

# **The 21<sup>st</sup> Asian Technology Conference in Mathematics**



***December 14-18, 2016***

***Hosted by Suan Sunandha Rajabhat University Bangkok, Thailand***

***Conference Venue: NongNooch Pattaya Garden & Resort, Pattaya, Thailand***

***The ATCM 2016 is co-sponsored by the Institute for Promotion and Science and  
Technology of Thailand***

## **Welcome Message from the Chair of LOC**

Welcome to the 21<sup>st</sup> Asian Technology Conference in Mathematics gathering of the expertise, researchers, teachers and students. It is great to see so many enthusiastic men and women here celebrating the genius and innovation of mathematics, software, technical expertise over the years. It is a great opportunity to get together for enhancing, understanding and constructing knowledge in Mathematics with Technology.

Suan Sunandha Rajabhat University (SSRU) is once again proud to be host of this conference in Thailand again this year where we will have the opportunity to meet and learn the best mathematics with technology.

I would like to welcome our members from various countries all over the world, who have made this long trip to participate in the largest, most extensive 21<sup>st</sup> ATCM conference at Nong Nooch Resort and Garden, Pattaya, Thailand.

The conference provides a good chance for you to share your knowledge and explore innovations in technical conference and workshops about the evolution of individual expertise in the area such as Autograph, Cabri Geometry, or GeoGebra, or graphic calculator as well as demonstrations of the Software and dynamic data exploration.

Please consult your conference Program Book for specific events. The conference will strive to offer plenty of networking opportunities, providing you with the opportunity to meet and interact with guest speakers and researchers from different countries, and additional handouts of our valued related area. Please also visit the exhibition areas and make sure to collect your registration kits for the conference and the workshops.

On behalf of SSRU, I would like to extend our warmest hospitality to each of you and we are very much looking forward to be your assistance and in making sure on the best services during 21<sup>st</sup> ATCM on December 14-18, 2016.

Thank you very much.

Assoc. Prof. Dr. Luedech Girdwichai  
Chair of ATCM Local Organizing Committee

President,  
Suan Sunandha Rajabhat University,  
Bangkok, Thailand.



# ATCM 2016, December 14-18, 2016. Thailand

## Map of Nong Nooch Conference Room



- ★ **Nantha Conference Center**
  - Opening Ceremony
  - Conference room no.1 , no. 7
  
- ★ **Rimbueng Conference Center**
  - Conference room no.2 (Rimbueng 1, 1st floor)
  - Conference room no.3 (Rimbueng 2, 1st floor)
  - Conference room no.4 (Rimbueng 3, 2nd floor)
  
- ★ **Nong Nooch Seafood**
  - Conference room no.5 (Hands-on workshop 1, 3rd floor)
  - Conference room no.6 (Hands-on workshop 2, 3rd floor)

## **CONFERENCE INFORMATION**

### **Conference Venues**

1. Opening ceremony and plenary speeches will be held at Nantha Conference Center.
2. Invited speeches will be held on December 15 at Nantha Conference Center, Rimbueng 1, Rimbueng 2 and December 16 and 17 at Rimbueng 1-3.
3. All Parallel Sessions (Rooms 1-7) will be held in the following rooms: Nantha Conference Center (Room 1, 7), Rimbueng 1-3 (Room 2-4), Seafood 3-4 (Room 5-6).
4. Exhibition and Tea Breaks will be held in the area in front of Seafood 3 and 4.
5. The venue for closing ceremony will be held at Nantha Conference Center.

### **Registration**

Registration for the conference will be at the following times:

#### **December 14, 2016**

17:30 -18:30: Participants will register at Nantha Conference Center.

#### **December 15-18, 2016**

08.00 - 08.50: Nantha Conference Center.

### **Conference entitlements**

The full registration fee except students' rate will entitle the delegate to the followings:

- Attendance to all academic sessions.
- Invitation to the Opening Ceremony, Cultural Program and Conference Dinner on the 15<sup>th</sup> of December.
- Registration kit containing the conference proceedings, abstracts booklet, programs booklet and other conference materials.
- Daily lunch and tea during breaks.
- Conference Tour on 17<sup>th</sup> afternoon (Please confirm your participation at registration desk by the morning of December 16). Participants may need to pay the entrance fees where applicable. Tentative schedule is shown below:

13:30-15.30 Cultural and elephant shows by Nong Nooch Garden & Resort

15:30-21:00 We offer two excursion options as follows:

Group 1: Thai cooking class and fruit buffet (600 THB per person)

Group 2: Visit Cheejan Buddha Mountain, Jewelry shop and shopping at Central Festival Pattaya Beach

### **Guidelines for paper presenters**

1. A total of 30 or 50 minutes is allocated to each paper in the parallel sessions. 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 either zip-disks or thumb-drives.

### **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.

### **Guidelines for poster presenters**

1. Poster sessions are scheduled during the tea break sessions of December 17 and 18 from 15:30-16:00. (Poster sessions will be held in the area in front of the conference room 4 or Rimbuing 3.)
2. Posters must be mounted by 10:30 a.m. on December 15, and removed by 10:30 a.m. on December 18. Material (Cello tap, etc.) for mounting your poster should be brought by the presenter.
3. Poster presenters are required to be present with their poster during the designated date and time.



# Program of ATCM 2016

## December 14, 2016 (Wednesday)

14.30-16.30	<b>GSP: Pre Session Workshop (Krongthong Khairiree)</b>
17:00-18:00	<b>Registration:</b> Nantha Conference Center
18:30-20:30	<b>Welcome Reception</b>

## December 15, 2016 (Thursday)

8:00-8:50	<b>Registration</b>
9:00-10:00	<b>Opening ceremony</b>
10:00-10:30	<b>Tea Break</b>

<b>10:30-11:20</b>	<b>Plenary Speech 1: Auditorium Room, Chair: Wei-Chi Yang</b>	
	21271 Exploiting Digital Technologies for Learning Mathematics <i>PRESENTERS: Celia Hoyles and Richard Noss</i>	
<b>11:30-12:30</b>	<b>Parallel Session I: Presentations</b> <b>(Each contributed paper presentation slot is 20 minutes, unless otherwise specified. Please allow 3 minutes for Q&amp;A, and 2 minutes for changeover)</b>	
	<b>Room 1: (Chair: JJ Dahan)</b>	
	11:30-11:55	21160 Homothetic centers of three circles and their three-dimensional applications <i>PRESENTER: Yoichi Maeda</i>
	12:00-12:25	21179 Two examples on discrepancy potentials of dynamic geometry software <i>PRESENTER: Yip Cheung Chan</i>
	<b>Room 2: (Chair: Leong Kwan Eu)</b>	
	11:30-11:55	21206 A Study of gamification on GeoGebra for remedial pupils in primary mathematics <i>PRESENTERS: KAI CEAT LIM, KWAN EU LEONG</i>
	12:00-12:25	21295 PUPILS' GEOMETRICAL ACHIEVEMENT USING VAN HIELE'S PHASE BASED INSTRUCTION <i>PRESENTERS: Kwan Eu Leong and Geik Tieng Poh</i>
	<b>Room 3: (Chair: Betty Wan Niu Voon)</b>	
	11:30-11:55	21222 Exploring Derivative Functions using HP Prime <i>PRESENTERS: Betty Wan Niu Voon and Ling Shing Wong</i>
	12:00-12:25	21168 Enriching the Teaching and Learning of Linear and Non-linear Systems of Equations through Developing a Module using HP Prime Graphing Calculator

PRESENTERS: Loreto Delizo and Joanne Olos

**Room 4: (Chair: Ian Allan Thomson)**

11:30-11:55 21192 Introducing MATLAB into High School Mathematics  
*PRESENTER: Ian Allan Thomson*

12:00-12:25 21191 The CourseLab a VLE: Its Effect on the Achievement and Students  
Perception Toward Learning Algebra  
*PRESENTER: Carmelita Ragasa*

**11:30 - 12:30 Hands-on Workshops I**

(CAL stands for calculator workshops; COMP stands for computer workshops)

(CAL Room 5) 21148 SPREADSHEETS AND QR CODES WITH CASIO CLASSWIZ  
*PRESENTER: Wei Ching Quek*

(CAL Room 6) 21156 Mathematical Problem Solving with a Graphing Calculator  
*PRESENTER: Wee Leng Ng*

**12:30-13:30 Lunch Break**

**13:30-14:20 Invited Speeches**

**Room 1: (Chair: Yuan Yuan)**

21294 Challenges in Integrating Technology in Teaching and Learning Mathematics in Basic  
Education  
*PRESENTER: Yuriko Yamamoto Baldin*

**Room 2: (Chair: JJ Dahan)**

21209 Rhombohedra Everywhere  
*PRESENTER: Jen-chung Chuan*

**Room 3: (Chair: Ma. Louise De Las Penas)**

21272 Outbox Centroid Theorem: An Episode of Dynamic Geometry Exploration  
*PRESENTER: Weng Kin Ho*

**13:30 - 14:30 Hands-on Workshops II**

(CAL stands for calculator workshops; COMP stands for computer workshops)

(CAL Room 4) 21157 Enhancing the Teaching and Learning of Mathematics  
Through Handheld Technology  
*PRESENTERS: Wee Leng Ng*

(CAL Room 5) 21162 Learning about equations with ClassWiz  
*PRESENTER: Barry Kissane*

13:30-16:30 Room 7: Learning Package for Infrastructure Engineering and Sustainable Power:  
Mechanics, Electronics and Artificial Intelligence with STEM activities  
*PRESENTER: Teerawat Prakobphon*

**14:30-15:30 Parallel Session II: Presentations**

**(Each contributed paper presentation slot is 20 minutes, unless otherwise specified.  
Please allow 3 minutes for Q&A, and 2 minutes for changeover)**

**Room 1: (Chair: Wee Leng Ng)**

14:30-14:55 21196 Using Dynamic Geometry Software to Enhance Student  
Understanding of the Concept of Speed  
*PRESENTERS: Wee Leng Ng and Foo Him Ho*

15:00-15:25 21216 Are Mathematics Students' Learning Styles Related to Their Preferred  
Method of Learning How to Use Advanced Calculators?  
*PRESENTER: Hazel Tan*

**Room 2: (Chair: Kanokrat Kunasaraphan)**

14:30-14:55	21154 THE COMBINED EFFECT OF OUTCOME-BASED EDUCATION (OBE) AND BLENDED LEARNING ON THE STUDENTS PERFORMANCE IN GENERAL MATHEMATICS <i>PRESENTER: Restituto Rodelas</i>
15:00-15:25	21169 The Occurrence of Passive Intermodulation and Troubleshooting in Thailand Mobile Industry <i>PRESENTERS: Aditep Chaisang and Sinchai Anantapreecha</i>
<b>Room 3: (Chair: Leong Kwan Eu)</b>	
14:30-14:55	21210 IMPACT OF USING TINKERPLOTS IN STATISTICAL REASONING <i>PRESENTERS: Leong Kwan Eu and Pavethira Seloraji</i>
15:00-15:25	21227 Teaching and Learning of Geometry in Primary School Using GeoGebra <i>PRESENTERS: Boo Jia Yi and Leong Kwan Eu</i>
<b>Room 4: (Chair: Maree Skillen)</b>	
14:30-14:55	21166 Exploring Mathematics with Technology <i>PRESENTER: Maree Skillen</i>
15:00-15:25	21218 Fostering a Teaching Culture with Technology in Mathematics <i>PRESENTER: Maree Skillen</i>
<b>14:30 - 15:30 Hands-on Workshops III</b> (CAL stands for calculator workshops; COMP stands for computer workshops)	
(CAL Room 5)	21231 Mathematical Modelling Using Handheld Technology <i>PRESENTER: Thomas Yeo</i>
<b>15:30-16:00 Tea Break and Poster Sessions</b>	
21237 Steady Critical Surface Waves over a Bump with Surface Tension <i>AUTHORS: Jeongwhan Choi, Sangwon Lee, Junkyung Kim and Sungim Whang</i>	
21265 Intention analysis in explainer indications for elementary geometry documents using laser pointer images <i>AUTHORS: Yuki Toyosaka, Naoki Tamura and Ryoji Fukuda</i>	
21266 Visualization of accuracy and reliability of approximation of density function in a discriminant analysis <i>AUTHORS: Yuki Ogino, Yuki Toyosaka and Ryoji Fukuda</i>	
21278 A Study of first graders' performance in number line estimation <i>AUTHORS: Yuan Yuan and Min-yuan Wei</i>	
21324 Geometric Constructions with Cinderella and ketcindy -- Application of mathematics to mathematics in senior high school <i>AUTHOR: Hideyo Makishita</i>	
21352 Experimental attempt to practice flip teaching with ShowMe <i>AUTHOR: Mahiko Takamura</i>	
<b>16:00-17:30 Parallel Session III Presentations</b> (Each contributed paper presentation slot is 20 minutes, unless otherwise specified. Please allow 3 minutes for Q&A, and 2 minutes for changeover)	
<b>Room 1: (Chair: Yosuke Sato)</b>	
16:00-16:25	21198 On Simple Representation of Locally Closed Sets <i>PRESENTERS: Yosuke Sato, Ryoya Fukasaku and Katsusuke Nabeshima</i>
16:30-16:55	21201 Finding the signature matrix of minimizing the Cayley transform by using Computer Algebra <i>PRESENTERS: Dexuan Zhang, Yongbin Li and Haocheng Zhou</i>



17:00-17:25 21219 Parallel and Distributed Boolean Grobner Bases Computation in SageMath  
*PRESENTERS: Akira NAGAI and Yosuke SATO*

<b>Room 2: (Chair: Janchai Yingprayoon)</b>		
16:00-16:25	21176	Improving Primary Mathematics Teaching and Learning with ORIGO Stepping Stones Online Program <i>PRESENTER: Korakot Chonvichit</i>
16:30-16:55	21147	Use Technology in Secondary Mathematics Teaching: Preparing Teachers for the Future <i>PRESENTER: Munindra Mazumdar</i>
<b>Room 3: (Chair: Chaweewan Kaewsaiha)</b>		
16:00-16:25	21220	Development Students' Understanding the Formula of the Surface Area of Sphere through the SAK hands-on Activity <i>PRESENTERS: Cherdasak Pakdeeviroch and Wararat Wongkia</i>
16:30-16:55	21223	Pre-service Teachers' Designing of Mathematics Activities Integrated the Use of the Geometer's Sketchpad Software <i>PRESENTERS: Sasiwan Maluangnont, Pilaluck Thongtip, Teerawit Tinprapa and Poonyapon Chanfoy</i>
17:00-17:25	21270	Multiple Language Converter <i>PRESENTER: Joe Marlou Opella</i>
<b>Room 4: (Chair: Chris Longhurst)</b>		
16:00-16:25	31000	STEM-WHAT IS THE BIG DEAL AND THE IMPLICATIONS ON OUR MATHEMATICS CLASSROOMS <i>PRESENTER: Chris Longhurst</i>
16:30-16:55	21325	Discover Pythagoras triangles in WASAN-The role of the technology in the problem discovery <i>PRESENTER: Shin Watanabe</i>
<b>16:00 - 17:00 Hands-on Workshops IV</b> (CAL stands for calculator workshops; COMP stands for computer workshops)		
(CAL Room 5)	21163	Modelling with spreadsheets on ClassWiz <i>PRESENTERS: Barry Kissane</i>
<b>13:30-17:00 Network Originality Competition (NOC).</b> <b>Special Event provided by HP-China. <u>Everyone is welcome to attend.</u></b> <b>Room 6. All presentations are in English unless otherwise is specified.</b>		
<b>Duration</b>	<b>Speakers</b>	<b>Content</b>
13:30-13:40 (10 minutes)	Zhang Fan	Introduction to special NOC events
13:40-13:50 (10 minutes)	Wang Huiyun	Considerations and Future Development of Introducing Information Technology into NOC Contest Applied Mathematics
13:50-14:35 (30 minutes)	Student team led by teacher Li Hong and Fan Lijun (9)	NOC Contest Applied Mathematics Papers
14:35-14:50 (15 minutes)	Chen Jinfan and Pan Yuanfu (student)	Using Hp Prime to Explore the Beauty of Mathematics.
14:50-15:05 (15minutes)	Zheng Ke (teacher)	The experimental study by graphing and mathematical proof of "the fixed value phenomenon of areas in conic
<b>14:50-15:05</b>	<b>Coffee break</b>	

<b>Duration</b>	<b>Speakers</b>	<b>Content</b>
15:20-15:35 (15 minutes)	Wu Xi (teacher)	Discussing the Visualization of Abstract Mathematical Conclusions With Examples
15:35-15:50 (15 minutes)	Gao Min (teacher)	Mathematically characteristic courses are very popular with students
15:50-16:05 (15 minutes)	Yang Zhichang (teacher)	Understanding Technology Promotes Mathematics Learning to Move Closer to Tools
16:05-16:20 (10 minutes)	Wang Huiyun	Conclusions
09:00-17:00	<b>Exhibitions</b>	
18:30-21:00	<b>Conference Dinner and Culture Night</b>	

## December 16, 2016 (Friday)

<b>8:00-8:50</b>	<b>Registration</b>
<b>9:00-9:50</b>	<b>Plenary Speech 2: Auditorium Room, Chair: Janchai Yingprayoon</b>
	The Effect of Integrated Learning in Mathematics and Science on Student's Critical Thinking and Collaboration Skills <i>PRESENTERS: Chaweewan Kaewsaiha, Nitthawat Leelawatthanapan, Poonnima Bumrunpong, Thanida Ruangtrakun, Thanatthapong Wangthaphun, Yanisa Thaiho, Chonlatip Janjumba and Ploysai Ohama</i>
<b>10:00-10:30</b>	<b>Tea Break</b>
<b>10:30-11:20</b>	<b>Plenary Speech 3: Auditorium Room, Chair: Jen-chung Chuan</b>
	21300 Locus, Parametric Equations and Innovative Use of Technological Tools- <i>PRESENTER: Wei-Chi Yang</i>
<b>11:30-12:30</b>	<b>Parallel Session IV: Presentations (Each contributed paper presentation slot is 20 minutes, unless otherwise specified. Please allow 3 minutes for Q&amp;A, and 2 minutes for changeover)</b>
	<b>Room 1: (Chair: Kenji Fukazawa)</b>
11:30-11:55	21205 Enhancement of Plotting Environment of STACK with Gnuplot <i>PRESENTERS: Kenji Fukazawa and Yasuyuki Nakamura</i>
12:00-12:25	21261 Solving Sudoku Puzzle by Evolutionary Algorithm <i>PRESENTERS: Kedar Nath Das, Sumit Bhatia, Shubhin Puri and Kusum Deep</i>
	<b>Room 2: (Chair: Thomas Yeo)</b>
11:30-11:55	21229 STEM in Mathematics <i>PRESENTER: Thomas Yeo</i>
12:00-12:25	21253 The Art of Using Modern Communication Technologies in Mathematics Teaching-Learning Process: Facebook and Text-Messaging <i>PRESENTER: Rodulfo T. Aunzo, Jr.</i>
	<b>Room 3: (Chair: Kam Ling Lao)</b>
11:30-11:55	21276 Knowledge for early childhood educators to facilitate children's mathematics learning under the influence of technology <i>PRESENTER: Kam Ling Lao</i>
12:00-12:25	21292 PERFORMANCE-BASED LEARNING EXPERIENCES ALGEBRA 1: INPUTS FOR THE ENHANCEMENT OF THE K-12 GRADE 7 TEACHING GUIDE <i>PRESENTER: Maris Lasco</i>
	<b>Room 4: (Chair: Victor Tan)</b>
11:30-11:55	21286 Online Interactive Visualization Tools for Learning Linear Algebra <i>PRESENTERS: Victor Tan and Bao Rong Cham</i>
12:00-12:25	21293 Applying math software to the real world <i>PRESENTER: Ogose Shigeki</i>
<b>11:30 - 12:30</b>	<b>Hands-on Workshops V (CAL stands for calculator workshops; COMP stands for computer workshops)</b>
(CAL Room 5)	21164 Investigating mathematics with ClassWiz <i>PRESENTER: Barry Kissane</i>
(COMP Room 6)	21186 An Animation of Six Identical Cylinders Each Touching Exactly Four Others <i>PRESENTER: Jen-chung Chuan</i>

<b>12:30-13:30</b>	<b>Lunch Break</b>	
<b>13:30-14:20</b>	<b>Invited Speeches</b>	
	<b>Room 2: (Chair: Barry Kissane)</b>	
	21298 Technology in Mathematics Education: A Stocktake & Crystal-Ball Gazing <i>PRESENTER: Greg Oates</i>	
	<b>Room 3: (Chair: Jen-Chung Chuan)</b>	
	21274 From One to Infinity: What DGS Has or Could Have Changed in our Teaching and Learning <i>PRESENTER: Jean-Jacques Dahan</i>	
	<b>Room 4: (Chair: Matthias Kawski)</b>	
	21279 Quadratic and Cubic Polynomials in Applied Problems: Finding Maximum – No Calculus, Using CAS (Maple) <i>PRESENTER: Bill Blyth</i>	
<b>14:30-15:30</b>	<b>Parallel Session V: Presentations</b> <b>(Each contributed paper presentation slot is 20 minutes, unless otherwise specified. Please allow 3 minutes for Q&amp;A, and 2 minutes for changeover)</b>	
	<b>Room 1: (Chair: Debbie Marie Verzosa)</b>	
	14:30-14:55	31001 Proving Apps via Mobile Technology <i>PRESENTERS: Debbie Marie Verzosa, Alva Aberin and Ma. Louise D Las Peñas</i>
	15:00-15:25	21153 Modeling with Netlogo <i>PRESENTER: Crista Arangala</i>
	<b>Room 2: (Chair: GT Springer)</b>	
	14:30-14:55	31002 Making Mathematical Models with HP Prime <i>PRESENTER: GT Springer</i>
	<b>Room 3: (Chair: Hong Li)</b>	
	14:30-14:55	21355 The Use of Math Experiment in Students' Mathematics Learning: Case Study <i>PRESENTER: Hong Li</i>
	15:00-15:25	21341 Exploration of Linear Programming Problems with a Feasible Region as a Polygon Region <i>PRESENTER: Xi Wu</i>
<b>14:30-15:30</b>	<b>Hands-on Workshops VI</b> (CAL stands for calculator workshops; COMP stands for computer workshops)	
	(CAL Room 4)	21167 Harnessing the Power of HP Prime graphing calculator in Teaching Senior High School Mathematics <i>PRESENTER: Helma Mesa</i>
	(CAL Room 5)	21177 Deeper Understanding of Mathematics Through Effective Use of Parameters <i>PRESENTER: Yew Fook Chan</i>
	(COMP Room 6)	21155 Introducing MATLAB into High School Mathematics <i>PRESENTER: Ian Allan Thomson</i>
<b>14:30-17.30</b>	Room 7:	32003 Instructional Materials for Primary Mathematics <i>PRESENTERS: Bhimmawajna Thammachai, Benjamas Laokwansathit and Ausanee Wongarmar</i>

15:30-16:00	<b>Tea Break and Poster Sessions</b>	
	21237 Steady Critical Surface Waves over a Bump with Surface Tension <i>AUTHORS: Jeongwhan Choi, Sangwon Lee, Junkyung Kim and Sungim Whang</i>	
	21265 Intention analysis in explainer indications for elementary geometry documents using laser pointer images <i>AUTHOR: Yuki Toyosaka, Naoki Tamura and Ryoji Fukuda</i>	
	21266 Visualization of accuracy and reliability of approximation of density function in a discriminant analysis <i>AUTHOR: Yuki Ogino, Yuki Toyosaka and Ryoji Fukuda</i>	
	21278 A Study of first graders' performance in number line estimation <i>AUTHORS: Yuan Yuan and Min-yuan Wei</i>	
	21324 Geometric Constructions with Cinderella and ketcindy -- Application of mathematics to mathematics in senior high school <i>AUTHOR: Hideyo Makishita</i>	
	21352 Experimental attempt to practice flip teaching with ShowMe <i>AUTHOR: Mahiko Takamura</i>	
16:00-17:30	<b>Parallel Session VI Presentations</b> <b>(Each contributed paper presentation slot is 20 minutes, unless otherwise specified. Please allow 3 minutes for Q&amp;A, and 2 minutes for changeover)</b>	
	<b>Room 1: (Chair: Xinyue Zhang)</b>	
	16:00-16:25	21356 Express Quadrilaterals by One Equation <i>PRESENTER: Lai Wei</i>
	16:30-16:55	21357 Explore the Definition of the Distance from a Point to a Parabola by using Mathematical Experiment <i>PRESENTER: Siqi Jia</i>
	17:00-17:25	21359 About the Chinese Traditional Toy: Spirograph <i>PRESENTERS: Xinyue Zhang and Xuan Yao</i>
16:00-17:00	<b>Hands-on Workshops VII</b> (CAL stands for calculator workshops; COMP stands for computer workshops)	
	(CAL Room 2)	21190 Technology-Advantaged Mathematics Teaching-Learning Process: CASIO fx-991EX Classwiz <i>PRESENTERS: Rodolfo T. Aunzo, Jr</i>
	(CAL Room 3)	21178 Improving Student Engagement Through the Use of Handheld Technology <i>PRESENTER: Yew Fook Chan</i>
	(CAL Room 4)	21180 Exploring Graphs using HP Prime <i>PRESENTER: Betty, Wan Niu Voon</i>
	(COMP Room 5)	21161 Coding in Mathematics <i>PRESENTER: LC Mooi</i>
	(COMP Room 6)	21185 Assembling 10 Rhombic Hexahedrons into a Rhombic Icosahedron <i>PRESENTER: Jen-chung Chuan</i>
09:00-17:00	<b>Exhibitions</b>	
18:30-21:00	<b>IPC dinner</b>	

## December 17, 2016 (Saturday)

<b>8:00-8:50</b>	<b>Registration</b>
<b>9:00-9:50</b>	<b>Plenary Speech 4: Auditorium Room, Chair: Wen Kin Ho</b>
	21297 Technology: Inquiry based learning, inverse questions, and control <i>PRESENTER: Matthias Kawski</i>
<b>10:00-10:30</b>	<b>Tea Break</b>
<b>10:30-11:30</b>	<b>Parallel Session VII: Presentations</b> <b>(Each contributed paper presentation slot is 20 minutes, unless otherwise specified. Please allow 3 minutes for Q&amp;A, and 2 minutes for changeover)</b>
	<b>Room 1: (Chair: Yubing Leng)</b>
	11:30-11:55 21360 The Applications of Geometer's Sketchpad in the Process of Learning Geometry <i>PRESENTERS: Yubing Leng and Zixuan Wang</i>
	12:00-12:25 21221 Project Based Learning in Science with Graphing Calculator Coupled Portable Sensors <i>PRESENTERS: Wong Ling Shing and Voon Betty Wan Niu</i>
	<b>Room 2: (Chair: Vladimir Shelomovskii)</b>
	11:30-11:55 21204 Hexagrammums <i>PRESENTER: Vladimir Shelomovskii</i>
	12:00-12:25 21217 Teaching methodology for smart students with less-developed abstract thinking skills <i>PRESENTER: Vladimir Shelomovskii</i>
<b>10:30-11:30</b>	<b>Hands-on Workshops VIII</b> (CAL stands for calculator workshops; COMP stands for computer workshops)
	(CAL Room 3) 21232 Mathematics Modelling in Real Life <i>PRESENTER: Katrina Ng</i>
	(CAL Room 4) 21165 Applying Instructional Technology Creatively In Mathematics Education (to Deliver Content Knowledge and Develop Higher Order Thinking Skills Effectively) <i>PRESENTER: Poh Yew Teoh</i>
	(COMP Room 5) 21199 Creating and designing furniture with Cabri 3D <i>PRESENTERS: Jean-Jacques Dahan and Jean-Marie Laborde</i>
	(COMP Room 6) 21195 Autograph v.4 to work <i>PRESENTER: Tim Harrison</i>
<b>11:30-12:30</b>	<b>Invited Speeches</b>
<b>11:30-12:20</b>	<b>Room 2: (Chair: Barry Kissane):</b> 21193 Can Technology make a difference to school Mathematics Teaching? <i>PRESENTER: Douglas Butler</i>
	<b>Room 3: (Chair: Yuan Yuan):</b> 30001 Teaching and Learning Mathematics with Mobile Technology <i>PRESENTER: Ma.Louise Antonette N.De Las Peñas</i>
	<b>Room 4: (Chair: José Antonio Vallejo):</b> 30002 Exploring the Objectives of Using Dynamic Geometry Software in the 21 <sup>st</sup> Century Curriculum <i>PRESENTER: Masami Isoda</i>
<b>12:30-13:30</b>	<b>Lunch Break</b>
<b>09:00-13:30</b>	<b>Exhibitions</b>
<b>13:30</b>	<b>Conference Tour for Paid Foreign Participants</b>

## December 18, 2016 (Sunday)

<b>8:00-8:50</b>	<b>Registration</b>
<b>9:00-11:00</b>	<b>Hands-on Workshops IX</b> (CAL stands for calculator workshops; COMP stands for computer workshops)
	(COMP Room 5) 32002 Fun Math with GeoGebra <i>PRESENTERS: Pinyada Klubkaew; Amarisa Chantanasiri, Nuanchan Ritkham, Pathamaporn Awachai, Puttoei Talawat, Sasiwan Maluangnont, Sutharot Nilrod and Pattanachai Rawiwan</i>
	(COMP Room 6) 32001 The Pedagogical Usability of GSP in Designing and Creating Mathematics Instructional Materials <i>PRESENTERS: Ronnachai Panapoi, Danita Chunarom, Pilaluck Thongtip, Siriwan Jantrkool, Woranart Yoosook and Jannapa Uttama</i>
<b>10:00-10:30</b>	<b>Tea Break</b>
<b>10:30-11:30</b>	<b>Special Hands-on Workshop with no technological tool</b> Room 4                      32004 Math Circle demo: Catalan counting <i>PRESENTERS: Matthias Kowski</i>
	<b>Parallel Session VIII: Presentations</b> <b>(Each contributed paper presentation slot is 20 minutes, unless otherwise specified. Please allow 3 minutes for Q&amp;A, and 2 minutes for changeover)</b>
	<b>Room 3: (Chair: Haftamu Menker Gebreyohannes)</b>
	10:30-10:55                      21202 Impact of multimedia in Teaching Mathematics <i>PRESENTERS: Haftamu Menker Gebreyohannes and Abdul Hadi Bhatti</i>
	11:00-11:25                      21203 Mathematical Regression Modeling For Smart Environmental Weather forecasting <i>PRESENTERS: Haftamu Menker Gebreyohannes</i>
<b>11:30-12:30</b>	<b>Closing Ceremony</b>
<b>12:30-13:30</b>	<b>Lunch and Farewell</b>