Program for the 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

November 26, 2014 (Wednesday*)*

| 17:00-18:00 | **Registration**: |
| 18:30-21:00 | **Welcome Reception** |

November 27, 2014 (Thursday)

7:00-8:50	**Registration**
9:00-10:00	**Opening ceremony**
10:00-10:30	**Tea Break**

10:30-11:20 Plenary Speech 1: Auditorium Room , Chair: Colette Laborde
20577 Technological tools have enhanced our teaching, learning and doing mathematics, what is next? Wei-Chi Yang
11:20-12:10 Plenary Speech 1: Auditorium Room , Chair:
30007 THREE TRAINING STRATEGIES FOR IMPROVING MATHEMATICS TEACHER COMPETENCES IN INDONESIA 2015-2019 BASED ON TEACHER COMPETENCY TEST (TCT) 2012-2014- Widodo (Professor rer nat on Mathematics, PPPPTK Matematika Yogyakarta, Indonesia)

12:10-13:40 **Lunch Break**

13:40-14:30	**Invited Speaker 1: Room 1**: (**Chair:** Krongthong Khairiree) 20495 Managing all the change and keeping teachers motivated-Douglas Butler
	Invited Speaker 2: Room 2: (**Chair:** Paul Abbott) 20498 Teaching Experimental Mathematics: Digital Discovery using Maple-Bill Blyth
	Invited Speaker 3: Room 3: (**Chair:** Jean-Jacques Dahan) 20573 Can Tightly Packed Circles be Movable? Jen-chung Chuan
13:40-14:40	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)
	GC Room 1: 20599 Learning about calculus with an advanced scientific calculator-Barry Kissane
	GC Room 2: 20640 Mathematical Modelling using TI-Nspire-Thomas Yeo

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: (Chair: Romeo Q. Tolentino**)**
	15:20-15:45 20473 An Algorithm for Solving Traveling Salesman ProblemSamrat 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
	Room 2: (Chair: Thomas Yeo**)**
	15:20-16:10 20493 Visualization of special orthogonal group SO(3) with dynamic (50 minutes) geometry software-Yoichi Maeda
	16:10-17:00 20639 Dynamic Lesson Design using Technology-Thomas Yeo (50 minutes)
	Room 3: (Chair:)
	16:00-16:50 A Presentation by teachers from China. (50 minutes)
	Room 4: (Chair: Barry Kissane**)**
	15:20-16:10 30001 A model for the educational role of calculators- Barry Kissane, (50 minutes) and Marian Kemp
	16:10-17:00 20561 Examples and Techniques of Morphing within CAS and DGS (50 minutes) Environments (Cabri and TI-Nspire). A Way of Enriching our Teaching at all Levels-Jean-Jacques Dahan
	Room 5: (Chair: William Speer**)**
	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

15:20 - 17:00	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)
	(GC Room 6) 20601 Mathematical Problem Solving with a Graphing Calculator-Wee Leng Ng
	(GC Room 7) 20653 Unveiling CASIO fx 991es+ : Maximizing its Application in Mathematics Classes-Maria Ailynn Diansuy, Romeo Tolentino
	(CW1 Computer Room 1) 20499 Introduction to e-Teaching of Secondary School / Undergraduate Mathematics using Maple Bill Blyth, Asim Ghous
	(CW2 Computer Room 2) 20575 Chrystal Growing with Rhombic Polyhedrons, a Cabri 3D Workshop-Jen-chung Chuan

09:00-17:00	**Exhibitions**
18:30-21:00	**Conference Dinner and Culture Night**

November 28, 2014 (Friday)

7:00-8:00 Registration:

8:00-8:50	**Plenary Speech 3: Chair:** Jen-chung Chuan
	20625 Interactivity and flexibility exemplified with Cabri- Colette Laborde
8:50-9:40	**Plenary Speech 4: Chair:** Wei-Chi Yang
	20578 Professional Development for Teachers in Mathematical Modelling Keng Cheng Ang

9:40-10:10   Tea Break

10:10-11:10	**Invited Speaker 4: Room 1: (Chair:** Bill Blyth **)** 20579 Reflections on Teaching Applied Mathematics with Technology-Paul Abbott
	Invited Speaker 5: Room 2: (Chair: Keng Cheng Ang**)** 20608 Bar Model and GSP: The Effective Strategy in Solving Word Problems-Krongthong Khairiree
	Invited Speaker 6: Room 3: (Chair: Masami Isoda**)** 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 Room 4) 20598 Learning about functions and equations with an advanced scientific calculator-Barry Kissane
	(CW Computer Room 1) 20501 Introduction to computer Aided Assessment of Secondary School / Undergraduate Mathematics using MapleTA- Bill Blyth and Asim Ghous
	(CW Computer Room 2) 20509 Hands-on workshop: Autograph in old clothes and in new (for ages 16-19)-Douglas Butler

11:10-13:10 Muslim Friday Prayer; Exhibition Hours and 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: (Chair: Felino Pascual**)**	
	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-Kok Fui Chin, Sharifah Norul Akmar bt Syed Zamri
	Room 2: (Chair: Chee-Keong Chong**)**	
	13:10-13:35	20591 Use of Lecture Capture in the Teaching and Learning of Statistics-Chee-Keong Chong, Marzita Puteh, Swee-Choo Goh
	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

Room 3: (Chair: Maria Isabel Lucas)

	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-991ID PLUS-WIWORO WIWORO
	13:35-14:00	20606 GEOMETRICAL PATTERNS OF YOGYAKARTA BATIK ORNAMENTS-WIWORO WIWORO, NABILA RAHMA KHAIRUNNISA
	14:00-14:25	20588 Effects of using Casio FX991 ES Plus on achievement and anxiety level in Mathematics-Maria Isabel Lucas, Erlinda Cayao

13:10-14:50	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)
	(GC Room 5) 20600 Learning mathematics with a modern graphics calculator-Barry Kissane
	(GC Room 6) 20494 Enhancing the Teaching and Learning of Mathematics Through Handheld Technology-Wee Leng Ng
	(CW1 Computer Room 1) 20603 An overview of Mathematica for Education-Paul Abbott, Farid Pasha
	(CW2 Computer Room 2)) 20496 Hands-on workshop: Autograph in old clothes and in new (for ages 11-16)-Douglas Butler
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
15:20-17:00	**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)**

Room 1: (Chair: Al Jupri)

	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, Junki Iwagami, Takeshi Saitoh
	16:35-17:00	20504 Revisiting Geometric Construction using Geogebra-Glenn Laigo, Abdul Hadi Bhatti, Lakshmi Kameswari Pulipaka, et al.

Room 2: (Chair: Maria Ailynn Diansuy)

	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

Room 3: (Chair: Rahul Mukherjee)

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.

Room 4: (Chair: Stefan Oeyen)

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

15:20-17:00	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)
	(GC1 Room 5): 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 PPPPTK Matematika Yogyakarta, Indonesia
	(Room 6): 3009 Creative Mathematics Activities in a Classroom-Janchai Yingprayoon
	(CW1 Computer Room 1) 20604 Make your course interactive and engaging-Farid Pasha, Paul Abbott
	(CW2 Computer Room 2) 20562 Modelling the floating Indonesian flag : two techniques with Cabri 3D-Jean-Jacques Dahan, Jean-Marie Laborde
09:00-17:00 **Exhibitions**	
18:30-20:30 **IPC meeting**	

November 29, 2014 (Saturday)

8:00-8:50 **Registration:**	
8:00-8:50	**Plenary Speech 4: Chair:** Deane Arganbright
	30006 WHY TECHNOLOGIES ARE NECESSARY FOR THE CURRENT CURRICULUM REFORM?-Masami Isoda
8:50-9:40	**Plenary Speech: Chair:**
	20628 Integrating Technology in Teaching and Learning (Mathematics)-Paulina Pannen

9:40-10:10 Tea Break

10:10-11:10 Invited Speeches

10:10-11:10	**Invited Speaker 7: Room 1: (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 **Invited Speaker 8: Room 3: (Chair:** Wahyudi Wahyudi**)** 20637 Educating the Educators: Technology-Enhanced Mathematics Teaching and Learning - Leong Chee Kin
10:10-11:10	**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: (Chair: Yasuyuki Nakamura**)**
	10:10-10:35 20589 Teaching materials incorporating interactive graphics for college-level mathematics education- Shunji Ouchi, Yoshifumi Maeda, Naoki Hamaguchi, et al.
	10:40-11:10 20595 How to construct a question of linear algebra by Mathematics e-Learning System STACK-Tetsuya Taniguchi, Yasuyuki Nakamura, Takahiro Nakahara
	Room 2: (Chair: Janeth Canama**)**
	10:10-10:35 20624 On the Separator of Subsets of Regular Semigroups-Janeth Canama, Gaudencio Jr. Petalcorin

10:10-11:10	**Hands-on Workshops** (GC stands for calculator workshops; CW stands for computer workshops)
	(CW1 Computer Room 1) 20501 Introduction to computer Aided Assessment of Secondary School / Undergraduate Mathematics using MapleTA- Bill Blyth and Asim Ghous
	(CW2 Computer Room 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
12:30-13:30	Lunch Break
13:30-	***Free Conference Tour for Paid Foreign Participants***

09:00-13:30 Exhibitions

November 30, 2014 (Sunday)

7:00-8:00	**Registration**
8:00-8:50	**Plenary Speech 5: (Chair:)**
	20629 Re-conceptualizing Good Practice of Mathematics Teaching Through Lesson Study in Indonesia Marsigit -
9:00-9:50	**Invited Speaker 9: Room 1: (Chair:** Wei-Chi Yang**)** 20638 Mathematics Intelligent Learning Environment Hongguang Fu, Xiuqin Zhong
	Invited Speaker 10: Room 2: (Chair: Quesada Antonio**)** 20506 Comparing Mathematical Modeling Methods via Excel-Deane Arganbright
10:00-10:30	**Tea Break**
10:30-12:00	**Closing Ceremony**
12:00-13:30	**Lunch and Farewell**