

## Brief History of Trilateral Meeting

### Australia - Italy - Taiwan Trilateral Meeting

- 1st Trilateral Meeting in Taipei, Taiwan, 2000
- 2nd Trilateral Meeting in Murrumbidgee, Australia, 2003

<http://maths.anu.edu.au/events/past-events>

- 3rd Trilateral Meeting in Rome, Italy, Jan. 2006 (22 speakers)

<http://www.dma.unina.it/~cotizelati/trilat/programma.html>

- 4th Trilateral Meeting in Taipei, Taiwan, Dec. 2009 (29 speakers)

[http://www.math.sinica.edu.tw/www/file\\_upload/conference/200912\\_TRI/main.htm](http://www.math.sinica.edu.tw/www/file_upload/conference/200912_TRI/main.htm)

- 5th Trilateral Meeting in Wollongong, Australia, Dec. 2012 (32 speakers)

<http://www.austms.org.au/tiki-calendar.php?editmode=details&calitemId=410>

- 6th Trilateral Meeting in Parma, Italy, Dec. 2015 (22 speakers)

<http://calcvar.unipr.it/trilateral%2015/index.html>

- 7th Trilateral Meeting in Tainan, Taiwan, Jan. 2019

[http://www.math.ncku.edu.tw/~fang/2019\\_01\\_Trilateral\\_Meeting-DE\\_Workshop.html](http://www.math.ncku.edu.tw/~fang/2019_01_Trilateral_Meeting-DE_Workshop.html)

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Trilateral Meeting 2012

3rd December to 7th December 2012

Australia - Italy - Taiwan

Partial Differential Equations and Related Topics

5th Trilateral meeting on "Partial Differential Equations and Related Topics"

Trilateral Meeting 2012 SUNDAY 2nd DECEMBER 2012

Venue: Marketview Accommodation, Conference Room

6.00 pm – 7.30 pm Welcome to Wollongong event

Finger food, Wine and Beer for all delegates to meet in a social environment.

Trilateral Meeting 2012 MONDAY 3rd DECEMBER 2012

Venue: UOW Building 6 (SMART) Room 105

9.00 am – 9.30 am OFFICIAL OPENING Prof Judy Raper Prof Oscar Moze

Deputy Vice-Chancellor (Research) Science Attache? Embassy of Italy

01, 9.30 am – 10.30 am Prof Tai-Ping Liu, Academia Sinica Title: Kinetic theory and gas dynamics

10.30 am – 10.50 am MORNING TEA

02, 10.50 am – 11.50 am Prof Aldo Pratelli, U of Erlangen Title: New results for the isoperimetric problem in a space with low regularity density

03, 11.50 am – 12.15 pm Dr Glen Wheeler, University of Wollongong Title: Oscillation of curvature and the curve diffusion flow

04, 12.15 pm – 12.40 pm Dr Dmitry Demskoy, Charles Sturt U Title: Algebraic entropy for differential-difference equations

12.40 pm – 1.40 pm LUNCH

05, 1.40 pm – 2.40 pm Prof Chi-Kun Lin, NCTU Title: Zero-dispersion limit of the Klein-Gordon equation in EM fields

06, 2.40 pm – 3.40 pm Prof Yihong Du, U of New England Title: Regularity and long-time behavior of nonlinear free

bdary problems

, 3.40 pm – 4.00 pm AFTERNOON TEA

07, 4.00 pm – 5.00 pm Prof Shih-Hsien Yu, National University of Singapore Title: On hyperbolic system in half space

08, 5.00 pm – 5.25 pm Mr Lashi Bandara, Australian National U Title:  $??^\infty$  coefficient differential operators and nonsmooth Riemannian metrics

#### Trilateral Meeting

2012 TUESDAY 4th DECEMBER 2012 Venue: UOW Building 20 Lecture Theatre 4

09, 8.00 am – 9.00 am Prof Chao-Nien Chen, NCUE Title: Standing pulse solutions to FitzHugh-Nagumo equations

10, 9.00 am – 10.00 am Prof Stefano Bianchini, SISSA, Trieste Title: Continuous solutions to scalar balance laws

10.00 am – 10.20 am MORNING TEA

11, 10.20 am – 11.20 am Prof Dong-Ho Tsai, National Tsing Hua University Title: Contracting convex immersed closed plane curves with slow speed of curvature

12, 11.20 am – 12.20 pm Prof Thierry Coulhon, Australian National University Title: Heat kernel estimates, Sobolev inequalities and Riesz transform on non-cpt R-Ms

#### EXCURSION

12.20 pm – 1.20 pm Coach travel to Illawarra Fly

1.20 pm – 2.00 pm Illawarra Fly Feathers and Gills Lunch - Chicken Kiev or Fish and Chips

2.00 pm – 2.45 pm Guided Treetops Tour

2.45 pm – 3.30 pm Coach travel to Nan Tien Temple

3.30 pm – 4.30 pm Nan Tien Temple – self guided tour

4.30 pm – 5.00 pm Coach travel to Marketview Accommodation and UOW

#### Trilateral Meeting 2012 WEDNESDAY 5th DECEMBER 2012

Venue: UOW Building 6 (SMART) Room 105 8.30 am Coffee and Tea

13, 8.30 am – 9.30 am Dr Huy Nguyen, University of Queensland Title: Geometric rigidity of surfaces of bounded curvature

14, 9.30 am – 10.30 am Prof Jenn-Nan Wang, NTU Title: A size estimate problem in the shallow shell equations

10.30 am – 10.50 am MORNING TEA

15, 10.50 am – 11.50 am Prof Nicola Fusco, Univ di Napoli Federico II Title: On the stability of Almgren's isoperimetric inequality

16, 11.50 am – 12.50 pm Prof Norman Dancer, University of Sydney Title: Stationary solutions of large interaction problems

12.50 pm – 1.50 pm LUNCH

17, 1.50 pm – 2.50 pm Prof Luigi De Pascale, U of Pisa Title: Optimal transportation problems and electronic density functional theory

18, 2.50 pm – 3.50 pm Dr Artem Pulemotov, Univ of Queensland Title: BVPs for the prescribed Ricci curvature eqn on cohomogeneity one manifolds

19, 3.50 pm – 4.15 pm Mr N. Fewster-Young, Uof New South Wales Title: Deceptive solutions to singular boundary value problems

6.30 pm CONFERENCE DINNER Ha Long Bay 52 Crown St (Corner Corrimal St) Wollongong NSW 2500

#### Trilateral Meeting 2012 THURSDAY 6th DECEMBER 2012

Venue: UOW Building 6 (SMART) Room 105

8.30 am Coffee and Tea

20, 8.30 am – 9.30 am Dr Valentina-Mira Wheeler, University of Wollongong Title: Mean curvature flow supported on a hyperplane

21, 9.30 am – 10.30 am Prof Chiun-Chuan Chen, NTU Title: Wave solutions of reaction-diffusion equations and variational method

10.30 am – 10.50 am MORNING TEA

22, 10.50 am – 11.50 am Prof Alessio Porretta, Universita' di Roma Tor Vergata Title: Long time average of mean field games

23, 11.50 am – 12.50 pm Prof M. Hegland, Australian National U Title: Solving partial differential equations with exascale computers

12.45 pm – 1.45 pm LUNCH

24, 1.45 pm – 2.45 pm Prof Shuenn-Jyi Sheu, NCU Title: On Hamilton-Jacobi-Bellman equations for some investment problems

25, 2.45 pm – 3.45 pm Prof M. Morini, U of Parma Title: Minimality via second variation for a nonlocal isoperimetric problem

3.45 pm – 4.05 pm AFTERNOON TEA

26, 4.05 pm – 5.05 pm Prof Tony Roberts, University of Adelaide Title: Novel support for slowly varying and thin layer PDE models

27, 5.05 pm – 5.30 pm Mr David Hartley, Australian National University Title: Volume preserving mean curvature flow near cylinders

Trilateral Meeting 2012 FRIDAY 7th DECEMBER 2012 Venue: UOW Building 6 (SMART) Room 105

28, 8.30 am – 9.30 am Prof Andrea Malchiodi, SISSA, Trieste Title: Improved Moser-Trudinger inequalities via angular moments

29, 9.30 am – 10.30 am Prof Ben Goldys, University of Sydney Title: Stochastic Landau-Lifschitz-Gilbert equation

10.30 am – 10.50 am MORNING TEA

30, 10.50 am – 11.50 am Prof KC Chen, NTHU Title: Keplerian action functional, convexity, and n-body problems w/ boundary constraints

31, 11.50 am – 12.50 pm Prof Giuseppe Mingione, University of Parma Title: Update on nonlinear potential theory

32, 12.50 pm – 1.50 pm Dr Marianito Rodrigo, University of Wollongong Title: Valuation of American options with general payoffs

1.50 pm – 2.00 pm Closing Remarks

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6th Trilateral Meeting on Nonlinear PDEs and Applications

Dec. 14, 2015 ~ Dec. 18 2015 (Mon ~ Fri)

01 • Luigi Ambrosio, Well posedness of ODE's and continuity equations with nonsmooth vector fields, and applications

02 • Ben Andrews, Rolling stones in hyperspace

03 • Chao-Nien Chen, Traveling pulse solutions to FitzHugh-Nagumo equations

04 • Chiun-Chuan Chen, Critical exponent for a simple model of spot replication

05 • Kuo-Chang Chen, Syzygies of the n-center problem

06 • Guido De Philippis, An approximation result in  $SBV^p$

07 • Yi-Hong Du, Constant solutions, ground-state solutions and radial terrace solutions

08 • Alessio Figalli, Transport theory: from functional inequalities to random matrices

09 • Hung-Wen Kuo, Equilibrating effect of boundary in kinetic theory

- 10 • Ming-Chih Lai, Vesicle Electrohydrodynamics: Modeling and Simulation
  - 11 • Jiakun Liu, A Schauder theory of stochastic parabolic equations
  - 12 • Tai-Ping Liu, Boltzmann equation for Infinite range potentials
  - 13 • Gregoire Loeper, Option pricing with market impact and non-linear diffusion equations
  - 14 • James McCoy, Curvature contraction of convex surfaces by nonsmooth speeds
  - 15 • Andrea Malchiodi, Embedded Willmore tori in three-manifolds with small area constraint
  - 16 • Paolo Marcellini, A variational approach to parabolic equations and systems via the calculus of variations
  - 17 • Marcello Pongiglione, A variational approach to nonlocal and crystalline curvature flows
  - 18 • Aldo Pratelli, On new approximation results for bi-Sobolev homeomorphisms
  - 19 • Artem Pulemotov, The prescribed Ricci curvature problem on homogeneous spaces
  - 20 • Susanna Terracini, Entire solutions and spiralling asymptotic profiles of competition-diffusion systems
  - 21 • Enrico Valdinoci, Nonlocal minimal surfaces
  - 22 • Jenn-Nan Wang, Quantitative estimates for the second order elliptic equation with unbounded drift term and related questions
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