



Date: Friday, October 30, 2015

# Tentative Program of ATCM 2015

## December 16, 2015 (Wednesday)

17:00-18:00 **Registration:** Jinghaitan Hotel

18:30-20:30 **Welcome Reception**

## December 17, 2015 (Thursday)

8:00-8:50 **Registration**

9:00-10:00 **Opening ceremony**

10:00-10:30 **Tea Break**

### 10:30-11:20 Plenary Speech 1: Auditorium Room, Chair: Wei-Chi Yang

20831 *Stories of Learning Trigonometry from 7th graders-An Experiment of Educational Mathematics* Jingzhong Zhang

11:30-12:30 **Parallel Session I: 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: Christopher Longhurst)

11:30-11:55 20865 Mobile Learning: impacts on mathematics education-Mareen Skillen

12:00-12:25 20961 Pascals Triangle - An alternate approach- Christopher Longhurst

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

11:30-11:55 20944 The Role of Generalization in the Discovery, Proof and Visualization of a Theorem about Cubics with the Help of CAS and DGS (TI-Nspire and Cabri- Jean-Jacques Dahan

12:00-12:25 20972 Lesson Design Using Technology to Engage Students in Mathematics Learning-Thomas Yeo

#### Room 3: (Chair: Wei Ching Quek)

11:30-11:55 20741 Blended learning on Engineering Mathematics with powerful Web 2.0 tools-Wei Ching Quek

12:00-12:25 20824 Submariner – A Taste of Real-World Application of Trigonometry Through the Use of Heumi- EDDIE TAY, YIN KANG QUEK, BOON KENG LEE, SUI LINN TAN, SIEW YEE LIM, NOORSHAKINA BINTE JEMAHAT

#### Room 4: (Chair: Tao Yu)

11:30-11:55 20929 The Application and Analysis of the Function Calculator FX-991ESPLUS-TAO YU

12:00-12:25 20939 Application of Casio-CP400 in the mathematics teaching- Bao Zhu, Zhiqiang Wang, Ziying Wei

<b>Room 5: (Chair: Leyi Zhang)</b>	
11:30-11:55	20842 The Iteration Procedure and the Pythagoras Tree-Leyi Zhang
12:00-12:10	Student's presentation with HP.
12:10-12:20	Student's presentation with HP.
12:20-12:30	Student's presentation with HP.
<b>11:30 - 12:30</b>	<b>Hands-on Workshops</b> (GC stands for calculator workshops; CW stands for computer workshops)
(GC Room 6) 20986	AP Calculus Problems with HP Prime GT Springer
(GC Room 7) 28834	Mathematical Problem Solving with a Graphing Calculator Wee Leng Ng
(CW1 Computer Room 1) 20769	From Inductive Reasoning to Mathematical Induction with Geometry Expressions Phillip Todd
(CW2 Computer Room 2) 20825	Steiner Porism and Its 3D Generalizations Jen-chung Chuan
<b>12:30-13:30 Lunch Break</b>	
13:30-14:20	<b>Invited Speaker 1: Room 1: (Chair: JJ Dahan)</b> 20827 Catalan Solid and Its Generalization Jen-chung Chuan
	<b>Invited Speaker 2: Room 2: (Chair: Alasdair McAndrew)</b> 20829 Computer-aided strategies to shorten the gap between high school and university math courses- Jose A Vallejo, Antonio Morante
	<b>Invited Speaker 3: Room 3: (Chair: Jen-chung Chuan)</b> 20849 Developing Computational Thinking through Coding-Weng Kin Ho and Keng Cheng Ang
<b>14:30-15:30</b>	<b>Parallel Session II: 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: Barry Kissane)</b>	
14:30-15:20	20926 Creating Tablet based constructivist learning environments for (50 minutes) learning mathematics in developing countries – a South African perspective-Werner Olivier
<b>Room 2: (Chair: GT Springer)</b>	
14:30-15:20	HP Prime Presentation in Chinese (50 minutes)
<b>Room 3: (Chair: Helma Mesa)</b>	
14:30-14:55	20991 Harnessing the Power of Graphing Calculator in Teaching and Learning High School Mathematics- Helma Mesa, Lovely Mei Pescador
15:00-15:25	21034 Figure Drawing using KETCindy and its Application to Mathematics Education- Hideyo Makishita
<b>Room 4: (Chair: Jose A Vallejo)</b>	

	14:30-15:20	21048 Technology must be transparent and not get in the way of teaching and learning Douglas Butler <b>(Invited Speaker)</b>
<b>14:30 - 15:30</b>	<b>Hands-on Workshops</b> (GC stands for calculator workshops; CW stands for computer workshops)	
	(GC Room 5)	20936 Million Dollar Golf Hole Ian Sheppard
	(GC Room 6)	20973 Creating Authentic Mathematical Modelling Activities Using Technology- Thomas Yeo
	(CW1 Computer Room 1)	20892 利用 Hawgent 皓骏动态数学进行数学学习、发现和探索 Chuan-Bo Zuo
	(CW2 Computer Room 2)	20832 Code for Fun with Scratch Lee Choo Mooi
<b>15:30-16:00 Tea Break and Poster Sessions</b>		
		20907 Obstacles and Solutions for Using Computer in Saudi Mathematics Education- Zafer Alshehri
		20955 An Online journey using Moodle for assessment of large groups: Mathematics Students Experiences- Pragashni Padayachee
		21038 Malmquist Productivity Index with Fuzzy Data by Possibility Theory- Shivi Agarwal
		21043 IMPLEMENTATION OPEN PROBLEM-BASED LEARNING TO ABILITY OF MATHEMATICAL REPRESENTATION AND STUDENT ANXIETY-Rika Yanti
		21049 On Subordination of Harmonic Univalent Functions associated with Wright's generalized hypergeometric functions- TRILOK MATHUR
<b>16:00-17:30</b>	<b>Parallel Session III 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: Alasdair McAndrew)</b>	
	16:00-16:25	20919 Computing the Bell Number by Using Grobner Bases- Yongbin Li, Andrew Y.Z. Wang
	16:30-16:55	20948 An efficient implementation of Boolean Grobner Bases of a power set algebra- Akira NAGAI, Yosuke SATO
	17:00-17:25	21036 Formal Proof of Validity Automated Theorem Proving System Using Rules of Inference and Rules of Replacement- Lea Marissa Domingo, Mon Cristopher Micoso, Arjay Rasco, Joe Marlou Opella
	<b>Room 2: (Chair: Hong Li)</b>	
	16:00-16:25	20930 View the World by Equations- Lai Wei, Hong Li, Yu-Ji Yang
	16:30-16:55	20931 The Construction of Mathematics Inquiry Teaching Model in High School under the Technological Environment-Guo Jiajia
	17:00-17:25	20978 Researches on the Application of Graphing Calculator to Senior One Students on Learning Functions- Xiaoshu Chen
	<b>Room 3: (Chair: Ryoji Fukuda)</b>	
	16:00-16:25	20923 The use of TI graphics calculator on the circumcircle and inscribed quadrilateral-Ruiguang Xu
	16:30-16:55	20974 Area Type Judgment of Mathematical Document Using Movements of Gaze Point- Ryoji Fukuda, Yuki Ogino, Kenji Kawata, Takeshi Saitoh

17:00-17:25	20947 Detecting unnecessary assumptions of elementary geometry problems by CAS- Yosuke Sato, Ryoya Fukasaku
<b>Room 4: (Chair: Phillip Todd)</b>	
16:00-16:50	20773 Using Force to Crack Some Geometry Chestnuts- Phillip Todd (50 minutes)
17:00-17:25	20983 Can I get better marks using a Graphing Calculator? Christopher Longhurst
<b>Room 5: (Chair: Jiyan Wang)</b>	
16:00-16:25	20910 Using Information Technology Enhancing Mathematics Ability - The Summary of the Application of CASIO fx-82ES series Calculators to Mathematics Teaching and Learning in the Stage of Compulsory Education of China-Jiyan Wang
16:30-16:55	20925 The introduction of enigmatic number e with Casio fx-cg20- Hailian Zou
17:00-17:25	20985 Integrating Casio-CP400 in teaching high school math curriculum -The practical role of technology from teaching and learning perspectives- Zhisong Lian, Jeffrey Wong
<b>16:00 - 17:00</b>	<b>Hands-on Workshops</b> (GC stands for calculator workshops; CW stands for computer workshops)
	(GC Room 6) 20735 Introduction to ANOVA with CASIO fx9860 Wei Ching Quek
	(GC Room 7) 20908 Enhancing Understanding of Parameters Using Technology Yew Fook Chan
	(CW1 Computer Room 1) 20839 Pre-calculus (and beyond) with wxMaxima and GeoGebra Antonio Morante, Jose Antonio Vallejo
	(CW2 Computer Room 2) 21054 Autograph Workshop for teachers Douglas Butler
09:00-17:00	<b>Exhibitions</b>
18:30-21:00	<b>Conference Dinner and Culture Night</b>

## December 18, 2015 (Friday)

**8:00-8:50 Registration: Leshan Normal University**

<b>9:00-9:50</b>	<b>Plenary Speech 2: Auditorium Room: Chair: Wei-Chi Yang</b>
	<i>20898 TED Speech of Calculus: Theory Exists in Case Qun Lin</i>

**10:00-10:30 Tea Break**

<b>10:00-11:20</b>	<b>Plenary Speech 3: Auditorium Room: Chair: Carl Liu</b>
	<i>20826 See Graphs. Find Equations. Myth or Reality? 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>
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<b>Room 1: (Chair: Stefan Oeyen)</b>
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11:30-11:55	20920 Teaching Probability and Statistics with a MOOC by using a Flipped Classroom Model -Stefan Oeyen
12:00-12:25	20922 Simulating the Spirograph Works by the Geometers Sketchpad- Xuan Yao, Xinyue Zhang

<b>Room 2: (Chair: Zhihong Zheng)</b>
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11:30-11:55	20932 Investigation and Thoughts on Using Graphing Calculator to Promote Junior High Students' Understanding of the Mathematics Essence- Zhihong Zheng, Xiang Fang
12:00-12:25	20940 The Hand-held Technology in Flipped Classrooms-Wei Wang

<b>Room 3: (Chair: Jiang Ping)</b>
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11:30-11:55	20934 The Advantages of Ti calculator's Operating Techniques in Math Teaching- Jiang Ping, Zhang Xin
12:00-12:25	20935 The Construction of Uniform Polyhedron with the aid of GeoGebra- Jiang Ping, Qiu Fawen

<b>Room 4: (Chair: Yubing Leng)</b>
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11:30-11:55	20943 Information Technology and Geometric Transformation -research on the set which be made up of geometric transformation through information technology-Yubing Leng
12:00-12:10	Student's presentation with HP.
12:10-12:20	Student's presentation with HP.
12:20-12:30	Student's presentation with HP.

<b>11:30 - 12:30</b>	<b>Hands-on Workshops</b> (GC stands for calculator workshops; CW stands for computer workshops)
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(GC Room 5)	20833 Enhancing the Teaching and Learning of Mathematics Through Handheld Technology Wee Leng Ng
(CW Computer Room 1)	20770 Making Math Apps with Geometry Expressions Phillip Todd

	(CW Computer Room 2) 20828 Construction of Dual Patterns of Circles on a Sphere Jen-chung Chuan
<b>12:30-13:30</b>	<b>Lunch Break</b>
13:30-14:20	<b>Invited Speaker 4: Room 1: (Chair: Jen-chung Chuan):</b> 20855 Educational Technology in Functional Line of Mathematics- Vladimir Nodelman <b>Invited Speaker 5: Room 2: (Chair: Hongguang Fu):</b> 20857 Finding best possible constant for a polynomial inequality Lu Yang and Ju Zhang <b>Invited Speaker 6: Room 3: (Chair: Barry Kissane):</b> 20859 New Explorations of Old Mathematics via Spreadsheets Deane Arganbright
14:30-15:30	<b>Parallel Session V: 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: Takuya Kitamoto)</b>
14:30-14:55	20958 Multivariate Pade approximation using Quantifier Elimination- Takuya Kitamoto
15:00-15:25	20975 Text-Based Communication Tool for Mathematical Documents for Visually Handicapped- Ryoji Fukuda, Yuki Toyosaka
	<b>Room 2: (Chair: Hong Li)</b>
14:30-15:20 (50 minutes)	20941 The Application of Information Technology in the Formation of the Concept of Functions- Hong Li, Peixin Li, Hao Ding
	<b>Room 3: (Chair: Alasdair McAndrew)</b>
14:30-14:55	20912 Extending Euclidean constructions with dynamic geometry software-Alasdair McAndrew
15:00-15:25	20988 Comparison of Chinese and Australian attitudes to CAS in education- Alasdair McAndrew, Xiangzhao Li
	<b>Room 4: (Chair: Yoichi Maeda)</b>
14:30-14:55	20830 Visualization of quaternions with Clifford parallelism-Yoichi Maeda
15:00-15:25	20732 Reduce Math Anxiety And Help Students Become Independent Learners Using "Flipped Classroom" Method-Premjit Singh
<b>14:30-15:30</b>	<b>Hands-on Workshops</b> (GC stands for calculator workshops; CW stands for computer workshops)
	(GC Room 5) 21004 Cyclic and Bicentric Quadrilaterals GT Springer
	(GC Room 6) 20995 Origami as a low-tech empowered by high-tech hand-held Calculator Chang Wenwu
	(CW1 Computer Room 1) 20889 KETCindy -- linkage between dynamic geometry and TeX graphics- Masataka Kaneko, Hideyo Makishita, Satoshi Yamashita, Kiyoshi Kitahara, Setsuo Takato
	(CW2 Computer Room 2) 20946 Dandelin's theorem: dynamic visualization with Cabri 3D Jean-Jacques Dahan, Jean-Marie Laborde
<b>15:30-16:00</b>	<b>Tea Break and Poster Sessions</b>

	<p>20907 Obstacles and Solutions for Using Computer in Saudi Mathematics Education- Zafer Alshehri</p> <p>20955 An Online journey using Moodle for assessment of large groups: Mathematics Students Experiences- Pragashni Padayachee</p> <p>21038 Malmquist Productivity Index with Fuzzy Data by Possibility Theory- Shivi Agarwal</p> <p>21043 IMPLEMENTATION OPEN PROBLEM-BASED LEARNING TO ABILITY OF MATHEMATICAL REPRESENTATION AND STUDENT ANXIETY-Rika Yanti</p> <p>21049 On Subordination of Harmonic Univalent Functions associated with Wright's generalized hypergeometric functions- TRILOK MATHUR</p>
16:00-17:30	<b>Parallel Session VI 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: Luan Dequan)</b>
16:00-16:25	20980 An Example-Based Illustration of Using Graphing Calculators in Function Teaching- Luan Dequan
16:30-16:55	20852 Integrating the External and Internal Beauty of Mathematics- Ruijia Liu
17:00-17:25	20954 The application of the Logo language in junior high school geometry teaching-Talking from the polygon exterior Angle and proved- Lu Xu
	<b>Room 2: (Chair: Kang Shen)</b>
16:20-16:25	20863 Utilizing Graphing Calculators to Develop Students' Mathematical Thinking Quality-Kang Shen
16:30-16:55	20870 Using or not using graphing calculator is different-The depth integration of approaches and strategies of information technology and mathematics teaching- Zhiyong Zhang
17:00-17:25	20879 HP graphing calculator application in statistical testing "researched on the relation between vision and writing horizon"- Xiaoguang Gu
	<b>Room 3: (Chair: Janchai Yingprayoon)</b>
16:00-16:25	20867 New Technology, New Ideas- Min Jiang
16:30-16:55	21045 Teaching Mathematics using Augmented Reality (AR)- Janchai Yingprayoon
17:00-17:25	21046 Creative Mathematics Activities in the Classroom- Janchai Yingprayoon
	<b>Room 4: (Chair: Maria Ailynn Diansuy )</b>
16:00-16:25	21052 On the Application of Calculator in Solving Limits Involving Indeterminate Forms- Maria Ailynn Diansuy
16:30-16:55	21022 Effects of Flipped Instruction on the Performance and Attitude of DMMMSU-MLUC High School Students in Mathematics IV-Remalyn Casem
17:00-17:25	2300 Two different "environment" of the junior high school function Inspiration from the students using handheld technology to explore the two function-Wu Na
	<b>Room 5: (Chair: Chuan-Bo Zuo)</b>
16:20-16:25	20891 The Programming Button of HAWGENT Dynamic Mathematics System-Chuan-Bo ZUO, Chu-Biao LIN

16:30-16:55	20896 技术支持下在数学教学设计的思考、原则与案例-Chuan-Bo ZUO, Mei-Ju Li
17:00-17:25	20921 Application of TI graphics calculator in the exploration of dynamic changes- Ma Ning.

<b>16:00-17:00</b>	<b>Hands-on Workshops</b> (GC stands for calculator workshops; CW stands for computer workshops)
	(GC Room 6) 20937 The Art of Parabolic Functions Ian Sheppard
	(GC Room 7) 20982 Unveiling Classwiz FX-991EX : Maximizing its Application in Mathematics Classes Maria Ailynn Diansuy
	(CW1 Computer Room 1)
	(CW2 Computer Room 2) 20945 Cabri 3D to check if enlightened black objects are seen as black objects Jean-Jacques Dahan, Jean-Marie Laborde
09:00-17:00 <b>Exhibitions</b>	
18:30-20:30 <b>IPC meeting</b>	



## December 19, 2015 (Saturday)

8:00-8:50 **Registration: Leshan Normal University**

**9:00-9:50 Plenary Speech 4: Auditorium Room: Chair: Wen Kin Ho**

*20771 Solve First – Ask Questions Later: discovering geometry using Symbolic Geometry and CAS Phillip Todd*

**10:00-10:30 Tea Break**

**10:30-11:30 Special Session: Auditorium Room: Chair: Wei-Chi Yang**

*21030 Graphics calculators and the school mathematics curriculum: Perspectives and issues from three countries Barry Kissane, Wee Leng Ng, G.T. Springer*

**11:30-12:30 Invited Speeches**

**11:30-12:20 Invited Speaker 7: Room 1: (Chair: Jen-chung Chuan): 21005** Teaching elementary mathematics with virtual manipulatives: an introduction of Magic Board Yuan Yuan

**Invited Speaker 8: Room 2: (Chair: Phillip Todd): 20902** Open source computer systems in mathematics education Alasdair McAndrew

**Invited Speaker 9: Room 3: (Chair: Barry Kissane): 20977** Technology in the Mathematics Classroom: A Perspective from India Janaki Ghosh

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

**13:30- Conference Tour for Paid Foreign Participants**

**09:00-13:30 Exhibitions**

## December 20, 2015 (Sunday)

8:00-8:50 **Registration: Leshan Normal University**

9:00-9:50 **Invited Speeches**

**Invited Speaker 10: Room 1: (Chair: Werner Olivier):** 20890 What Have We Done About Mathematics Experiments With HAWGENT Chuan-Bo Zuo

**Invited Speaker 11: Room 2: (Chair: Barry Kissane):** 21044 Creative Thinking in Mathematics with Tangrams and The Geometer's Sketchpad Krongthong Khairiree

**Invited Speaker 12: Room 3: (Chair: Carl Liu):** 20977 TBA Hongguang Fu

10:00-10:30 **Tea Break**

10:30-11:30 **Parallel Session I: 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)

10:30-10:55 20950 Ti Calculator Reshaping Teachers and Students; Roles from the Perspective of Effective Learning-Yibo Fu, Liping Wang, Xiaoyu Wang, Xiujun Zhang

11:00-11:25 20952 A Case of Monitoring and Analysis on Inquiry Learning Process under the Technical Support

### Room 2: (Chair)

10:30-10:55 21021 The Impact of Using Cabri 3D on Achievement and Skills in Initial Geometry-Rika Yanti

11:00-11:25 21041 IMPROVING STUDENTS' MATHEMATICS LOGIC THINKING SKILL THROUGH MEANS-ENDS ANALYSIS (MEA) METHOD AT SENIOR HIGH SCHOOL- Ramlah Hasanah, Rika Yanti

### Room 3: (Chair:)

10:30-10:50 21035 FALLACIES IN ANALYZING DATA TYPE OF ORDINAL SCALE- Hanifah Nuris Sopiany

10:50-11:10 21023 The Impact of Using MMPL Models with Contextual Approach on Grade 8 Students' Skills in Spatial Ability- Hanifah Nuris Sopiany

11:10-11:30 21029 REMEDIATION plus EXTENSIVE STUDENTS' AND TEACHERS' UTILIZATION OF NUMERACY TOOL (R+ESTUNT)- Restituto Rodelas, Eleonora Claricia

### Room 4: (Chair:)

10:30-10:55 20880 The ONAD method for qP-wave equation solving- Rong Huang, Yan Yang, Guojie Song

11:00-11:25 20904 Research and Implementation of Determining the Validity of the Mathematical Expression- Ming Lee, Ju Zhang, Xinyan Li, Lian Chen, Jie Lei

11:30-12:30 **Closing Ceremony**

12:30-13:30 **Lunch and Farewell**