International Congress of Mathematicians

Hyderabad, India

August 19 - 27, 2010

Schedule of Invited Talks

(Sectionwise)
1 Logic and Foundations

Sunday, August 22, 2010  
Room No. 1.06  
Chair: R. Ramanujam

15:00 - 15:45  
1.1 A. Nies, University of Auckland, New Zealand  
*Interactions of computability and randomness*

16:00 - 16:45  
1.2 Y. Peterzil, University of Haifa, Israel/ S. Starchenko, University of Notre Dame, USA  
*Tame complex analysis and o-minimality*

Friday, August 27, 2010  
Room No. 1.06  
Chair: H. Woodin

15:00 - 15:45  
1.3 J. T. Moore, Cornell University, USA  
*The proper forcing axiom*
2 Algebra

Saturday, August 21, 2010
Chair: R. Parimala

15:00 - 15:45
2.1 P. Balmer, University of California, Los Angeles, USA
Tensor triangular geometry

16:00 - 16:45
2.2 V. Suresh, University of Hyderabad, India
Quadratic forms, Galois cohomology and function fields of p-adic curves

Tuesday, August 24, 2010
Chair: I. Reiten

15:00 - 15:45
2.3 D. J. Benson, University of Aberdeen, UK
Modules for elementary abelian p-groups

16:00 - 16:45
2.4 S. Fomin, University of Michigan, USA
Total positivity and cluster algebras

Thursday, August 26, 2010
Chair: I. B. S. Passi

15:00 - 15:45
2.5 N. Karpenko, Université Pierre et Marie Curie, Paris, France
Canonical dimension

16:00 - 16:45
2.6 Z. Reichstein, University of British Columbia, Canada
Essential dimension
3 Number Theory

Friday, August 20, 2010
Room No. 1.02
Chair: Kumar Murty

15:00 - 15:45
3.1 R. Heath-Brown, University of Oxford, UK
Artin's conjecture on zeros of $p$-adic forms

16:00 - 16:45
3.2 C. Breuil, IHES, France
The emerging $p$-adic Langlands programme

17:00 - 17:45
3.3 K. S. Kedlaya, MIT, USA
Relative $p$-adic Hodge Theory and Rapoport-Zink period domains

Sunday, August 22, 2010
Hall 4
Chair: R. Balasubramanian

15:00 - 15:45
3.4 M. Kisin, Harvard University, USA
The structure of potentially semi-stable deformation rings

16:00 - 16:45
3.5 K. Soundararajan, Stanford University, USA
Quantum unique ergodicity and number theory

17:00 - 17:45
3.6 R. Greenberg, University of Washington, USA
Selmer groups and congruences

18:00 - 18:45
3.7 C. B. Khare, University of California, Los Angeles, USA
Serre's modularity conjecture, I

Wednesday, August 25, 2010
Hall 4
Chair: R. Heath-Brown

16:00 - 16:45
3.8 J-P. Wintenberger, Université Louis Pasteur, Strasbourg, France
Serre's modularity conjecture, II
Friday, August 27, 2010

Chair: M. Waldschmidt

15:00 - 15:45
3.9 A. Venkatesh, Stanford University, USA
Statistics of number fields and function fields

16:00 - 16:45
3.10 T. Saito, University of Tokyo, Japan
Wild ramification of schemes and sheaves

17:00 - 17:45
3.11 S. Morel, Harvard University, USA
The intersection complex as a weight truncation and an application to Shimura varieties
4 Algebraic and Complex Geometry

Friday, August 20, 2010
Chair: V. Lakshmibai

15:00-15:45
4.1 R. Thomas, Imperial College, London, UK
An exercise in mirror symmetry

16:00-16:45
4.2 C. Hacon, University of Utah, USA
Boundedness results in birational geometry

17:00-17:45
4.3 S. Saito, University of Tokyo, Japan
Cohomological Hasse principle and motivic cohomology

Sunday, August 22, 2010
Chair: V. Srinivas

15:00-15:45
4.4 J. McKernan, MIT, USA
Flips and flops

16:00-16:45
4.5 M. Paun, Université Henri Poincaré
Quantitative extensions of twisted pluricanonical forms and non-vanishing

17:00-17:45
4.6 D. Huybrechts, University of Bonn, Germany
Hyperkähler manifolds and sheaves

18:00-18:45
4.7 D. Kaledin, Independent University of Moscow, Russia
Motivic structures in non-commutative geometry

Wednesday, August 25, 2010
Chair: R. Piene

15:00-15:45
4.8 P. Belkale, University of North Carolina, Chapel Hill, USA
The tangent space to an enumerative problem

16:00-16:45
4.9 J-Y. Welschinger, Université Lyon 1, France
Integral invariants in real enumerative geometry
Friday, August 27
Chair: C. Voisin

15:00-15:45
4.10 F-O. Shreyer, Universität des Saarlandes, Saarbrücken, Germany
Betti numbers of syzygies and cohomologies of coherent sheaves

16:00-16:45
4.11 C-C. M. Liu, Columbia University, USA
Gromov-Witten theory of Calabi-Yau 3-folds

17:00-17:45
4.12 V. Srinivas, Tata Institute of Fundamental Research, India
Algebraic cycles on singular varieties
5  Geometry

Saturday, August 21, 2010
Room No. 2.03

Chair: T. R. Ramadas

15:00 - 15:45
5.1 F. C. Marques, IMPA, Brazil
Scalar curvature, conformal geometry and the Ricci flow with surgery

16:00 - 16:45
5.2 F. Pacard, Université de Paris-Est, Créteil, France
Constant scalar curvature and extremal Kähler metrics on blow-ups

17:00 - 17:45
5.3 J. Fu, Fudan University, P. R. of China
On non-Kähler Calabi-Yau three folds with balanced metrics

Tuesday, August 24, 2010
Room No. 2.03

Chair: R. Kulkarni

15:00 - 15:45
5.4 A. Erschler, Université de Paris-Sud, Orsay, France
(Talk delivered by A. Eskin)
Poisson-Furstenberg boundaries, large scale geometry and growth of groups

16:00 - 16:45
5.5 W. Goldman, University of Maryland, USA
Locally homogeneous geometric manifolds

17:00 - 17:45
5.6 L. Guth, University of Toronto, Canada
Metaphors in systolic geometry

Wednesday, August 25, 2010
Room No. 2.03

Chair: W. Goldman

17:00 - 17:45
5.7 I. Fernandez, University of Seville, Spain/P. Mira, Universidad Politécnica de Cartagena, Spain
Constant mean curvature surfaces in 3-dimensional Thurston geometries
Thursday, August 26, 2010

Chair R. Schoen

15:00 - 15:45
5.8 X. Ma, Institut de Mathématiques de Jussieu, Paris, France
Geometric quantization on Kähler and symplectic manifolds

16:00 - 16:45
5.9 S. Ivanov, St. Petersburg Department of the Steklov Mathematical Institute, Russia
Volume comparison via boundary distances

17:00 - 17:45
5.10 A. Nabutovsky, University of Toronto, Canada
Morse landscapes of Riemannian functionals and related topics

Friday, August 27, 2010

Chair: S. Ivanov

15:00 - 15:45
5.11 T. Januszkiewicz, Ohio State University, USA
Simplicial nonpositive curvature

16:00 - 16:45
5.12 T. Yamaguchi, University of Tsukuba, Japan
Reconstruction of collapsed manifolds
6 Topology

Saturday, August 21, 2010  
Chair: R. Thomas

15:00 - 15:45  
6.1 D. Auroux, University of California, Berkeley, USA  
*Fukaya categories and bordered Heegaard-Floer homology*

16:00 - 16:45  
6.2 D. Gabai, Princeton University, USA  
*Hyperbolic geometry in the 2000s*

17:00 - 17:45  
6.3 J. Lurie, Harvard University, USA  
*Moduli problems for ring spectra*

Tuesday, August 24, 2010  
Chair: M. Mirzakhani

15:00 - 15:45  
6.4 W. Lück, Westphälische Wilhelms Universität, Münster, Germany  
*K and L theory of group rings*

16:00 - 16:45  
6.5 J. Grodal, University of Copenhagen, Denmark  
*The classification of p-compact groups and homotopical group theory*

17:00 - 17:45  
6.6 U. Hamenstädt, University of Bonn, Germany  
*Actions of the mapping class group*

Thursday, August 26, 2010  
Chair: J-Y. Welschinger

15:00 - 15:45  
6.7 K. Costello, Northwestern University, USA  
*A geometric construction of the Witten genus I*

16:00 - 16:45  
6.8 M. Mirzakhani, Stanford University, USA  
*On Weil-Petersson volumes and geometry of random hyperbolic surfaces*

17:00 - 17:45  
6.9 M. Hutchings, University of California, Berkeley, USA  
*Embedded contact homology and its applications*
Friday, August 27, 2010

Chair: M. Hutchings

15:00 - 15:45
6.10 M. Lackenby, Oxford University, UK
Finite covering spaces of 3-manifolds

16:00 - 16:45
6.11 J. Park, Seoul National University, Republic of Korea
A new family of complex surfaces of general type with $p_g = 0$

17:00 - 17:45
6.12 A. Stipsicz, Renyi Institute of Mathematics, Hungary
Ozsvath-Szabo invariants and 3-dimensional contact topology
7 Lie Theory and Generalizations

Saturday, August 21, 2010

Chair: R. Parthasarathy

15:00 - 15:45
7.1 C. Stroppel, University of Bonn, Germany
*Schur-Weyl dualities and link homologies*

16:00 - 16:45
7.2 T. N. Venkataramana, Tata Institute of Fundamental Research, India
*Cohomology of arithmetic groups and representations*

17:00 - 17:45
7.3 H. Oh, Brown University, USA
*Dynamics on geometrically finite hyperbolic manifolds with applications to Apollonian circle packings and beyond*

18:00-18:45
7.4 A. Eskin, University of Chicago, USA
*Quasi-isometric rigidity of solvable groups*

Tuesday, August 24, 2010

Chair: T. N. Venkataramana

15:00 - 15:45
7.5 I. Gordon, University of Edinburgh, UK
*Rational Cherednik algebras*

16:00 - 16:45
7.6 I. Losev, MIT, USA
*Finite W-algebras*

17:00 - 17:45
7.7 Shrawan Kumar, University of North Carolina, Chapel Hill, USA
*Tensor product decomposition*

Thursday, August 26, 2010

Chair: Shrawan Kumar

15:00 - 15:45
7.8 N. A. Shah, Tata Institute of Fundamental Research, India
*Equidistribution of translates of curves on homogeneous spaces and Dirichlet’s approximation*

16:00 - 16:45
7.9 E. Lapid, Hebrew University of Jerusalem, Israel
*Some applications of the trace formula and the relative trace formula*
8 Analysis

Saturday, August 21, 2010  Room No. 1.03
Chair: G. Pisier

15:00 - 15:45
8.1 M. Csornyei, University College, London, UK
Differentiability of Lipschitz functions, structure of null sets and other problems

16:00 - 16:45
8.2 A. Kuijlaars, Katholieke Universiteit, Leuven, Belgium
Multiple orthogonal polynomials in random matrix theory

17:00 - 17:45
8.3 A. R. Its, IUPUI, Indianapolis, USA
Asymptotic analysis of the Toeplitz and Hankel determinants via the Riemann-Hilbert method

Tuesday, August 24, 2010  Room No. 1.03
Chair: A. Sitaram

15:00 - 15:45
8.4 T. Toro, University of Washington, USA
Potential theory meets geometric measure theory

16:00 - 16:45
8.5 M. Sodin, Tel Aviv University, Israel
Nodal lines of random waves

17:00 - 17:45
8.6 F. Nazarov, University of Wisconsin, USA
Random complex zeroes

Wednesday, August 25, 2010  Room No. 1.03
Chair: S. Bagchi

15:00 - 15:45
8.7 P. Koskela, University of Jyvaskyla, Finland
Regularity of the inverse of a Sobolev homeomorphism

16:00 - 16:45
8.8 G. Martin, Massey University, New Zealand
Quasiregular mappings, curvature and dynamics
9  Functional Analysis and Applications

Friday, August 20, 2010  Room No. 1.05
Chair: V. S. Sunder

15:00 - 15:45  
9.1 M. Izumi, Kyoto University, Japan  
*Group actions on operator algebras*

16:00 - 16:45  
9.2 S. Vaes, Katholieke Universiteit, Leuven, Belgium  
*Rigidity for von Neumann algebras and their invariants*

17:00 - 17:45  
9.3 D. Shlyakhtenko, University of California, Los Angeles, USA  
*Free probability, planar algebras, subfactors and random matrices*

Sunday, August 22, 2010  Room No. 1.05
Chair: R. Bhatia

15:00 - 15:45  
9.4 A. Naor, New York University, USA  
*L₁ embeddings of the Heisenberg group and fast estimation of graph isoperimetry*

16:00 - 16:45  
9.5 M. Rudelson, University of Missouri, USA/R. Vershynin, University of Michigan, USA  
*Non-asymptotic theory of random matrices: extreme singular values*

17:00 - 17:45  
9.6 D. Gaboriau, Ecole Normale Supérieure de Lyon, France  
*Orbit equivalence and measured group theory*
10 Dynamical Systems and Ordinary Differential Equations

Friday, August 20, 2010
Room No. G05
Chair: M. Viana

15:00 - 15:45
10.1 M-C. Arnaud, Université d’Avignon et des Pays de Vaucluse
Green bundles and related topics

16:00 - 16:45
10.2 G. Contreras, CIMAT, Mexico
Generic dynamics of geodesic flows

17:00 - 17:45
10.3 D. Turaev, Imperial College, London, UK
Richness of chaos in the absolute Newhouse domain

Sunday, August 22, 2010
Room No. G05
Chair: S. G. Dani

15:00 - 15:45
10.4 P. Bernard, Université de Paris-Dauphine, France
Arnold’s diffusion: from the a priori unstable to the a priori stable case

16:00 - 16:45
10.5 M. L. Einsiedler, ETH, Zurich, Switzerland
Applications of measure rigidity of diagonal actions

17:00 - 17:45
10.6 A. Wilkinson, Northwestern University, USA
Conservative partially hyperbolic dynamics

Wednesday, August 25, 2010
Room No. G05
Chair: V. Kannan

15:00 - 15:45
10.7 X. Buff/ A. Cheritat, Université Paul Sabatier, Toulouse, France
Quadratic Julia sets with positive area

16:00 - 16:45
10.8 F. Rodriguez Hertz, IMERL, Uruguay
Measure theory and geometric topology in dynamics
Friday, August 27, 2010

Chair: W. de Melo

15:00 - 15:45
10.9 C-Q. Cheng, Nanjing University, P. R. of China
Variational construction of diffusion orbits for positive definite Lagrangians

16:00 - 16:45
10.10 O. Sarig, Weizmann Institute of Science, Israel
Unique ergodicity for infinite measures
11 Partial Differential Equations

Friday, August 20, 2010
Room No. G03
Chair: C. Kenig

15:00 - 15:45
11.1 S. Chen, Fudan University, P. R. of China
Study of multidimensional systems of conservation laws: problems, difficulties and progress

16:00 - 16:45
11.2 N. Dencker, University of Lund, Sweden
The solvability of differential equations

17:00 - 17:45
11.3 N. Burq, Université de Paris-Sud, Orsay, France
Random data Cauchy theory for dispersive partial differential equations

Sunday, August 22, 2010
Room No. G03
Chair: E. N. Dancer

15:00 - 15:45
11.4 M. del Pino, University of Chile, Chile
New entire solutions to some classical semilinear elliptic problems

16:00 - 16:45
11.5 N. Nadirashvili, Université de Provence, France
Weak solutions of nonvariational elliptic equations

17:00 - 17:45 A. Schnirelman, Concordia University, Canada
Long-time behaviour of fluid flows

Wednesday, August 25, 2010
Room No. G03
Chair: M. J. Esteban

15:00 - 15:45
11.7 E. N. Dancer, University of Sydney, Australia
Finite Morse index and linearized stable solutions on bounded and unbounded domains

16:00 - 16:45
11.8 C. De Lellis, University of Zurich, Switzerland
Almgren’s Q-valued functions revisited
16:00 - 16:45
11.9 N. Fusco, Università degli Studi di Napoli, Federico II, Italy

Equilibrium configurations of epitaxially strained elastic films: existence, regularity and qualitative properties of solutions
12 Mathematical Physics

Saturday, August 21, 2010

Chair: M. Marcolli

15:00 - 15:45
12.1 A. Kupiainen, Helsinki University, Finland
Origins of diffusion

16:00 - 16:45
12.2 K. Wendland, Augsburg University, Germany
On the geometry of singularities in quantum field theory

17:00 - 17:45
12.3 H. Spohn, TU, Munich, Germany
Weakly nonlinear wave equations with random initial data

Tuesday, August 24, 2010

Chair: K. B. Sinha

15:00 - 15:45
12.4 A. Kapustin, California Institute of Technology, USA
Topological field theory, higher categories and their applications

16:00 - 16:45
12.5 M. Marcolli, California Institute of Technology, USA
Noncommutative geometry and arithmetic

Thursday, August 26, 2010

Chair: N. Reshetikhin

15:00 - 15:45
12.6 Y. Last, Hebrew University of Jerusalem, Israel
Stability of absolutely continuous spectrum under decaying perturbations: a review of recent developments

16:00 - 16:45
12.7 G. Seregin, Oxford University, UK
Weak solutions to the Navier-Stokes equations with bounded scale-invariant quantities

17:00 - 17:45
12.8 V. Mastropietro, Università degli Studi di Roma, Tor Vergata, Italy
Universality, phase transitions and extended scaling relations
13  Probability and Statistics

Friday, August 20, 2010  Room No. 1.03
Chair: D. Aldous

15:00 - 15:45
13.1 I. Benjamini, Weizmann Institute of Science, Israel
Random planar metrics

16:00 - 16:45
13.2 C. Neuhauser, University of Minnesota, USA
Coevolution in spatial habitats

17:00 - 17:45
13.3 Q-M. Shao, Hong Kong University of Science and Technology, Hong Kong, China
Stein’s method, self-normalized limit theory and applications

Sunday, August 22, 2010  Room No. 1.03
Chair: S. Peng

15:00 - 15:45
13.4 A. Borodin, California Institute of Technology, USA
Growth of random surfaces

16:00 - 16:45
13.5 F. den Hollander, University of Leiden, The Netherlands
A key large deviation principle for interacting stochastic systems

17:00 - 17:45
13.6 S. Van de Geer, ETH, Zurich, Switzerland
$\ell_1$-regularization in high dimensional statistical models

Wednesday, August 25, 2010  Room No. 1.03
Chair: B. L. S. Prakasa Rao

17:00 - 17:45
13.7 A. Van der Vaart, Vrije Universiteit, Amsterdam, The Netherlands
Bayesian regularization
Thursday, August 26, 2010

Chair: S. N. Evans

15:00 - 15:45
13.8 J. Quastel, University of Toronto, Canada
Weakly asymmetric exclusion and KPZ

16:00 - 16:45
13.9 P. Chaudhuri, Indian Statistical Institute, Kolkata, India
On quantiles in finite and infinite dimensional spaces

17:00 - 17:45
13.10 S. Sheffield, MIT, USA
How do you divide your (two-dimensional) time? SLE, CLE, the GFF and
Liouville quantum gravity zippers/necklaces, and also congratulations to Stas

Friday, August 27, 2010

Chair: B. V. Rao

15:00 - 15:45
13.11 S. N. Evans, University of California, Berkeley, USA
Time and chance happeneth to them all: mutation, selection and recombination

16:00 - 16:45
13.12 A. Bose, Indian Statistical Institute, Kolkata, India
Patterned random matrices and the method of moments
14 Combinatorics

Friday, August 20, 2010
Chair: C. Praeger

15:00 - 15:45
14.1 L. J. Billera, Cornell University, USA
Flag enumeration in polytopes, Eulerian partially ordered sets and Coxeter groups

16:00 - 16:45
14.2 B. Leclerc, Université de Caen, France
Cluster algebras and representation theory

17:00 - 17:45
14.3 J. Nešetřil, Charles University, Czech Republic
Sparse combinatorial structures: classification and applications

Sunday, August 22, 2010
Chair: B. Leclerc

15:00 - 15:45
14.4 H. Cohn, Microsoft Research, New England, USA
Order and disorder in energy minimization

16:00 - 16:45
14.5 B. D. McKay, Australian National University, Australia
Subgraphs of random graphs with specified degrees

17:00 - 17:45
14.6 B. Sudakov, University of California, Los Angeles, USA
Recent developments in extremal combinatorics: Ramsey and Turlán type problems

Wednesday, August 25, 2010
Chair: N. M. Singhi

15:00 - 15:45
14.7 S. Lando, State University Higher School of Economics, Russian Federation
Hurwitz numbers: on the edge between combinatorics and geometry

16:00 - 16:45
14.8 E. Rains, California Institute of Technology, USA
Elliptic analogues of the Macdonald and Koornwinder polynomials

17:00 - 17:45
14.9 O. Riordan, Oxford University, UK
Percolation on sequences of graphs
15  Mathematical Aspects of Computer Science

Saturday, August 21, 2010  Room No. G01
Chair: I. Dinur

15:00 - 15:45
15.1 V. Guruswami, Carnegie-Mellon University, USA
Bridging Shannon and Hamming: list error-correction with optimal rate

16:00 - 16:45
15.2 C. Dwork, Microsoft Research, USA
Privacy against many arbitrary low-sensitivity queries

17:00 - 17:45
15.3 D. A. Spielman, Yale University, USA
Algorithms, graph theory, and linear equations in Laplacian matrices

Tuesday, August 24, 2010  Room No. G01
Chair: Satya Lokam

15:00 - 15:45
15.4 P. Bürgisser, University of Paderborn, Germany
Smoothed analysis of condition numbers

16:00 - 16:45
15.5 D. Aharonov, Hebrew University of Jerusalem, Israel
Quantum computation and mathematics

Thursday, August 26, 2010  Room No. G01
Chair: Jaikumar Radhakrishnan

15:00 - 15:45
15.6 S. Khot, New York University, USA
Inapproximability of NP-complete problems, discrete Fourier analysis and geometry

16:00 - 16:45
15.7 S. Vadhan, Harvard University, USA
The unified theory of pseudorandomness
16 Numerical Analysis and Scientific Computing

Saturday, August 21, 2010
Room No. 1.05
Chair: S. J. Osher

15:00 - 15:45
16.1 B. Cockburn, University of Minnesota, USA
The hybridizable discontinuous Galerkin Methods

16:00 - 16:45
16.2 R. H. Nochetto, University of Maryland, USA
Why adaptive FEM outperform classical ones

17:00 - 17:45
16.3 Z. Shen, National University of Singapore, Singapore
Wavelet frames and image restorations

Tuesday, August 24, 2010
Room No. 1.05
Chair: B. Cockburn

15:00 - 15:45
16.4 M. F. Wheeler, University of Texas, Austin, USA
Role of computational science in protecting the environment: geological storage of CO$_2$

16:00 - 16:45
16.5 P. A. Markowich, University of Cambridge, UK and University of Vienna, Austria
Numerical analysis of Schrödinger equations in the highly oscillatory regime

17:00 - 17:45
16.6 J. Xu, Pennsylvania State University, USA
Fast Poisson based solvers for linear and nonlinear PDEs
17 Control Theory and Optimization

Friday, August 20, 2010    Room No. 1.06
Chair: J-M. Coron

15:00 - 15:45
17.1 H. Frankowska, Université Pierre et Marie Curie, Paris, France
Optimal control under state constraints

16:00 - 16:45
17.2 X. Zhang, Chinese Academy of Sciences, P. R. of China
A unified controllability/observability theory for some stochastic and deterministic partial differential equations

17:00 - 17:45
17.3 P. A. Parrilo, MIT, USA
Semidefinite programming and complex algebraic geometry

Tuesday, August 24, 2010    Room No. 1.06
Chair: V. S. Borkar

15:00 - 15:45
17.4 S. Iwata, Kyoto University, Japan
Submodular functions: optimization and approximation

16:00 - 16:45
17.5 A. Shapiro, Georgia Institute of Technology, USA
Computational complexity of stochastic programming: Monte Carlo sampling

Wednesday, August 25, 2010    Room No. 1.06
Chair: M. Groetschel

15:00 - 15:45
17.6 Y. Nesterov, Université Catholique de Louvain, Belgium
Recent advances in structural optimization

16:00 - 16:45
17.7 R. Weismantel, ETH, Zurich, Switzerland
A cutting plane theory for mixed integer optimization
18 Mathematics in Science and Technology

Friday, August 20, 2010

Chair: H. P. Dikshit

15:00 - 15:45
18.1 P. K. Maini, Oxford University, UK
Modelling aspects of tumour metabolism

16:00 - 16:45
18.2 E. Baake, Bielefeld University, Germany
Deterministic and stochastic aspects of single-crossover recombination

17:00 - 17:45
18.3 K. Kunisch, University of Graz, Austria
Novel concepts for nonsmooth optimization and their impact on science and technology

Sunday, August 22, 2010

Chair: R. L. Karandikar

15:00 - 15:45
18.4 F. Delbaen, ETH, Zurich, Switzerland
BSDE and risk measures

16:00 - 16:45
18.5 N. Touzi, Ecole Polytechnique, Paris, France
Second order backward SDEs, fully nonlinear PDEs and applications in finance

17:00 - 17:45
18.6 X. Zhou, Oxford University, UK
Mathematicising behavioural finance

Wednesday, August 25, 2010

Chair: F. Delbaen

15:00 - 15:45
18.7 C. Schuette, Frei Universität, Berlin, Germany
On Markov state models for metastable processes

16:00 - 16:45
18.8 Z. Xu, Xi’an Jiaotong University, P. R. of China
Data modelling: visual psychology approach and L1/2 regularization theory
19 Mathematics Education and Popularization of Mathematics

Friday, August 20, 2010

15:00 - 17:00 Panel Discussion
Relation between the discipline and school mathematics
Chair: T. Gowers, University of Cambridge, UK
Speakers: C. Bosch, Instituto Technologico Autonomo de Mexico, Mexico
W. McCallum, University of Arizona, USA
R. Ramanujam, Institute of Mathematical Sciences, Chennai, India
H. Steinbring, University of Duisburg-Essen, Germany
I. Yashchenko, Moscow Centre for Continuous Mathematical Education, Russia

Saturday, August 21, 2010
Chair: S. Shirali

15:00 - 15:45
19.1 J. Adler, University of The Witwatersrand, South Africa, and King’s College, London, UK
Professional knowledge matters in mathematics teaching

Sunday, August 22, 2010

15:00 - 17:00 Panel Discussion
Ethnomathematics, language and socio-cultural issues
Chair: O. Skovsmose, Aalborg University, Denmark
Speakers: M. Salett, Universidade Regional de Blumenau - FURB, Brazil
A. Halai, Aga Khan University, Dar-es-Salam, Tanzania

Wednesday, August 25, 2010

15:00 - 17:00 Panel Discussion
Communicating mathematics to society at large
Chair: G. M. Ziegler, Technische Universit"at, Berlin, Germany
Speakers: M. Freiberger, University of Cambridge, UK
I. Peterson, Mathematical Association of America, USA
R. Ramachandran, ‘The Hindu’, New Delhi, India
C. Rousseau, University of Montreal, Canada
20 History of Mathematics

Thursday, August 26, 2010
Room No. 1.06
Chair: K. Plofker

15:00 - 15:45
20.1 T. H. Kjeldsen, Roskilde University, Denmark
History of convexity and mathematical programming: connections and relationships in two episodes of research in pure and applied mathematics of the 20th Century

16:00 - 16:45
20.2 N. Schappacher, IRMA, France
Rewriting points

17:00 - 17:45
20.3 B. Van Dalen, Ludwig Maximilians University, Germany
Islamic astronomical handbooks and their transmission to India and China