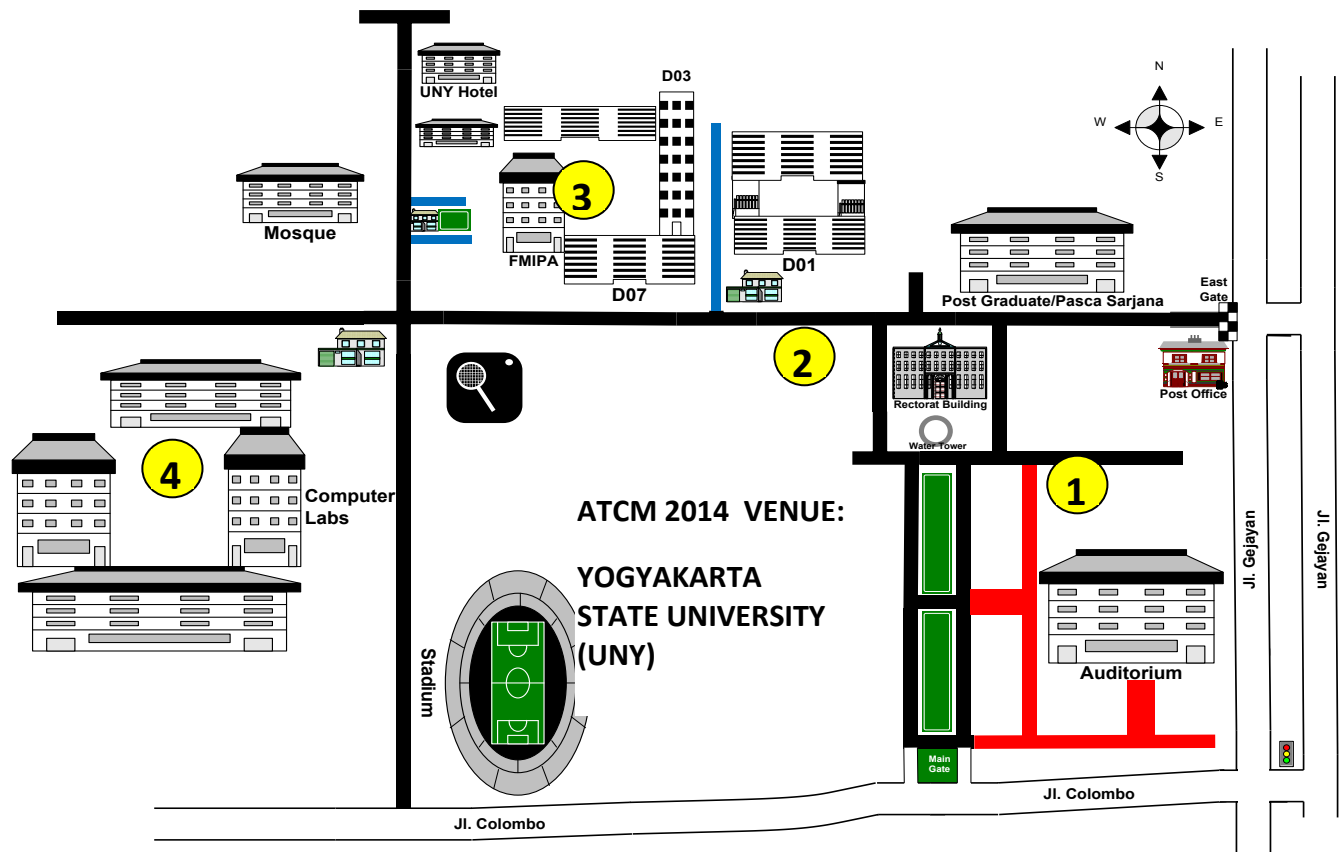# Contents

A. YSU MAP

MAP of Joint Conference on Innovation and Technology for Mathematics and Mathematics Education (19th ATCM – ISIMMED – ISMEI – SeNdiMat)

DEPARTMENT OF MATHEMATICS EDUCATION

FACULTY OF MATHEMATICS AND SCIENCE (FMIPA), YOGYAKARTA STATE UNIVERSITY (UNY)

JL. COLOMBO, KARANGMALANG, DEPOK, SLEMAN, YOGYAKARTA, INDONESIA 55281

Venue:

1. Auditorium (University Hall) for opening, welcome dinner, and 1st day plenary speeches

2. Rectorat Conference Hall (**CH**) for 2nd and 3rd days plenary speeches

3. FMIPA complex (building D07) for invited speeches, parallel sessions, exhibition, and closing
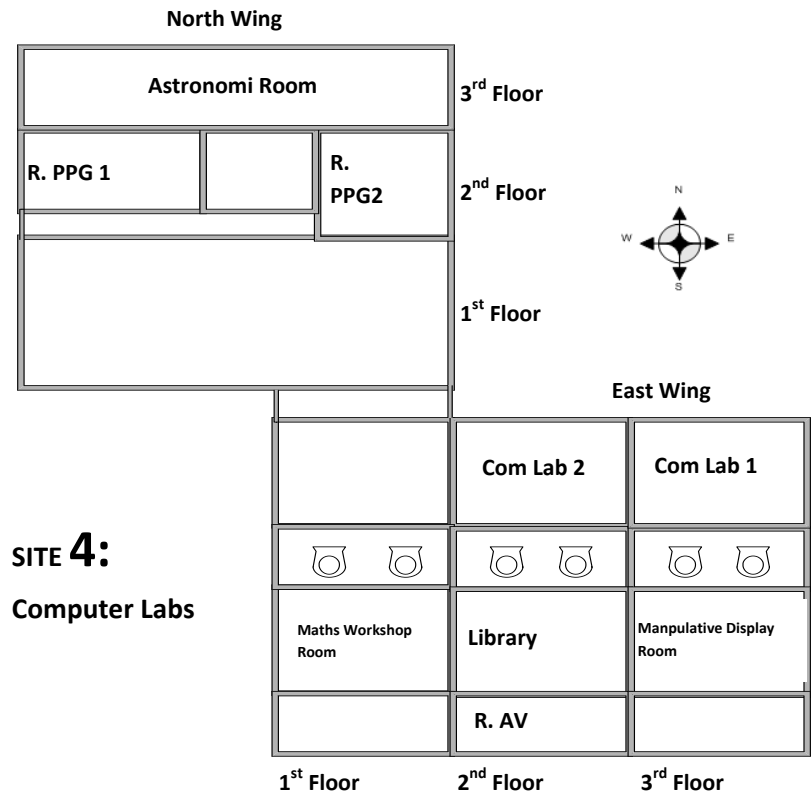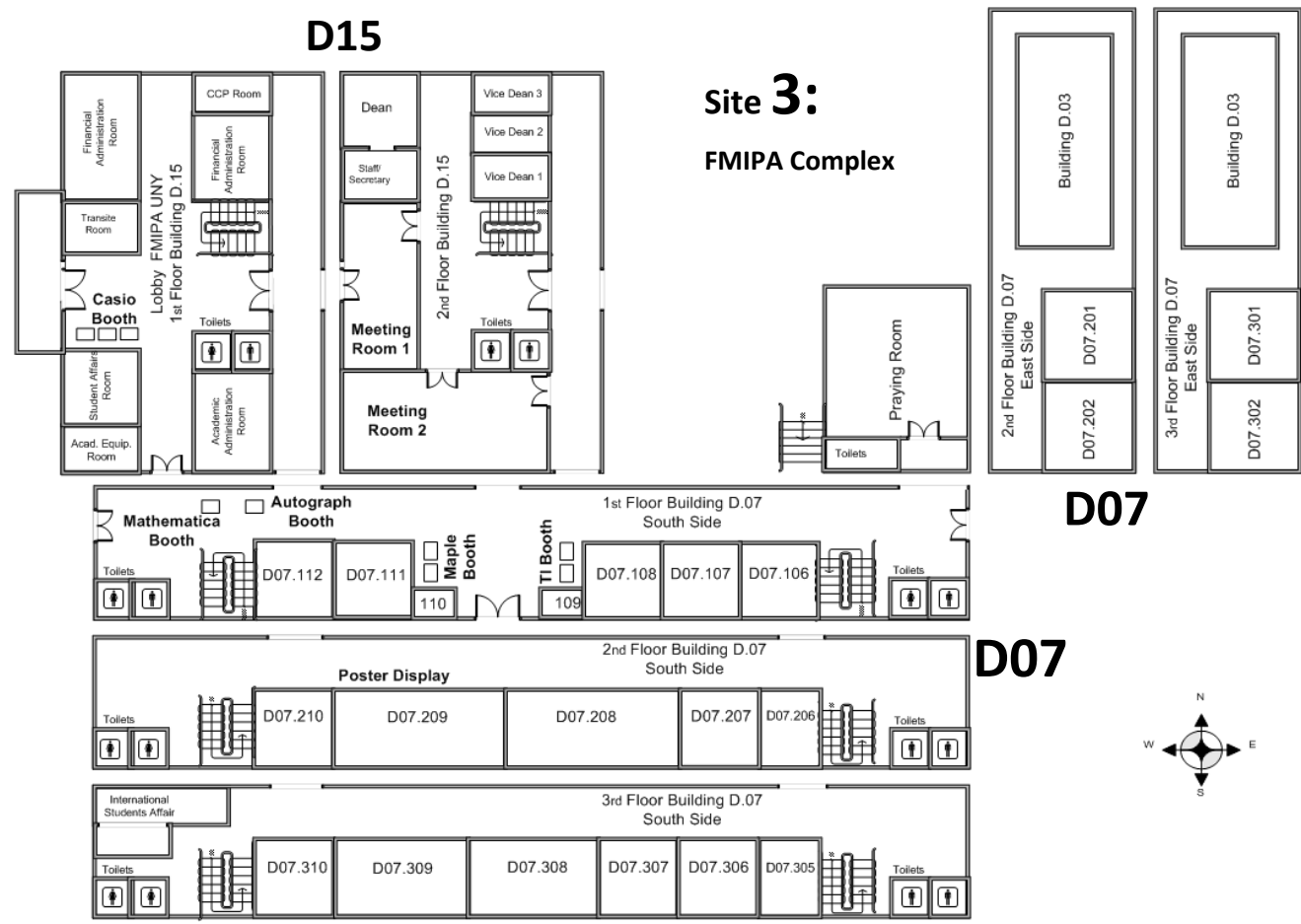
4. Computer Labs for workshops

Distance from **1 to 3** is ± 300 meters, from **2 to 3** is ± 200 meters, from **3 to 4** is ± 100 meters.

Yogyakarta State University is located about 8 km to the west of
Yogyakarta International Adi Sucipto Airport.
Taxi fare is IDR50.000 – IDR75.000 (US$1 $\approx$ IDR11.500).

B. ROOMS MAP

D15

Site 3:
FMIPA Complex

D15 Building (1st Floor):
- Financial Administration Room
- CCP Room
- Transite Room
- Financial Administration Room
- Lobby FMIPA UNY 1st Floor Building D.15
- Casio Booth
- Student Affairs Room
- Acad. Equip. Room
- Academic Administration Room
- Toilets
- Dean
- Staff/ Secretary
- Meeting Room 1
- Meeting Room 2
- 2nd Floor Building D.15
- Vice Dean 3
- Vice Dean 2
- Vice Dean 1
- Toilets

D07:
- Praying Room
- Toilets
- 2nd Floor Building D.07 East Side: D07.201, D07.202
- 3rd Floor Building D.07 East Side: D07.301, D07.302
- Building D.03
- Building D.03

D07 — 1st Floor Building D.07 South Side
- Mathematica Booth
- Autograph Booth
- Maple Booth
- TI Booth
- Toilets
- D07.112, D07.111, 110, 109, D07.108, D07.107, D07.106
- Toilets

D07 — 2nd Floor Building D.07 South Side
- Poster Display
- Toilets
- D07.210, D07.209, D07.208, D07.207, D07.206
- Toilets

3rd Floor Building D.07 South Side
- International Students Affair
- Toilets
- D07.310, D07.309, D07.308, D07.307, D07.306, D07.305
- Toilets

North Wing
- **Astronomi Room** — 3rd Floor
- **R. PPG 1**, **R. PPG2** — 2nd Floor
- 1st Floor

East Wing
- Com Lab 2
- Com Lab 1
- Maths Workshop Room
- Library
- Manpulative Display Room
- R. AV
- 1st Floor
- 2nd Floor
- 3rd Floor

SITE 4:
Computer Labs

C. Greeting

D. Program Outline

For Joint Conference on Innovation and Technology for Mathematics and Mathematics Education:
19th ATCM, 1st ISIMMED, 2nd SeNdiMat and 3rd ISMEI 2014
November 26-30, 2014, Yogyakarta State University, Indonesia

Wednesday	Thursday		Friday		Saturday		Sunday	
26 Nov 2014	**27 Nov 2014**		**28 Nov 2014**		**29 Nov 2014**		**30 Nov 2014**	
	07.00 – 09.00	Registration	07.00 – 08.00	Registration	07.00 – 08.00	Registration	07.00 – 08.00	Registration
	09.00 – 10.00	Opening Ceremony (YSU Auditorium)	08.00 – 09.40	Plenary Speech (2x1 speakers) (YSU Rectorate CH)	08.00 – 09.40	Plenary Speech (2x1 speakers) (YSU Rectorate CH)	08.00 – 09.00	Plenary Speech (1 speaker) (FMIPA)
	10.00 – 10.30	Tea/Coffee Break	09.40 – 10.10	Tea/Coffee Break	09.40 – 10.10	Tea/Coffee Break	09.00 – 10.00	Invited Speech (2 rooms x 1 speaker) (FMIPA)
Arrival and Registration of Participants	10.30 – 12.10	Plenary Speech (2x1 speakers) (YSU Auditorium)	10.10 – 11.10	1. Invited Speech (3 rooms x 1 speaker) 2. Workshops (3r x 1s) (FMIPA)	10.10-11.10	Invited Speech (2r x 1s)	10.00 – 10.30	Tea/Coffee Break
					11.10-12.00	1. Parallel Sessions 2. Workshops		
	12.10 – 13.40	Lunch Break	11.10 – 13.10	1. Muslim: **Friday Praying** 2. Other: **Exhibition** 3. **Lunch Break**	12.00 – 13.10	Lunch Break	10.30 – 12.00	Closing Ceremony
	13.40 – 14.40	1. Invited Speech (3 rooms x 1 speaker) 2. Workshops (2r x 1s) (FMIPA)	13.10 – 14.50	Parallel Sessions/ Workshops (10 rooms + 2 labs) (FMIPA)	13.10 – 14.50	Parallel Sessions (8 rooms) (FMIPA)	12.00 – 13.00	Lunch & Farewell
	14.40 – 15.20	Tea/Coffee Break	14.50 – 15.20	Tea/Coffee Break	14.50 – 15.20	Tea/Coffee Break		
	15.20 – 17.00	Parallel Sessions/ Workshops (10 rooms + 2 labs) (FMIPA)	15.20 – 17.00	Parallel Sessions/ Workshops (10 rooms + 2 labs) (FMIPA)	15.20 – 17.00	Parallel Sessions (10 rooms) (FMIPA)	**City Tour** (Foreign ATCM Participants)	Sayo nara … See you next year!
18.30 – 21.00	Welcome Reception (ATCM Participants & Committee) P4TK Matmtka	Welcome Dinner/ Culture Night (All Participants) = YSU Auditorium =	IPC Meeting (Prambanan Temple)		Social and Free Time			

Note: Exhibition and Poster Presentation (display) will be done during all sessions from Thursday to Saturday at the Exhibition Area from 09.00 to 15.00.

E. Detailed Schedule

Program for Joint Conference on Innovation and Technology for Mathematics and Mathematics Education: 19[th]ATCM, 1st ISIMMED, 3rd ISMEI, and 2nd SeNdiMat

November 26 - 30, 2014, Yogyakarta State University, Indonesia

November 26, 2014 (Wednesday*)*			PIC
17:00 -18:00 **Registration – FMIPA & UNY Hotel**			
18:30 -21:00 **Welcome Reception (Foreign Participants and Committee) – P4TK Matematika**			

November 27, 2014 (Thursday)			
07:00 -08:50 **Registration - Auditorium**			
09:00 -10:00 **Opening ceremony (All Participants, Invited Guests, Committee) - Auditorium**			
10:00 -10:30 **Tea Break**			
10:30 -11:20	**Plenary Speech 1: Auditorium, Chair:** Colette Laborde 20577 *Technological Tools Have Enhanced Our Teaching, Learning and Doing Mathematics, What is Next?* Wei-Chi Yang		Sahid
11:20 -12:10	**Plenary Speech 1: Auditorium, Chair:** Wahyudi 30007 *Three Training Strategies for Improving Mathematics Teacher Competences in Indonesia 2015-2019 based on Teacher Competency Test (TCT) 2012-2014* Widodo & Muh. Tamimudin H.		
12:10 -13:40 **Lunch Break (FMIPA)**			
13:40 -14:30	**Invited Speaker 1: Room 1(R. 207+208), Chair:** Krongthong Khairiree 20495 *Managing all the Change and Keeping Teachers Motivated* - Douglas Butler		Endah R.
	Invited Speaker 2: Room 2(R. 209+210), Chair: Paul Abbott 20498 *Teaching Experimental Mathematics: Digital Discovery Using Maple* - Bill Blyth		Ariyadi W.
	Invited Speaker 3: Room 3 (R. Astronomi), Chair: Jean-Jacques Dahan 20573 *Can Tightly Packed Circles be Movable*? Jen-Chung Chuan		Ilham R.
13:40 -14:40	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)		
	GC 1(R. PPG1)	20599 *Learning About Calculus with an Advanced Scientific Calculator* Barry Kissane	Kusprihan-tosa
	GC 2 (R. PPG2)	20640 *Mathematical Modelling using TI-Nspire* - Thomas Yeo	Nurhadi W.
14:40-15:20 **Tea Break**			
15:20 -17:00	**Parallel Session I. 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 1 (R. 201), Chair: Romeo Q. Tolentino		Dhoriva U.W.
	15:20 -15:45	20473 *An Algorithm for Solving Traveling Salesman Problem* Samrat Hore, Anup Dewanji, Aditya Chatterjee	
	15:45 -16:10	20660 *Modeling the Mohr's Circle for Two Dimensional State of Stress Using The Scientific Calculator* - Romeo Q. Tolentino	
	16:10 -16:35	*Statistical Reasoning Learning Enviroment (SRLE) In Teaching Video Improved Statistical Reasoning Skills* - Siti Nurashiken Binti Md Sabudin	
	16:35 -17:00	*The Role of the Center for Mathematical Modeling and Simulation, Institut Teknologi Bandung, at Mathematical Modeling Course at Department of Mathematics, Institut Teknologi Bandung* - Saladin Uttunggadewa	
	Room 2 (R. 202), Chair: Thomas Yeo		Agus M. A.
	15:20 -16:10 (50 minutes)	20493 *Visualization of Special Orthogonal Group SO(3) with Dynamic Geometry Software* - Yoichi Maeda	
	16:10-17:00 (50 minutes)	20639 *DynamicLesson Design Using Technology* - Thomas Yeo	
	Room 3(R. 206), Chair: Ariyadi Wijaya		Nila M.
	15:20 -15:45	*Analysis of Bruneian Lower Primary Mathematics Texts for Addition and Subtraction Word Problems* - Harkirat S Dhindsa	

	15:45 -16:10	*Identifying (Indonesian) Students' Difficulties in Solving Context-Based (PISA) Mathematics Tasks* – Ariyadi Wijaya	
	16:10 -17:00 (50 minutes)	*Using Technology in Learning Mathematics, The Research on the Integration of CASIO Graphing Calculators and Mathematics teaching* - Jiyan Wang	

Room 4 (R. 301), Chair: Barry Kissane — Eminugroho

15:20 -16:10 (50 minutes)	30001 *A Model for the Educational Role of Calculators* Barry Kissane and Marian Kemp	
16:10 -17:00 (50 minutes)	20561 *Examples and Techniques of Morphing within CAS and DGS Environments (Cabri and TI-Nspire). A Way of Enriching Our Teaching at All Levels* - Jean-Jacques Dahan	

Room 5 (R. 302), Chair: William Speer — Musthofa

15:20 - 15:45	20492 *Using the iPad and Calculator-Based Ranger to Introduce Fundamental Concepts of Slope to Younger Students* - William Speer	
15:45 - 16:10	20610 *Consideration on the Effect of the Lesson in Problem Solving by Few Children* - Tsutomu Ishii	
16:10 - 16:35	20627 *Math Input Interface by MathDox Formula Editor for Math e-Learning System STACK* - Yasuyuki Nakamura, Takahiro Nakahara, Yusuke Inagak	
16:35 - 17:00	*Enhancing Students' Mathematical Reasoning by Algebrator-assisted Inquiry Method* - Yaya S. Kusumah	

Room 6 (R. 306), Chair: Edy Widodo — Rosita K.

15:20 - 15:45	*Mining the Traffic Conditions via Twitter based on Rough Set Theory* RB Fajriya Hakim	
15:45 - 16:10	*M-Estimation Of Multivariate Response Surface Models* – Edy Widodo	
16:10 - 16:35	*Martingales and Efficient Market Hypothesis (Emh)* - Nita Delima	
16:35 - 17:00	*Fuzzy Hierarchical Clustering and Association Rules to Select Evacuation Routes* RB Fajriya Hakim	

Room 7 (R. 307), Chair: Heri Retnawati — Heri R.

15:20 - 15:45	*The Benefits of Compact Disc Interactive Mathematics as a Builder Democratic Mindset* - Lusi Rachmiazasi Masduki	
15:45 - 16:10	*The Effectiveness of Worksheet with Problem Solving Approach* Abdurahman Askois	
16:10 - 16:35	*Designing Mathematics Model of Teaching: The syntax of "Problem-Solving Performance Modelling" Model of Teaching* - Nurcholif Diah Sri Lestari	
16:35 - 17:00	*Assembling the Mathematics Test Using the Value of Information Functions* Heri Retnawati	

Room 8 (R. 308), Chair: Rifky Fauzi — Nikenasih B.

15:20- 15:45	*The Influence of Hydrodynamics on the Spread of Pollutants and Sedimentation in the Confluence of Two Rivers* - Rani Kurnia Putri	
15:45- 16:10	*The Implementation of Meshless Local Petrov Galerkin (MLPG) Method for Determine Pollutant Sources in Brantas River* - Miranda Eliyan	
16:10- 16:35	*Pollutant and Sedimentation Dispersion Pattern in the Confluence of Two Rivers* Dewi Nurmalitasari	
16:35- 17:00	*On the Pseudo-spectral Methods for Solving MKdV Equation* – Rifky Fauzi	

Hands-on Workshops
(GC stands for calculator workshops; CW stands for computer workshops)

15:20 - 17:00	GC 3 (R. PPG1)	20601 *Mathematical Problem Solving with a Graphing Calculator* Wee Leng Ng	Nurhadi W.
	GC 4 (R. PPG2)	20653 *Unveiling CASIO Fx 991ES+ : Maximizing Its Application in Mathematics Classes* - Maria Ailynn Diansuy, Romeo Tolentino	RetnoS.
	CW1 (CR 1)	20499 *Introduction to e-Teaching of Secondary School/Undergraduate Mathematics Using Maple* - Bill Blyth, Asim Ghous	Dwi Lestari
	CW2 (CR 2)	20575 *Chrystal Growing with Rhombic Polyhedrons, a Cabri 3D Workshop* Jen-Chung Chuan	Kusprihan-toso

09:00 -17:00 **Exhibitions**	Bambang SHM
18:30 - 21:00 **Conference Dinner and Culture Night (All Participants & Committee) - Auditorium**	

CR1 = Computer Room 1 (3rd Floor)   CR2 = Computer Room 2 (2nd Floor)

November 28, 2014 (Friday)			
07:00 - 08:00 **Registration (Rectorate Conference Room)**			
08:00 - 08:50	**Plenary Speech 3: Rectorate Conference Room, Chair:** Jen-Chung Chuan		Endah R.
	20625 Interactivity and Flexibility Exemplified with Cabri - Colette Laborde		
08:50 - 09:40	**Plenary Speech 4: Rectorate Conference Room, Chair:** Wei-Chi Yang		
	20578 Professional Development for Teachers in Mathematical Modelling - Keng Cheng Ang		
09:40 -10:10 **Tea Break**			
10:10 - 11:10	**Invited Speaker 4: Room 1(R. 207+208), Chair:** Bill Blyth		Ariyadi W.
	20579 *Reflections on Teaching Applied Mathematics with Technology* - Paul Abbott		
	Invited Speaker 5: Room 2(R. 209+210), Chair: Keng Cheng Ang		Ilham R.
	20608 *Bar Model and GSP: The Effective Strategy in Solving Word Problems* Krongthong Khairiree		
	Invited Speaker 6: Room 3 (R. Astronomi), Chair: Masami Isoda		Himma-wati PL
	20613 *Modern Geometry via Dynamic Tools* - Ma. Louise Antonette De Las Penas		
10:10 - 11:10	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)		
	GC 5 (R. PPG1)	20598 *Learning About Functions and Equations with an Advanced Scientific Calculator* - Barry Kissane	Sugiman
	GC 6 (R. PPG2)	Workshop on Scientific Calculator - Casio Jakarta	Musthofa
	CW3 (CR 1)	20501 *Introduction to Computer Aided Assessment of Secondary School/ Undergraduate Mathematics Using MapleTA* - Bill Blyth and AsimGhous	Heri R.
	CW4 (CR 2)	20509 *Hands-on Workshop: Autograph in Old Clothes and in New (for Ages 16-19)* - Douglas Butler	Nurhadi W.
11:10 -13:10 **Muslim Friday Prayer, Exhibition, Lunch Break**			
13:10 -14:50	**Parallel Session II. 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 1 (R.201), Chair: Felino Pascual		Dhoriva U.W.
	13:10-14:00 (50 minutes)	20478 *The Minimal Travel Time for Light Passing Through a Nonhomogeneous Medium* – Felino Pascual	
	14:00 - 14:25	20570 *Effects of Spreadsheet Towards Learners' Usage of Mathematical Language* - KokFui Chin, Sharifah Norul Akmarbt Syed Zamri	
	14:25 - 14:50	*Forecasting Consumer Price Index of Education Recreation, and Sport, Using Feedforward Neural Network Model* - Dhoriva U.W.	
	Room 2 (R. 202), Chair: Chee-Keong Chong		Agus M. A.
	13:10 - 13:35	20591 *Use of Lecture Capture in the Teaching and Learning of Statistics* Chee-Keong Chong, Marzita Puteh, Swee-ChooGoh	
	13:35 - 14:00	20597 *The Model of PGSD-UT's Students Worksheet Based on Display Component Based Theory as a Learning Strategy in Face to Face Tutorial* Suroyo N, Ngadi Marsinah, R. Sudarwo	
	14:00 - 14:25	30002 *A Practical Case for e-Mathematical Experiment with "Geometry Apps" from HP Prime* - Yang Jianyi and Liu Chengyang	
	14:25 - 14:50	*The Implementation of Cooperative Learning Course Review Horay Type Aided Macromedia Flash Media in Integral Calculus Course* – Dewi Rahimah	
	Room 3 (R. 206), Chair: Maria Isabel Lucas		Rosita K.
	13:10 - 13:35	20605 *Discovering the Concept of Limit Function at Tenth Grade Senior High School With Scientific Approach According to 2013 Curriculum Using Calculator Casio Fx-991 ID Plus* – Wiworo	
	13:35 - 14:00	20606 *Geometrical Patterns of Yogyakarta Batik Ornaments* Wiworo, Nabila Rahma Khairunnisa	
	14:00 - 14:25	20588 *Effects of Using Casio FX991 ES Plus on Achievement and AnxietyLevel in Mathematics* - Maria Isabel Lucas, Erlinda Cayao	
	14:25 - 14:50	*Mathematical Problem Solving Approach Student Behavior Learning Theory* La Misu	
	Room 4 (R. 301), Chair: Zulkarnain		Ilham R.
	13:10 - 13:35	*Educational Design Research: Developing Students' Understanding of Measurement Units of Area* - Susilahudin Putrawangsa	
	13:35 - 14:00	*Realistic Mathematics Education of Indonesia, Mathematically Disposition, and Mathematically Creative Thinking Ability of Junior High School* Nila Kesumawati	
	14:00 - 14:25	*Mathematical Representation Ability and Self Confidence Students Through Realistic Mathematics Approach* - Adi Asmara	

	14:25-14:50	*The Effect of Realistic Mathematics Approach to Mathematical Problem Solving Skills in Students of Class VII SMP Negeri 3 Mandau - Zulkarnain*	
	Room 5 (R. 302), Chair: Kistosil Fahim		Musthofa
	13:10 - 13:35	*Finding New Numbers From Square Matrix - Muzamil Huda*	
	13:35 - 14:00	*Fuzzy Number Min-Plus Algebra and Matrix - M. Andy Rudhito*	
	14:00 - 14:25	*On Regular Elements of Semigroups of n-Ary Operations – Yeni Susanti*	
	14:25 - 14:50	*Monorail and Tram Scheduling Which Integrated in Surabaya Using Max-Plus Algebra – Kistosil Fahim*	
	Room 6 (R. 306), Chair: Neneng Tita Rosita		Himmawati P.L.
	13:10 - 13:35	*Creative Problem Solving with Higher Order Thinking Problem in Learning Mathematics - Janet Trinekemanoy*	
	13:35 - 14:00	*Development PISA Problems with Culture Context of Bengkulu - Risnanosanti*	
	14:00 - 14:25	*Applying Geogebra Software to Improve Students of Learning Outcomes and Activities – Gusniarti*	
	14:25 - 14:50	*An Analysis of Mathematical Problem Solving Ability of High Capability Students of the Islamic Elementary Schools at Sumedang – Neneng Tita Rosita*	
	Room 7 (R. 307), Chair: Imam Solekhudin		Eminugroho
	13:10-13:35	*Donsker's Delta Function of the Generalized Mixed Fractional Brownian Motion* Herry Pribawanto Suryawan	
	13:35-14:00	*A Numerical Method for Infiltration Problems - Imam Solekhudin*	
	14:00-14:25	*Numerical Solution of KdV Equation - L.H. Wiryanto*	
	14:25-14:50	*Limit and Colimit and Their Properties – Denik Agustito*	
	Room 8 (R. 308), Chair: Mohamad Fatekurohman		Nikenasih B.
	13:10 - 13:35	*Modified Genetic Algorithm to Solve Time-varying Lot Sizes Economic Lot Scheduling Problem - Bethany Elvira*	
	13:35 - 14:00	*The New Concepts Dimension of Fractal Geometry and Its Applications* Dwi Juniati	
	14:00 - 14:25	*Risk Analysis of Credit Default On Rural Bank by Using Back Propagation Neural Network Approach – Sukono*	
	14:25 - 14:50	*An algorithm of Nonparametrics Maximum Likelihood Estimation for Bivariate Censored Data – Mohamad Fatekurohman*	

	Hands-on Workshops (GC stands for calculator workshops; CW stands for computer workshops)		
13:10-14:50	GC 7 (R. PPG 1)	20600 *Learning Mathematics with a Modern Graphics Calculator* Barry Kissane	Nurhadi W.
	GC 8 (R. PPG 2)	20494 *Enhancing the Teaching and Learning of Mathematics Through Handheld Technology - Wee Leng Ng*	Nila Mareta
	CW5 (CR 1)	20603 *An Overview of Mathematica for Education - Paul Abbott, Farid Pasha*	Kusprihan-toso
	CW6 (CR 2)	20496 *Hands-on Workshop: Autograph in Old Clothes and in New (for Ages 11-16) - Douglas Butler*	Dwi Lestari

14:50 -15:20 **Tea Break and Poster Sessions**
20618 *Let's Explore the Functions of Complex Value -* Chieko Fukuda, Kyoko KAKIHANA
20619 *Problem Solving with Certification -* Shin Watanabe
20635 *An Application of CAS for Defining Equations of Singularities with Indeterminate Exponents* Tadashi Takahashi, Fumiya Iwama

	Parallel Session III. Presentations (Each contributed paper presentation slot is 25 minutes, unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)		
15:20 - 17:00	**Room 1 (R. 201), Chair:** Al Jupri		Dhoriva U.W.
	15:20 - 15:45	20574 *The Impact of a Technology-rich Intervention on Grade 7 Students' Skills in Initial Algebra -* Al Jupri, Paul Drijvers, Marja van den Heuvel-Panhuizen	
	15:45 - 16:10	20611 *Non-visual Expression Method for Mathematical Documents in Elementary Geometry -* Ryoji Fukuda, Masato Kojo	
	16:10 - 16:35	20612 *Applicability of Gaze Points for Analyzing Priorities of Explanatory Elements in Mathematical Documents*	

		Ryoji Fukuda, JunkiIwagami, Takeshi Saitoh	
16:35 - 17:00	20504	*Revisiting Geometric Construction Using Geogebra* Glenn Laigo, Abdul Hadi Bhatti, Lakshmi Kameswari Pulipaka, et al.	

Room 2 (R.202), Chair: Maria Ailynn Diansuy — Agus M. A.

15:20 - 15:45	20481	*Using Spreadsheet to Create Rug Patterns and Designs* - Maryanne Bagore	
15:45 - 16:10	20641	*On the Application of Technology to Solutions of Limits Involving Indeterminate Forms* - Maria Ailynn Diansuy	
16:10 - 16:35	20590	*Integration of Products Using Differentials* Rebecca Tolentino, Janette Lagos	
16:35 - 17:00		*The Innovative Thinking Reflective Process In Solving Calculus Problems* In Abdullah & Hery Suharna	

Room 3 (R. 206), Chair: Rahul Mukherjee — Rosita K.

15:20 - 15:45	20465	*Optimal Statistical Designs via Directional Derivatives in the Presence of a Nuisance Parameter* - Rahul Mukherjee	
15:45 - 16:10	20470	*Application of Frechet Derivatives for Optimal Statistical Planning of Experiments with Asymmetrically Distributed Measurement Errors* Mausumi Bose	
16:10 - 16:35	20587	*Locating Points in 3D Graphic Space As More Direct Interface to the Learning Contents of Vector Equations* Wataru Ohno, Kotaro Shimada, Hitoshi Nishizawa, et al.	
16:35 - 17:00		*The Application of Goal Programing for Portfolio Selection Problem in Indonesia* Rosita Kusumawati	

Room 4 (R. 301), Chair: Stefan Oeyen — Ilham R.

15:20 - 15:45	20582	*Developing the Technology Integration Competency in a Pre-service Teacher Training* - Stefan Oeyen	
15:45 - 16:10	20502	*Using Graphing Calculator in Problem Solving Tasks* Kwan Eu Leong, Mary Ann Serdina Parrot	
16:10 - 16:35	30003	*Applications of Information Technology to the "Five Points" Conjecture* Ren-shou Huang & Yuan-jing Xia	
16:35 - 17:00		*Development of Mathematics Learning Equipment Based on Humanistic Using Savi Approach Assisted By Interactive CD* - Kartinah	

Room 5 (R. 302), Chair: Hayatun Nufus — Musthofa

15:20 - 15:45	*Integrating Faith in Mathematics Teaching and Learning* Kartini Hutagaol Simanjuntak	
15:45 - 16:10	*Student's Attitudes Towards Mathematics Lessons, Mathematics Learning, and Problems About Reasoning and Mathematical Communication* – Hayatun Nufus	
16:10 - 16:35	*Teaching Experiments in Exploring Convex Functions* - Pham Sy NAM	
16:35 - 17:00	*Teacher's Informal Learning Trajectory and Student's Actual Learning Trajectory on Learning Cube and Cuboid Nets* – Mujiyem Sapti	

Room 6 (R. 306), Chair: Hongki Julie — Himma-wati P.L.

15:20 - 15:45	*Values and Characters-Nuanced Innovative Teaching to Develop Hard Skills and Soft Skills of Junior and Senior High Students' Math* – Heris Hendriana	
15:45 - 16:10	*Metacognitive Strategies Employed in Solving Arithmetic Word Problems* LOH, Mei Yoke	
16:10 - 16:35	*The Understanding Profiles of the Subject 1 About the Philosophy, Principles, and Characteristics of RME Before Subject 1 Learns from the Learning Resource* Hongki Julie	
16:35 - 17:00	*The Use of Riau Folk Games in Developing Mathematic Learning Material For 4th Grade of Elementary School* – Yenita Roza	

Room 7 (R. 307), Chair: Wardani Rahayu — Eminugroho

15:20 - 15:45	*The Problem of Students in Learning Sources Development Writing of Mathematics* Akhsanul In'am	
15:45 - 16:10	*The Readiness and the Ability of Elementary School Teachers in Integrating Mathematics into Other Subjects on the Implementation of 2013 Curriculum* Mustamin Idris	
16:10 - 16:35	*The Influence Of React Strategy Towards Mathematical Belief* - Wardani Rahayu	
16:35 - 17:00	*The Influence Of Accelerated Learning Cycle On Junior High School Students' Mathematics Connection Abilities* - Sindi Amelia	

	Room 8 (R. 308), Chair: Nahor Murani Hutapea		Nikenasih B.
	15:20-15:45	*The Implementation of Visual Thinking Approach in Learning Activity with a Quick on the Draw to Improve the Problem Solving Ability of Junior High School Students* Rezi Ariawan	
	15:45-16:10	*The Implementation of Metacognitive Learning Approach in Developing Students' Mathematical Communication Ability* - Mimih Aminah	
	16:10-16:35	*The Enhancement of Mathematical Reasoning Ability of Senior High School Students' Through Generative Learning* – Nahor Murani Hutapea	
	16:35-17:00	*Developing Teaching Material of Inquiry Co-operation Model for Enhancing Students' Mathematical Communication Ability* – Heni Pujiastuti	
15:20-17:00	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)		
	GC 9 (R. PPG 1)	30005 *Discovering Concept of Limit Function in Tenth Grade Senior High School With Scientific Approach According to 2013 Curriculum Using Calculator Casio Fx-991 ID Plus* -Wiworo	Nurhadi W.
	GC10 (R. PPG 2)	30009 *Creative Mathematics Activities in a Classroom* – Janchai Yingprayoon	Nila Mareta
	CW7 (CR 1)	20604 *Make Your Course Interactive and Engaging* - Farid Pasha, Paul Abbott	Kusprihan-toso
	CW8 (CR 2)	20562 *Modelling the Floating Indonesian Flag: Two Techniques with Cabri 3D* Jean-Jacques Dahan, Jean-Marie Laborde	Dwi Lestari
09:00-17:00 **Exhibitions**			Bambang SHM
18:30-20:30 **IPC Meeting (Prambanan Temple)**			Sahid

 CR1 = Computer Room 1 (3rd Floor)   CR2 = Computer Room 2 (2nd Floor)

November 29, 2014 (Saturday)

07:00-08:00 **Registration (Rectorate Conference Room)**		
08:00-08:50	**Plenary Speech 5: Rectorate Conference Room, Chair:** Deane Arganbright *30006 Why Technologies are Necessary for the Current Curriculum Reform?* Masami Isoda	Nur Inasi
08:50-09:40	**Plenary Speech 6: Rectorate Conference Room, Chair:** Marsigit *20628 Integrating Technology in Teaching and Learning (Mathematics)* Paulina Pannen	
09:40-10:10 **Tea Break**		
10:10-11:10	**Invited Speaker 7: Room 1(R. 207+208), Chair:** Ma. Louise Anotnette De Las Penas 20614 *A Capstone Course to Improve the Preparation of Mathematics Teachers on the Integration of Technology* - Antonio Quesada	Endah R.
	Invited Speaker 8: Room 2(R. 209+210), Chair: Wahyudi 20637 *Educating the Educators: Technology-Enhanced Mathematics Teaching and Learning* - Leong Chee Kin	Ariyadi W.
11:10-12:00	**Parallel Session IV. 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 1 (R. 201), Chair: Yasuyuki Nakamura	Dhoriva U.W.
	11:10 - 11:35 20589 *Teaching Materials Incorporating Interactive Graphics for College-level Mathematics Education* Shunji Ouchi, Yoshifumi Maeda, Naoki Hamaguchi, et al.	
	11:35 - 12:00 20595 *How to Construct a Question of LnearAlgebra by Mathematics e-Learning System STACK* - Tetsuya Taniguchi, Yasuyuki Nakamura, Takahiro Nakahara	
	Room 2 (R. 202), Chair: Janeth Canama	Agus M. A.
	11:10 - 11:35 20624 *On the Separator of Subsets of Regular Semigroups* Janeth Canama, Gaudencio Jr. Petalcorin	
	11:35 - 12:00 *Teaching Experiments in Constructing Mathematical Problems that Relate to Real Life* - Pham Sy NAM	
	Room 3 (R. 206), Chair: Himmawati	Himmawati
	11:10 - 11:35 *The Student's Response to Solid Geometry Learning Using ICT* - Himmawati	
	11:35 - 12:00 *Build an Interactive Application "Matica" for Teaching and Learning Mathematics* Winita Sulandari	

	Room 4 (R. 301), Chair: Indah Widiati		Ilham R.
	11:10-11:35	*Application of Model Problem Based Learning (PBL) with Creative Problem Solving (CPS) in Arithmetic Sequence and Series* - Siti Khomariyah	
	11:35-12:00	Developing Mathematical Problem Solving Skills of Students Junior High School Through Contextual Learning - Indah Widiati	
	Room 5 (R. 302), Chair: Dasa Ismaimuza		Musthofa
	11:10-11:35	*Assimilation and Accomodation Speed Detection of the Seventh Grade Students in Learning Special Triangle* - Herfa MD Soewardini	
	11:35-12:00	*Associations Between Students' Prior Knowledge with Critical and Creative Thinking Ability on Mathematics Junior High School Students Through Problem Based Learning and Cognitive Conflict Strategy* - Dasa Ismaimuza	
	Room 6 (R. 306), Chair: Winita Sulandari		Rosita K.
	11:10-11:35	*Blended Learning Design for Mathematics in School* - Supandi	
	11:35-12:00	*Application Model Learning Creative Problem Solving (CPS) Math Learning to Improve Results Class VII1 SMPN 3 Pekanbaru* - Susda Heleni	
	Room 7 (R. 307), Chair: Agustina Sri Purnami		Eminugroho
	11:10-11:35	*Caping Kalo as Kudus Cultural Heritage to Construct Circle Concept of Primary School Students* – Eka Zuliana	
	11:35-12:00	*Coaching Model to Certified Junior High School Math Teachers in Yogyakarta* Agustina Sri Purnami	
	Room 8 (R. 308), Chair: Euis Eti Rohaeti		Nikenasih
	11:10-11:35	*Defragmenting of Thinking Process Through Cognitive Mapping to Fix Student's Error in Solving the Problem of Algebra* - Salman Sakif	
	11:35-12:00	*Developing a Balanced Hard Skills and Soft Skills Of Students' Math Through the Character-Oriented Scientific Approach* – Euis Eti Rohaeti	
11:10-12:00	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)		
	CW 9 (CR 1)	20501 *Introduction to Computer Aided Assessment of Secondary School/ Undergraduate Mathematics using MapleTA* Bill Blyth and Asim Ghous	Nurhadi W.
	CW10 (CR 2)	20563 *Become a Bricklayer, a Carpenter and More in Building a House and the Double Stair of the Chambord Castle with Cabri 3D* Jean-Jacques Dahan, Jean-Marie Laborde	Kusprihan-toso

12:00-13:10 **Lunch Break**

13:10 – 17:00 Free Conference Tour for Paid Foreign Participants

	Parallel Session V. Presentations (Each contributed paper presentation slot is 25 minutes, unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)		
13:10-14:50	Room 1 (R. 201), Chair: Sudirman		Dhoriva U.W.
	13:10-13:35	*Developing Mathematic Student's Textbook for 5th Grade of Elementary School Based on Traditional Games of Riau Province* - Yenita Roza	
	13:35-14:00	*Improving Ability of Teachers in Action Learning of Mathematic Through Using Environment of School as Source of Learning* - Sudirman	
	14:00-14:25	*Mathematics Learning Now and Will Come* - Hasratuddin	
	14:25-14:50	*Effectiveness of Progressive Learning Approach toward Enhancement of Students' Competency on Mathematics Journal Writing* - Kodirun	
	Room 2 (R. 202), Chair: Hamidah		Agus M. A.
	13:10-13:35	*Students' Concept Maps in Abstract Algebra* - Jackson Pasini Mairing	
	13:35-14:00	*Project-Based Learning on Learning Mathematics* Raoda Ismail, Okky Riswandha Imawan	
	14:00-14:25	*Relationships Between Retention Of Mathematical Critical Thinking and Self Regulated Learning Through Contextual Approach* - Hamidah	
	14:25-14:50	*Thinking Process of Elementary School Students in Word Problem Solving* - Baiduri	
	Room 3 (R. 206), Chair: Hepsi Nindiasari		Rosita K.
	13:10-13:35	*The Effect of Students Attitude Toward Mathematics for Mathematics Achievement in Indonesia* - Desi Rahmatina	
	13:35-14:00	*Stages of Reflective Thinking Mathematically* - Hepsi Nindiasari	
	14:00-14:25	*Student Comprehension About Line and Row From Apos Theory Point of View* Syaiful	

	14:25-14:50	*Tutorial Based on Problem and Role Playing to Increase Yogyakarta Open University Students' Undestanding of Class Action Research* - Tri Dyah Prastiti	
	Room 4 (R. 301), Chair: Edy Bambang Irawan		Ilham R.
	13:10-13:35	*Development a Set of Instructional Learning Based Realistic Mathematics Education and Local Wisdom* - Theresia Laurens	
	13:35-14:00	*Investigation Of Mathematical Concepts In Order To Increase Tacit Knowledge Of Mathematics Novice Teachers* – Edy Bambang Irawan	
	14:00-14:25	*Improving Competence Mathematical Self-Efficacy of Junior Secondary School Students by Applying Realistic Mathematics Approach* - Somakim	
	14:25-14:50	*The Development of Teaching Macromedia Flash of Plane Material in Class X SMKN 1 Langsa* – Ariyani Mulyo	
	Room 5 (R. 302), Chair: Khoirul Qudsiyah		Musthofa
	13:10 - 13:35	*Development of Learning Mathematics to Train Students' Metacognitive Ability* Mustamin Anggo	
	13:35 - 14:00	*Mathemathics Learning Through the Problems of Environmental* - Warman	
	14:00 - 14:25	*The Effect of Reog Learning for Mathematical Analogic Ability and Creativity From Junior State High School in Pacitan Regency* – Khoirul Qudsiyah	
	14:25 - 14:50	*The 2-Tuple Linguistic Representation Approach For Learning Competence Evaluation* - Sri Andayani	
	Room 6 (R. 306), Chair: Nurina Happy		Himmawati P.L.
	13:10 - 13:35	*Development of Mathematics Learning Equipment Based on Critical Thinking Using Savi Approach Assisted by Interactive CD* - Rasiman	
	13:35 - 14:00	*Mathematical Creative Thinking Skills of Students Junior High School in Kendari City* Kadir	
	14:00 - 14:25	*The Effectiveness of Problem-Based Learning on Mathematical Creative Thinking Skill and Self-Esteem of Junior High School Students* - Nurina Happy	
	14:25 - 14:50	*The Enhancement Ability of Mathematic Connection Through Van Hiele Theory Based On Learning* – Epon Nur'aeni	
	Room 7 (R. 307), Chair: Rachmad Ramelan		Eminugroho
	13:10 - 13:35	*Efectiveness Of React Strategy For Improve Of Problem Solving Ability On Mathematics In Junior High School* - Sari Herlina	
	13:35 - 14:00	*Implementation of Project Based Learning as an Effort to Improve Student Mathematical Strategic Competence and Productive Disposition* Rahayu Kariadinata, Iyon Maryono, Erni Nuraeni	
	14:00 - 14:25	*Learning the Root Form Numbers Meaningfully and Joyfully Through Golden Snail Learning Strategy in Senior High School* - Rachmad Ramelan	
	14:25 - 14:50	*What Students' Thinking about Contextual Problems Is* Ekasatya Aldila Afriansyah	
	Room 8 (R. 308), Chair: Hedi Budiman		Nikenasih B.
	13:10 - 13:35	*Enhancing the Ability of Mathematics Student Problem Solving through Pembelajaran Pelangi Matematika* - Diar Veni Rahayu	
	13:35 - 14:00	*Developing Mathematical Discovery Ability Using Geometry Expression Software* Hedi Budiman	
	14:00 - 14:25	*Joyful and Meaningful in Mathematics Classroom Through Brainly.Com* Lidia Endi Sulandari	
	14:25 - 14:50	*Using The Ornaments Of Historical Mosque to Learn Two-Dimensional Shapes* Sutarto Hadi, Karim, Kamaliyah, Rizki Amalia	
14:50-15:20 Tea Break and Poster Sessions			
15:20 - 17:00	**Parallel Session V. 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 4 (R. 301), Chair: Yuliana Susanti		Retno S.
	15:20-15:45	*To Have the 7 Grader Students Understand of Polygon Area by Using Open Ended Approach* - Nanang Hari Setiyono	
	15:45-16:10	*Performance of Mean Absolute Deviance (MAD) with Sharpe Index in Portfolio Optimization* - Retno Subekti	
	16:10-16:35	*Analysis of Rice Availability in Indonesia Using Multi-Dimensional Scaling* Yuliana Susanti	
	16:35-17:00	*Solving Linear and Non Linear IVP Problem Using Picard Iterartion* Fitriana Yuli Saptaningtyas	

	Room 5 (R. 302), Chair: Agus Susanta		Agus M. A.
	15:20 - 15:45	*Mathematical Disposition of Prospective Mathematics Teacher* - Ali Mahmudi	
	15:45 - 16:10	*Improving the Conceptual Mastery and Trigonometric Learning Achievement Using an Applet Geogebra-Assisted Cooperative Learning Model in The Eleventh Ma (Engine A) Graders of Smk N 2 Wonosari of Gunungkidul Regency in The School Year Of 2014/2015* - Ika Wulandari	
	16:10 - 16:35	*The Inquiry Based Learning Assisted GeoGebra to Enhance Students Learning Out Comes in Geometry Transformation at Mathematics Education University of Bengkulu* – Agus Susanta	
	16:35 - 17:00	*Application of Association Rules with Apriori Algorithm to Determine the Pattern of the Relationship between SBMPTN Database and Students Grade Point Average* Kuswari Hernawati	
	Room 6 (R. 306), Chair: Nur Insani		Nur Insani
	15:20 - 15:45	*Using Mathematics Software And Internet Access For Teaching In Mathematics* Afrial	
	15:45 - 16:10	*The Hypothetical Learning Trajectory on Addition in Mathematics GASING* Rully Charitas Indra Prahmana	
	16:10 - 16:35	*Learning of Area Measurement Using an Applet* - Wahid Yunianto	
	16:35 - 17:00	*A Comparison of Heuristics Algorithms to Solve Vehicle Routing Problem with Multiple Trips and Intermediate Facility* - Nur Insani	
	Room 7 (R. 307), Chair: Musthofa		Musthofa
	15:20 - 15:45	*Integration of Autograph in Improving Mathematical Problem Solving and Mathematical Connection Ability Using Cooperative Learning Think-Pair-Share* Ida Karnasih	
	15:45 - 16:10	*Mathematics Education for Disaster Risk Reduction* - Darto	
	16:10 - 16:35	*An Application of Maxplus Algebra in Crytography* - Musthofa	
09:00 -17:00 Exhibitions			Bambang SHM
18:30 - 21:00 Social and Free Time			

November 30, 2014 (Sunday)		
07:00-08:00 **Registration (FMIPA)**		
08:00 - 08:50	**Plenary Speech 5: R. 207-210 (R. 207-210) , Chair:** Sugiman *20629 Re-conceptualizing Good Practice of Mathematics Teaching Through Lesson Study in Indonesia* - Marsigit	Sahid
09:00 - 09:50	**Invited Speaker 7: Room 1(R. 207-210), Chair:** Wei-Chi Yang 20638 *Mathematics Intelligent Learning Environment* - Hongguang Fu, Xiuqin Zhong	Sahid
	Invited Speaker 8: Room 2(R. Astronomi), Chair: Quesada Antonio 0506 *Comparing Mathematical Modeling Methods via Excel* - Deane Arganbright	Ariyadi W.
10:00 -10:30 **Tea Break**		
10:30 -12:00 **Closing Ceremony (FMIPA)**		
12:00 -13:30 **Lunch and Farewell**		

F. Half-Day Tour (For Paid Foreign Participants) & Full-Day Tour

G. At Glance About Yogyakarta State University

H. At Glance About Yogyakarta City