

Second Mathematics and Physical Sciences Graduate Congress (MPSGC)

General Schedule

Tuesday, 12 December (AM), LT31 (Blk S16 Level 3)

8.15 am – 8.50 am Registration

8.50 am – 9.00 am Guests to be seated

Opening Ceremony

9.00 am – 9.05 am Opening Note
A/P Ji Wei, Vice Dean, Faculty of Science
National University of Singapore

Deans' Speeches

9.05 am – 9.15 am **Prof Tan Eng Chye**
Dean, Faculty of Science
National University of Singapore

9.15 am – 9.25 am **Prof Piamsak Menasveta**
Dean, Faculty of Science
Chulalongkorn University

9.25 am – 9.35 am **Prof Rauzah Hashim**
Deputy Dean, Faculty of Science
University of Malaya

Tea Break

Plenary Sessions

10.00 am – 10.45 am *Indian Tsunami 26 December, 2004*
Prof Piamsak Menasveta
Department of Physical Science, Chulalongkorn
University
(Chair: Prof Supawan Tantayanon)

10.45 am – 11.30 am *Development of S-Band EDFAS for Telecommunications*
Prof Harith Ahmad
Department of Physics, University of Malaya
(Chair: Dr Zamri Zainal Abidin)

11.30 am – 12.15 pm *From Molecules to Materials of the Future*
Prof Jagadese J. Vittal
Department of Chemistry, National University of
Singapore
(Chair: Assoc Prof Ji Wei)

Lunch Break

Second Mathematics and Physical Sciences Graduate Congress (MPSGC)

Parallel Programme - Mathematics & Statistics
Tuesday, 12 December, CRA, S14-03-10

Session 1 (PM)

Chair: **Lim Fong Yin (NUS)**
Chareewan Sirisrisumrit (Chulalongkorn)

- 2.00 pm – 2.40 pm ***Invited Speaker***
Overview of PhD Programme in the Department of Mathematics
Shen Zuowei
National University of Singapore
- 2.40 pm – 3.05 pm *Complementarity-based Demand Functions and Pricing Models for Multi-product Markets*
Soon Wanmei
National University of Singapore
- 3.05 pm – 3.30 pm *Wielandt Lengths and Subgroups of Various p -Groups And Their Relations with Other Group Invariants*
Lee Poh Lin, Angeline
University of Malaya
- 3.30 pm – 4.00 pm Tea Break

Session 2 (PM)

Chair: **Soon Wanmei (NUS)**
Lee Poh Lin, Angeline (UM)

- 4.00 pm – 4.40 pm ***Invited Speaker***
Rank-One Non-Increasing Additive Mappings between Matrix Spaces
Lim Ming Huat
University of Malaya
- 4.40 pm – 5.05 pm *Heuristic Cut for Identifying the Solution of the Architectural Layout Design Optimization*
Kamol Keatruangkamala
Chulalongkorn University
- 5.05 pm – 5.30 pm *A 3D Numerical Method for Simulating Air Bubbles Rising in Viscous Liquids*
Jan F. Stene
National University of Singapore
- 5.30 pm – 5.55 pm *Association Rule Extraction Based on the Weak Support*
Chareewan Sirisrisumrit
Chulalongkorn University

Second Mathematics and Physical Sciences Graduate Congress (MPSGC)

Parallel Programme - Mathematics & Statistics
Wednesday, 13 December, CRA, S14-03-10

Session 1 (AM)

Chair: Jan F. Stene (NUS)
Kamol Keatruangkamala (Chulalongkorn)

- 9.00 am – 9.40 am *Invited Speaker*
Properties of Harmonic Functions Star-like of Order with Respect to Other Points
Suzeini Abdul Halim
University of Malaya
- 9.40 am – 10.05 am *Ramanujan's Eisenstein Series and Powers of Dedekind's Eta Function*
Toh Pee Choon
National University of Singapore
- 10.05 am – 10.30 am *Optimal Production And Repair Policies for a Manufacturing System Under a Time Varying Demand Process*
Yeo, Ivan
University of Malaya
- 10.30 am – 11.00 am Tea Break

Session 2 (AM)

Chair: Toh Pee Choon (NUS)
Ng Kok Haur (UM)

- 11.00 am – 11.40 am *Invited Speaker*
Computational Methods for Molecule Orientations of Liquid Crystals and Liquid Crystal Flows
Lin Ping
National University of Singapore
- 11.40 am – 12.05 pm *Ground States of Bose-Einstein Condensates: Asymptotics and Numerical Computation*
Lim Fong Yin
National University of Singapore
- 12.05 pm – 2.00 pm Lunch Break

Second Mathematics and Physical Sciences Graduate Congress (MPSGC)

Parallel Programme - Mathematics & Statistics
Wednesday, 13 December, CRA, S14-03-10

Session 1 (PM)

Chair: **Khang Tsung Fei (NUS)**
Mohd. Isfahani Ismail (UM)

- 2.00 pm – 2.40 pm ***Invited Speaker***
Challenges and Opportunities in Statistical Research for Graduate Students
Choi Kwok Pui
National University of Singapore
- 2.40 pm – 3.00 pm *Random Matrix Theory: A Short Introduction*
Zhang Lixin
National University of Singapore
- 3.00 pm – 3.20 pm *Fitting the Straight Lines for Several Unreplicated Linear Functional Relationship Model*
Jedzry Fadzlin Jalaluddin
University of Malaya
- 3.30 pm – 4.00 pm Tea Break

Session 2 (PM)

Chair: **Jedzry Fadzlin Jalaluddin (UM)**
Hao Ying (NUS)

- 4.00 pm – 4.20 pm *A Class of Discrete Distributions Arising From Difference of Two Random Variables*
Ng Choung Min
University of Malaya
- 4.20 pm – 4.40 pm *Detecting Wahlund's Effect in Cases where Clear Population Subdivision Exists*
Khang Tsung Fei
National University of Singapore

Second Mathematics and Physical Sciences Graduate Congress (MPSGC)

Parallel Programme - Mathematics & Statistics
Thursday, 14 December, CRA, S14-03-10

Session 1 (AM)

Chair: **Zhao Yudong (NUS)**
Ng Choung Min (UM)

- 9.00 am – 9.20 am *Simultaneous Shewhart-Cumulative Sum Charts Scheme*
Rushan A B Abeygunawardana
National University of Singapore
- 9.20 am – 9.40 am *Computation of the Multivariate Normal Integral*
Ng Kok Haur
University of Malaya
- 9.40 am – 10.00 am *Bootstrap Confidence Interval of A New Herd Measure*
Wong Yoke Chen
University of Malaya
- 10.00 am – 10.20 am *Response-Adaptive Randomization in Clinical Trials*
Li Juanjuan
National University of Singapore
- 10.20 am – 11.00 am Tea Break

Session 2 (AM)

Chair: **Wong Yoke Chen (UM)**
Zhang Lixin (NUS)

- 11.00 am – 11.20 am *Non-null Semi-parametric Inference for the Mann-Whitney Measure*
Zhao Yudong
National University of Singapore
- 11.20 am – 11.40 am *A Procedure for Detecting Additive Outlier in $BL(1,0,1,1)$ Process*
Mohd. Isfahani Ismail
University of Malaya
- 11.40 am – 12.00 pm *A New Approach on Gene Selection for Tissue Classification*
Hao Ying
National University of Singapore

Second Mathematics and Physical Sciences Graduate Congress (MPSGC)

Poster Session - Mathematics & Statistics
Wednesday, 13 December, 4.40 pm – 6.00 pm
S14-03-01 (Maths Studio)

- P1 *Slip Effects of Viscoelastic Simulation for Die Swell Problem*
Piyamabhorn Uttamung
Chulalongkorn University
- P2 *Sedimentation Study at Putrajaya Wetland, Malaysia*
Ahmad Farid Bin Abu Bakar
University of Malaya
- P3 *Modelling of Hydrological Interaction at Paya Indah Wetlands, Malaysia*
Bahaa-eldin Elwali Abddel Rahim Elwali
University of Malaya
- P4 *A Family of S-Shape Functions for Analyzing Binary Responses*
Fam Pei Shan
University of Malaya
- P5 *The Use of Digital Imaging in the Characterization of DLA-Type Fractals*
Mohd. Najmuddin
University of Malaya
- P6 *Modelling and Analysis of Data Disclosure Risk by the Inverse Trinomial Distribution*
Sim Shin Zhu
University of Malaya