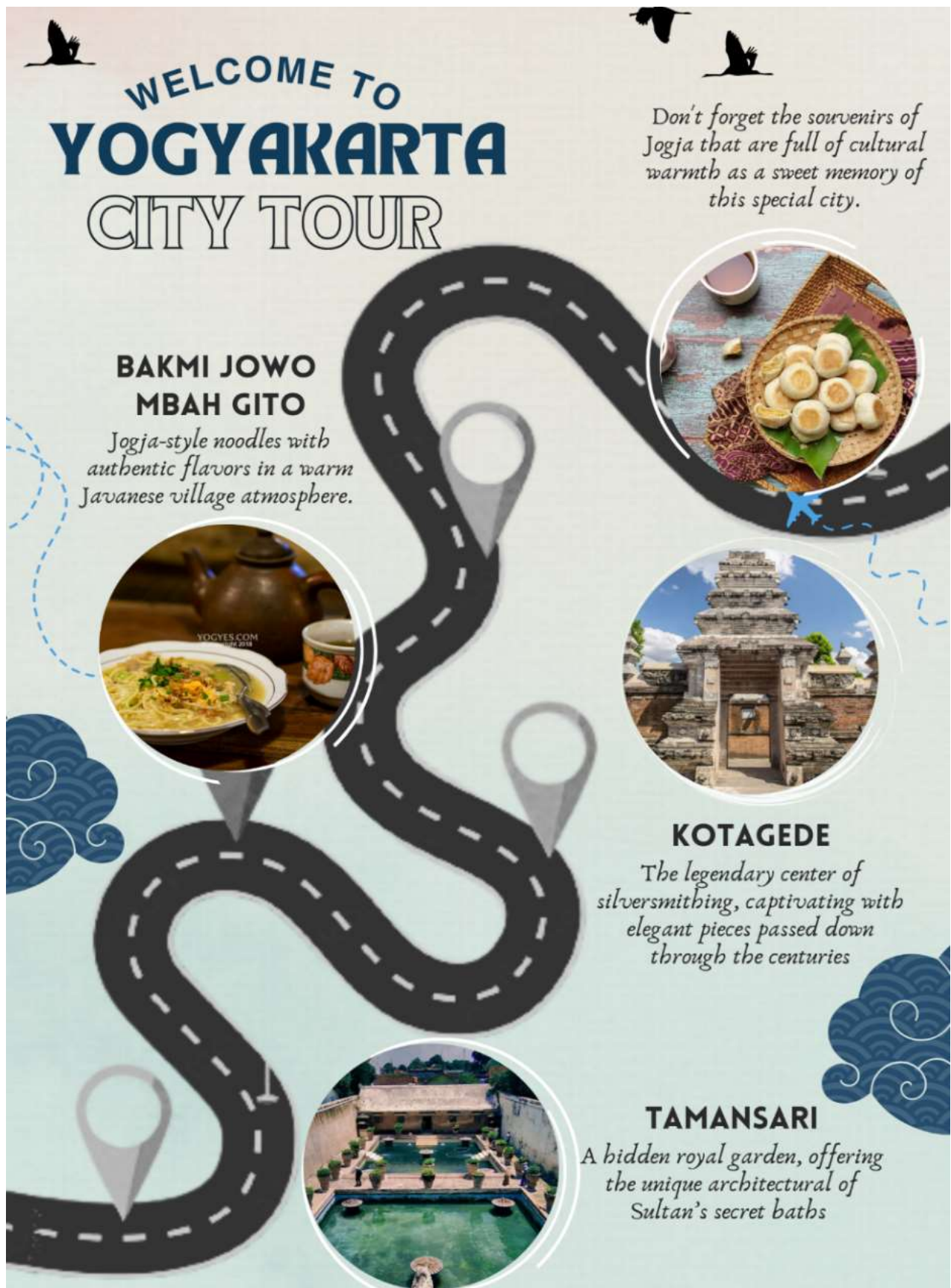
Day 4. Wednesday, December 11th, 2024

7:30-8:30	Registration
8:30-9:20	Invited Speech Room 1 (Chair: José A. Vallejo) 22180 Polynomials associated with bicentric polygons <i>Alasdair McAndrew</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
8:30-9:20	Invited Speech: Room 2 (Chair: Weng Kin HO) 22161 Creating Planar k-isogonal Tilings <i>Ma. Louise Antonette De Las Penas, Mark Tomenes, Agatha Kristel Abila</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024
9:30-10:00	Tea Break
10:00-10:50	Panel Session: Room 1 (Moderator: Alasdair McAndrew) 26001 A.I. and Mathematics/Mathematics Education <i>José A. Vallejo, Russel Carlson, Alasdair McAndrew, Douglas Meade</i> Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
10:00-10:50	Invited Speech by ISIMMED Room 2 (Chair: Nila Mareta Murdiyani) Multimedia learning and Cognitive Load Theory: Current Research and Development <i>Endah Retnowati</i> Zoom Meeting ID for Room 2: 917 6560 6395 Passcode: atcm2024
11:00-11:50	Closing (Room 1) Zoom Meeting ID for Room 1: 929 6060 9708 Passcode: atcm2024
12:00-13:00	Lunch 🍽️ and Farewell
13:00-	Half-day tour **

** see conference entitlements

G. Half-Day City Tour

The city tour will be held in the last day of the conference, i.e., Wednesday December 11th, 2024. The tour will be started at about 1 p.m. See conference entitlements on Page 8, please note that during our tour, the itinerary may be subject to change due to unforeseen circumstances. We will do our best to ensure a smooth and enjoyable experience for everyone.



H. Visitor's Guide to Yogyakarta

(<https://en.wikivoyage.org/wiki/Yogyakarta#Q7568>)

Yogyakarta— despite the official spelling, the name is usually pronounced and not uncommonly written **Jogjakarta** or just **Jogja** (JOG-jah) — is a major tourist destination in [Indonesia](#). It is the capital of Yogyakarta Special Region to the south of Central Java province.



Jogja is a great base for visiting Borobudur, the world's largest Buddhist structure



Prambanan, the masterpiece of Javanese Hinduism

Bank Indonesia Building

Yogyakarta is a bustling town of some 500,000 people and the most popular tourist destination on [Java](#), largely thanks to its proximity to the temples of [Borobudur](#) and [Prambanan](#). The city is a centre of art and education, offers some good shopping and has a wide range of tourist facilities.

The city (*kota*) of Yogyakarta is one of five districts in the semi-autonomous province of Daerah Istimewa Yogyakarta (DIY), the "Yogyakarta Special Region". The other districts are the regencies of:

- **Sleman** on the slopes of fiery [Mount Merapi](#) to the north
- **Bantul** all the way to the sea to the south
- The hills of **Gunungkidul** to the east
- The lowlands of **Kulon Progo** to the West



This special status is thanks to the Sultanate of **Hamengkubuwono**, which has ruled the area since 1749 and steered the state through difficult times of occupation and revolution. During the Indonesian war of independence, Sultan Hamengkubuwono IX offered the fledgeling Indonesian government his enclave as a capital city. Yogyakarta became the revolutionary capital of the republic from 1946 to 1949 when Jakarta was still occupied by the Dutch. As a result, the newly-independent Indonesia appointed the Sultan as the governor of the province of DIY — the only one in Indonesia that is not elected directly by the people. The Indonesian central government has tried to weaken the sultan's power by calling for direct elections for the governor. The present sultan, Hamengkubuwono X, was chosen by an overwhelming majority.

Yogyakarta is full of domestic tourists during school holidays, with tourist buses on the visitor hotspots of shopping street Jl Malioboro and the northern palace square, or *alun-alun*, trapped in heavy traffic. Vehicles, parking and vendors contribute to the traffic jams.

Tourist information

There are three information offices, one at the airport, one at the main railway station, and this main one: **Tourist information office**, Jl Malioboro No.16 (Next to Hotel Mutiara), ☎ [+62 274 566000](tel:+62274566000). M–Th 07:30–20:00, F–Sa 07:30–19:30. Has maps in English and can give useful information.



Place of Interests in and around Yogyakarta City

The number one must-see attraction is Sri Sultan Hamengkubuwono's palace, better known as *Kraton Ngayogyakarta*. Near the palace are a number of other heritage buildings: the BNI '46 building, the Central Post Office and Bank Indonesia.

Other notable landmarks and attractions are:

- **Benteng Vredeburg** (Vredeburg Fort), Jl Jenderal Ahmad Yani No.6, ☎ [+62 274 586934](tel:+62274586934), [+62 274 510996](tel:+62274510996). A Dutch fort in front of Gedung Agung (the President's Palace). A great example of Dutch colonial architecture. A few military items are presented, including a twin cannon.
- **Church of the Sacred Heart of Jesus** (Gereja Ganjuran), Jalan Ganjuran, Sumbermulyo, Bambanglipuro, Jogodayoh, Sumbermulyo, Bambang Lipuro, Bantul, DIY 55764 (11 miles south of the city centre), ☎ [+62 274367154](tel:+62274367154). This Catholic church is remarkable for its Javanese styling. The main building is in the form of a traditional *joglo*, and there is a chapel in the form of a Hindu temple. Mary, Jesus and the angels are represented as Javanese.
- **Imogiri royal graves**. Graveyard of the Sultan Agung and his descendants, the Yogyakarta and Surakarta royal families. It was damaged during an earthquake in 2006 but has been reopened.
- **Kotabaru**. The Dutch officials' residential area has some heritage homes, a colonial style church, monastery (Gereja Kotabaru), and a stadium (Stadion Kridosono).
- **Kotagede**. The capital of the ancient Islamic Mataram kingdom. The tomb of its first king, Panembahan Senopati, is here in the royal graveyard. Before independence, Kotagede was Jogja's economic centre, as it had the largest market and was home to many wealthy batik merchants. Some of the older buildings have been modernised or replaced with newer buildings, but Kotagede remains a prime example of Javanese architecture and city structure. Check out the local silver handicrafts.
- **Tugu Monument**. A downtown landmark. Built by Sri Sultan Hamengkubuwono VI, the spire was originally a sphere representing the universe. During the colonial era, the spire was replaced with a golden cylinder.

The Kraton

The Sultan's palace or *Kraton* encompasses the main palace, the sultan's residential buildings, two *alun-alun* (palace squares), and a large residential area where the sultan's servants used to live.

At night, the 'alun-alun' is ablaze with the lights of decorated chariots

- **Northern alun-alun** (Alun-alun utara). Built for training the Sultan's army, it was opened to the public during the reign of Sultan Hamengkubuwono IX. Now used for the quarterly *Garebeg* parade held in the months of Maulud, Besar and Sawal, according to the Javanese calendar. In the parade, the Sultan's servants carry huge cone-shaped offerings to the *alun-alun*. After the parade, attendees scramble to get a scrap of the offering as it is believed to bring good luck. Prior to the month of Maulud, a popular public fair is held here for 30 days, offers many kinds of goods from traditional handicrafts to Chinese ceramics. A snack associated with the fair is the doughnut-like *galundeng*. On weekend or holiday nights, pedal cars decorated with lights (*gowes*) can be hired to make a circuit of the square.
- **Kraton Yogyakarta**. Sa-Th 08:00–13:00, F 08:00–11:00. A calm and elegant example of Javanese heritage with two separate entrances; the Main Court (*Pagilaran* and *Siti Hinggil*) and the Residence. The Main Court showcases the grandeur of the Sultan's monarchy, while the Residence is more homely, showcasing the royal family's luxurious lifestyle. There are regular free performances of music and dance. Check out the times when you arrive in Yogyakarta. (Every Sunday at 11:00 as of Oct 2015). There are three gamelans in the palace, and the pavilion nearest the entrance houses one of them. If it is being played, feel free to take a seat and enjoy it for a while.



A guide is part of the entrance fee, but they would appreciate a modest tip. You might be offered a trip to the 'sultan's servants' batik workshop'. This is a scam that will only bring you to a regular batik shop with inflated prices.

- **Carriage Museum** (Museum Kereta). Houses the Sultan's horse-drawn carriages, including two beautiful carriages imported from the Netherlands and known as Golden Carriages (*kereta kencana*).
- **Water Castle** (Taman Sari), Jl Taman, Kraton. daily 09:00–15:00. This is a partly-ruined complex built as a pleasure garden by the first Sultan in 1765. One of the bathing pools was dedicated to the sultan's harem, and he had a tower overlooking the area so he could take his pick. Towards the back is the original entrance to the pools, a small dock connected to a long-since-vanished river; a bit of snooping beyond this entrance will get you to a back street, where one can visit a fascinating network of tunnels and rooms, including an Escher-like series of interlacing staircases over what looks like a disused well. Entrance fee does not cover the guide, who will expect tips.



Also worth seeing is the prince's palace to the SE of the main palace.

- **Masjid Gede Kauman**. One of the oldest and largest mosque in Yogyakarta. Located on the west of *Alun-alun Utara*, this mosque was where the Sultan performs his religious rites and ceremonies.

Yogyakarta was designed so that the main elements of the city form an imaginary line. This straight line starts from [Parangtritis](#) on the coast, through the Kraton and Tugu Monument, and finally to [Mount Merapi](#). This represents the Sultan's strong relationship with the guardian spirits of Mount Merapi and the ocean at Parangtritis.

Museums

- **Affandi Museum**, Jl Laksda Adisucipto No.167 (at the beginning of the road out to the airport), ☎ [+62 274 562593](tel:+62274562593), e-mail: affandimuseum@yahoo.com. Delightful museum built around the former home of the late Affandi, one of Indonesia's best-known painters. Several galleries, including one with 30 of Affandi's paintings from his early, impressionist and expressionist periods, and another with paintings by some of his 11 children. The artist designed some of the buildings (the central complex was originally his home and offices) himself, and the grounds themselves are worth the admission price.
- **Aircraft Museum** (Museum Dirgantara), Jl Lettu TPA Supardal (behind Adi Sucipito Airport inside the Air Force base. You will need to deposit your passport (a paper copy might be sufficient) while you are inside.), ☎ [+62 274 564465](tel:+62274564465), [+62 274 564466](tel:+62274564466). M-Th 08:00-13:00, Sa 08:00-12:00. Holds several antique aircraft from World War II, a Badger bomber, MIG-15 to MIG-21, P-51 Mustang, Catalina flying boat, Auster MkII, Lavochkin LA-11, F-86 Sabre, T-33 Bird and an A6M5 Zero. There is also a P-51 airplane simulator but it was broken (Oct 2015). Children on school trips will see you as a big attraction if you look western so smile and prepare to pose for many pictures.
- **Sonobudoyo Museum** (Museum Sonobudoyo), Jl Trikora No.6 (by the northern alun-alun), ☎ [+62 274 76775](tel:+6227476775), [+62 274 373617](tel:+62274373617), fax: +62 274 385664. Many Javanese artefacts like wayang puppets, masks, statues, textiles, weapons, and a full set of gamelan instruments. Worth a visit if you have some extra time in Yogya, or you are interested in Javanese culture study. Wayang kulit performances are given every night 20:00-22:00, accompanied by gamelan.

Candi (ancient temples)

Candi (CHAN-dee) are ancient structures mainly built during the 7th-9th centuries. They are built from river stones or blocks of volcanic stone. The walls are often carved with reliefs depicting stories from either Buddhism or Hinduism, and a stone statue usually sits at the center. There are many candi in and around Yogyakarta, some have been restored and made accessible. The two most famous candi are both easily reached from Jogja. Buddhist [Borobudur](#) is a couple of hours to the northwest. The Hindu temple complex [Prambanan](#) is just to the east.

Candi Kalasan

- **Candi Kalasan** (Kalasan Temple) (Around 2 km to the west of [Prambanan](#), or 14 km to the east of Yogyakarta. To the south side of the main Prambanan-Yogyakarta road.). The oldest Buddhist candi in Yogyakarta. Built in 778 AD by Rakai Panangkaran of the Sanjaya dynasty. He was a Hindu but he built this Buddhist temple, reflecting the harmonious religious life during that time. The walls are covered with ancient white cement called *bajralepa*. It was built in honour of the goddess, Dewi Tara. A bronze statue of a Boddhisatva found in the candi has been removed.



Candi Sambisari, buried for centuries under metres of volcanic ash

□ **Candi Sambisari** (Sambisari Temple) (Close to Adisucipto airport.). Consists of one main candi and three supporting candis (*perwara*). You can see *lingga* and *yoni*, symbols of male and female sex, inside the main candi. There are three statues in the wall of the main candi, Agastya on the south side, Ganesha on the east, and Dewi Durga on the north. From the *lingga*, *yoni*, and the statues, it has been concluded that Sambisari was built to worship Siva. There is no definitive agreement about when and who built the candi. But from the Wanua III inscriptions, Candi Sambisari is considered to have been constructed between 812 and 838 AD).



□ **Candi Sari** (Sari Temple) (600 m to the northeast of Candi Kalasan). Built as the dormitory for a Buddhist monastery. There are two floors with three rooms on each. The reliefs are similar to those at Candi Kalasan and the walls are also covered with *bajralepa*. There are Bodhisattvas and Dewi Tara carved beside the windows indicating the link between Candi Kalasan and Candi Sari. The roof consists of 9 stupas in a grid formation. The holes in the construction show how timbers were used as part of the building process. This candi is considered to have been built in the same era as Candi Kalasan.

Art galleries

- **Bentara Budaya**, Jl Suroto No.2, Kota Baru, ☎ [+62 274 560404](tel:+62274560404), e-mail: bby@bentarabudaya.com. A cultural institute set up by the Kompas Gramedia publishing and media group. Branches in Jogja, Jakarta, Solo and Bali. Art exhibitions, movies, book discussions.
- **Cemeti Art House**, Jl DI Panjaitan No. 41, ☎ [+62 274 371015](tel:+62274371015), [+62 81 2273-3564](tel:+628122733564), e-mail: cemetiah@indosat.net.id. Fine art and modern art exhibitions, book discussions and performances.
- **French/Indonesian Cultural Center (LIP)**, Jl Sagan No.3, ☎ [+62 274 566520](tel:+62274566520). Art exhibitions, movies, book discussions, performances, library.
- **Jogja Gallery**, Jl Pekapalan No.7 (near the northern alun-alun), ☎ [+62 274 419999](tel:+62274419999), [+62 274 412021](tel:+62274412021), [+62 274 7161188](tel:+622747161188), e-mail: jogjagallery@yahoo.co.id. Tu–Su 09:00–21:00. Modern art gallery exhibiting avant garde artworks.
- **Kedai Kebun** (Kedai Kebun Forum), Jl Tirtodipuran No.3, ☎ [+62 274 376114](tel:+62274376114), e-mail: forumkedaikebun@gmail.com. W–M 11:00–23:00. Art space managed by artists including gallery, performance space, bookstore and restaurant. Art exhibitions, performances, book discussions. Has accommodation for rent.

It may be possible for non-Indonesians to study at these universities through the Indonesian-government Dharmasiswa scheme. Studies in Indonesian performing arts are a particular focus for recipients of this support. Jogja is well-known for its language schools. There are many to choose from, including:

- **Wisma Bahasa**, Jl Affandi, Gang Bromo No.15A, Mrican, ☎ [+62 274 561627](tel:+62274561627), [+62 274 520341](tel:+62274520341), [+62 851 0147-8518](tel:+6285101478518), [+62 817 545-1406](tel:+628175451406), fax: +62 274 561627, +62 274 520341, e-mail: info@wisma-bahasa.com. The oldest Indonesian language course in Yogyakarta, since 1982. Provides Indonesian, Javanese, Tetum, and English courses. Branches in Jakarta and Bali. Offers e-learning.

Jogja is the home of batik, traditional wayang puppets, sculpture, ceramics and silverware. Handicrafts from outside Jogja can also be found. Alternatively, as a modern city, there are stylish malls offer interesting goods and services at a reasonable cost.

Jalan Malioboro, lined with batik, handicraft and fashion stores

- **Jalan Malioboro**. Well-known shopping street very popular with domestic and international tourists alike. Stretching from Yogyakarta train station in the north to the *alun-alun* in the south, it is 2 km long and home to hundreds of shops and street-stalls offering all kinds of handicrafts. The street is partly pedestrianised and no motorbike parking is allowed. Motorbikes can be parked in the Abu Bakar Ali area.



Handicrafts

- [Monggo Chocolate Kingdom Museum](#), Tugu Gentong Street, Sribitan, Bangunjiwo, Kasihan, Bantul. ☎ [+62 274 373192](#). daily 08:00-17:00. The Monggo chocolate factory!
- **Saptohoedojo Art Gallery**, Jl Raya Solo, Maguwoharjo, Depok, Sleman, ☎ [+62 274 488443](#). daily 07:00-22:00. This sprawling complex houses an utterly eclectic collection of Indonesian art, ranging from abstract modern paintings and batik shirts through *gamelan* instruments and stuffed tigers to Papuan tribal totems complete with the skulls of vanquished enemies. Everything is for sale and previous customers, pictures of whom are proudly pasted on the walls, include Pope John Paul II and the Dalai Lama. While the adjoining restaurant looks quite attractive, the food served is rather disappointing.
- **Tabubu Ethnic Music Shop**, Jl Saman, Block 2, no. 167, Rt. 06, Bangunharjo (off Jl Imogiri Barat, a bit hard to find). They make and sell traditional musical instruments (flutes, drums, stringed instruments, etc.) from various parts of Indonesia. The shop is in the owner's house, and he is very friendly - just drop by and you can see and try the instruments he has on display. If you want to buy, however, you will have to make a custom order, as the instruments on display are not for sale. The prices are pretty good, starting at tens of thousands of rupiah for the cheaper flutes to hundreds of thousands for stringed instruments.)
- [Tjokrosuharto](#), Jl. Panembahan Mangkurat 58, ☎ [+62 274 375208](#). This handicraft shop opens its door for business in 1954 and still operating today. It offers a large selection of Javanese handicrafts such as wayang kulit (leather puppet), wayang golek (wooden puppet), batik, keris, silverware, sculptures, and traditional outfits.
- **Dagadu** (*lower ground floor Malioboro Mall*). Offers funny contemporary t-shirts and souvenirs that revolves around Yogyakarta people's culture.
- **Ciamis Art Shop**, Jl Malioboro No.153. Shadow puppets, masks, carvings, and more at fixed prices that are lower than in the market. Open 09:00–13:00 and 18:00–20:00.
- **Nadzar**, Jl Malioboro No.187. Huge souvenir shop specializing in batik, art, jewellery, and more. Has every souvenir you could imagine at fixed prices.

Batik

There are some excellent batik galleries selling hand-made paintings on cotton and silk. The cloth folds up easily for transport and can be ironed later. There are also several scams which you should avoid. Authentic batik should look vivid on both sides of the cloth; whereas stamped batik will only look vivid on one side. To get the best price, visit a gallery where they grade the quality of the pieces, usually using a scale from A-Z. Prices range from Rp50,000 for A (small student paintings), to Rp1,000,000 for Z paintings (usually large pieces done by master artists). You may be able to haggle an extra 25% off the marked price. Beware shops which buy and resell the paintings, marking up the prices for Z-level artwork to Rp8,000,000 - this is massively overpriced.

- **Hamzah Batik** (Mirota Batik), Jl Ahmad Yani No.9 (opposite Beringharjo market), ☎ [+62 274 588524](#), [+62 274 518127](#), [+62 274 547016](#). The large family-owned store offers plenty of handicrafts, not only from Yogyakarta but also from all part of Indonesia.
- [Leksa Ganesha Batik Gallery](#), Jl Parangtritis 8.5 km, Tembi, Timbulharjo, Sewon, Bantul, ☎ [+62 274 646-3175](#), [+62 812 2706-8768](#). daily 07:00–21:00. This gallery just outside Yogyakarta offers something a little different to batik collectors: a chance to visit the studios of renowned batik artists and villagers and meet them as they work. Social entrepreneur Tatang Wibowo started this project in 2011 as a way to continue supporting local artists in an innovative tourism model. It's a rare opportunity to make a connection with the people who make batik.

Ori Art Gallery is a reputable batik painting shop with a large selection and fair prices, and you can usually watch an artist there demonstrating the fascinating and meticulous technique.

Traditional markets

- **Pasar Beringharjo** (Beringharjo Market), Jl Pabringan No.1 (north of Vredeburg Fort). The largest traditional market in town. The vendors sell many kind of goods, ranging from basic household items (vegetables, fruit, meat) to many kind of handicrafts. [Haggle](#) furiously.

Shopping malls & supermarkets

- **Malioboro Mall**, Jl Malioboro No.52-58, ☎ [+62 274 551888](#), fax: +62 274 588242. Yogyakarta's premier shopping mall for shopping in hassle-free, air-con comfort. Features a large **Matahari** department store, a **Periplus** book store with a good English selection (B1F), and all the usual suspects of Western and Indonesian fast food (Pizza Hut, KFC, EsTeler 77, etc.). Home to the largest **Dagadu** outlet.
- **Galleria Mall**, Jl Jendral Sudirman 99-101, ☎ [+62 274 583661](#), fax: +62 274 583711. A compact mall anchored by **Matahari** department store. The food court at the basement is popular among the youths. Features many interesting restaurant including **KFC**, **McDonald's Express**, **Thai Express**, Bakso Gress (Chinese meatballs served with noodles), Mie Nusantara, **Bee's** (Japanese Bento), Es Teler 77, Cheers Cup (assortments of fresh drinks).

- [Plaza Ambarukmo](#) (Amplaz), Jl Laksda Adisucipto, ☎ [+62 274 274 4331000](#), fax: +62 274 4331001. Located next to the historical Ambarukmo Hotel, the huge 5-floor shopping complex features a Centro Department Store, **Carrefour Hypermarket**, Gramedia Bookstore, Timezone, 21 Cineplex, MAKO bread, Starbucks Coffee, Dagadu, etc. The food court is on the 3rd floor. ATM center is on the lower ground floor.
- [Ramai Mall and Supermarket](#), Jl Jenderal Ahmad Yani No.73, ☎ [+62 274-562482](#). 09:00–20:00. Big department store. The least expensive A/C supermarket in Jogja. low prices.
- **Mirota kampus dept store and supermaket**, Jl Simanjuntak No.70, ☎ [+62 274-561254](#). 09:00-20:00. low prices.
- [Progo -Mall & Progo Supermarket](#). (Toko Progo), Jl Mayor Suryotomo No.29, ☎ [+62 274 513419](#), e-mail: tokoprogo@yahoo.com. daily08:30–21:00. Has operated since 1968. low prices.
- **Jogja City Mall** (JCM), Jl Magelang KM. 6 No. 18, Sinduadi, Mlati, Sleman, ☎ [+62 274 530-5853](#). daily 10:00–20:00. Integrated with the Sahid Rich Jogja Hotel.
- [Indogrosir](#), Jl Raya Magelang Km. 6, ☎ [+62 274 622040](#). 09:00–21:00.

Eat

Sweet & chilli cuisine

It's not a big secret to Indonesian people that Yogyakarta people adore sweet foods. The local dish known as *gudeg*, for example, is distinctively sweet in flavor. Local snacks, such as *bakpia* and *yangko*, are extremely sweet. However, not every local dish is sweet. *Krecek*—the orange-ish fried beef often served with *gudeg*—is challengingly hot for the untrained tongue. *Lodeh* made by the locals, though often considered 'too sweet' by other Indonesians, also has a hint of a fiery chili taste. It's a good idea to ask the food vendor whether the dish is hot or not. For those who are just curious, simply ask them to omit the chilli from the dish and serve it separately. This way you can still taste the original flavor of the dish, but add the chili only if you want it.

Yogyakarta food used to be known for its sweetness. However, as more and more people move to Jogja, the city starts seeing more diversity in flavor. Now you can find many kinds of interesting dishes, from sweet, spicy, to fiery. Sometimes a fusion from other cuisines such as Chinese or Western can be found. Restaurants in the center often close quite early by Western standards, with admission often refused after 21:00.

Local delicacies

The following dishes are recommended:

- **Gudeg**, a curry of jackfruit, chicken and egg served with rice, and is the most famous local dish. Goopy slop in various shades of brown, the stuff does not look particularly appetizing, but it can be tasty if done right. There are many *gudeg* restaurants, but the most popular are: *Gudeg Wijilan*, *Gudeg Juminten*, *Gudeg Bu Tjitro*, *Gudeg Tugu*, *Gudeg Bu Ahmad*. If you can wake up early in the morning, you may find small stalls serving *Gudeg* just at the corner of the street, or close to traditional markets. If you can't sleep at night, you can go to *Jalan Janturan* and enjoy the *Gudeg Pawon* (enjoying *gudeg* inside the old style kitchen) that open in late night. Due to the heavy fiber content of young jackfruit and the thick coconut milk, those who have weak stomach may have trouble with *gudeg*.
- **Kipo**, bite-size snacks made of green tapioca dough filled with sweetened grated coconut. Can be found in *Kotagede*.
- **Bakpia**, another bite-size snack made from sweetened green bean paste wrapped with thin dough pastry. The most popular *bakpia* is known as *Bakpia Patuk*, which not surprisingly, are sold in *Pathuk* street, also known as *Jl. Aip K.S. Tubun*.
- **Jadah tempe**, sandwich of rice cake and sweet beancake. Can be found in *Kaliurang*.
- **Es rujak** or **rujak es krim**, a fruit salad made from mangos, papayas, apples, pineapples, cucumbers etc., mixed with palm sugar, lime juice, salt, chillies and (of course) ice cream (*es krim*). All flavours (sweet, sour, bitter, spicy, salty) in one plate. Available near *Pakualam's Palace* in the center of Yogyakarta city.

Consulates

- **France Consular Agency in Jogjakarta**, Institute Franco-Indonesien Jl. Sagan 3 No. 1, Yogyakarta 55223, ☎ [+62 274 566520](#), [+62 274 547409](#).

More resources on Yogyakarta:

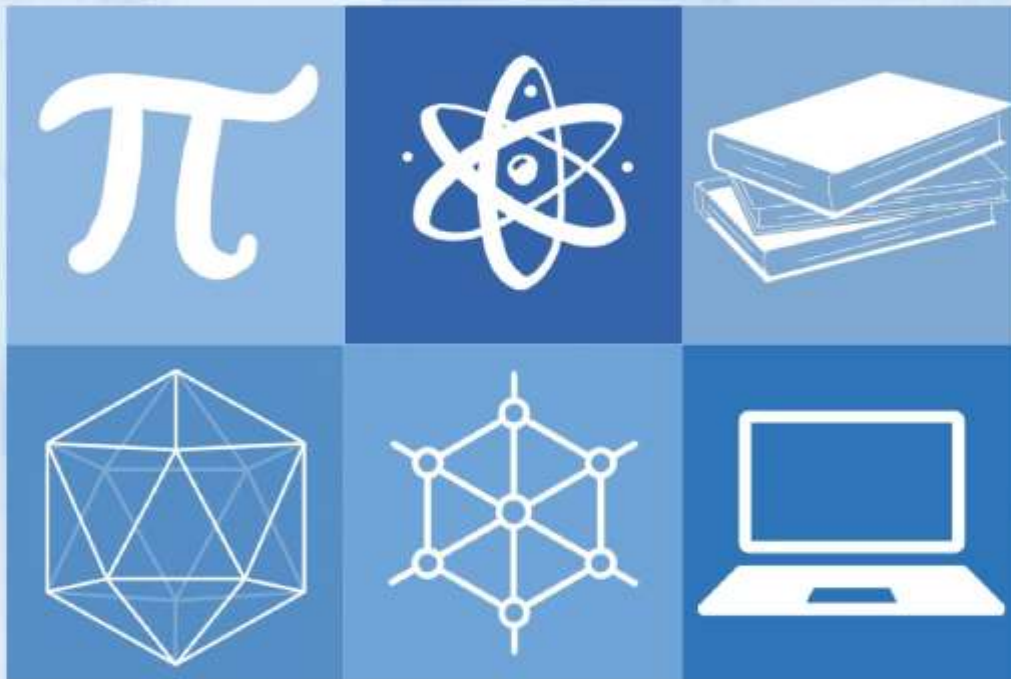
- Yogyakarta Tours and Tickets(<http://discoveryourindonesia.com/yogyakarta-tours/>)
- www.yogyes.com
- www.jogjakartatouristinformation.com
- www.tourjogja.com
- <http://www.jogjapages.com/en/yogyakarta-tourist-attraction/>
- <http://visitingjogja.com/>

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