

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

16:00 - 16:45

1.4 M. Ziegler, Technische Universität, Berlin, Germany

to be announced

2 Algebra

Saturday, August 21, 2010

Hall 4

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

Hall 4

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

Hall 4

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

Wednesday, August 25, 2010

Hall 4

Chair: R. Heath-Brown

15:00 - 15:45

3.7 C. B. Khare, University of California, Los Angeles, USA

Serre's modularity conjecture, I

16:00 - 16:45

3.8 J-P. Wintenberger, Université Louis Pasteur, Strasbourg, France

Serre's modularity conjecture, II

Friday, August 27, 2010

Hall 4

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, Steklov Mathematical Institute, 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 de Lyon 1, France

Invariants entiers en géométrie énumérative

Friday, August 27

Chair: S. Ramanan

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 to be 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

18:00 - 18:45

5.8 T. Ilmanen, ETH, Zurich, Switzerland

to be announced

Thursday, August 26, 2010

Room No. 2.03

Chair R. Schoen

15:00 - 15:45

15:00 - 15:45

5.9 X. Ma, Institut de Mathématiques de Jussieu, Paris, France

Geometric quantization on Kähler and symplectic manifolds

16:00 - 16:45

5.10 S. Ivanov, St. Petersburg Department of the Steklov Mathematical Institute, Russia

Volume comparison via boundary distances

17:00 - 17:45

5.11 A. Nabutovsky, University of Toronto, Canada

Morse landscapes of Riemannian functionals and related topics

Friday, August 27, 2010

Room No. 2.03

Chair: S. Ivanov

15:00 - 15:45

5.12 T. Januszkiewicz, Ohio State University, USA

Simplicial nonpositive curvature

16:00 - 16:45

5.13 T. Yamaguchi, University of Tsukuba, Japan

Reconstruction of collapsed manifolds

6 Topology

Saturday, August 21, 2010

Room No. 1.01

Chair: R. Thomas

15:00 - 15:45

6.1 D. Auroux, University of California, Berkeley, USA
Fukaya categories and bordered Heegard-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

Room No. 1.01

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

Room No. 1.01

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

Room No. 1.01

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

Room No. G05

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

Room No. G05

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

Room No. G05

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

to be announced

Wednesday, August 25, 2010

Room No. 1.03

Chair: S. Bagchi

15:00 - 15:45

8.7 P. Koskela, University of Jyväskylä, 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

L_1 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

to be announced

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

Room No. G05

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

11.6

17:00 - 17:45 A. Schnirelman, Concordia University, Canada

to be announced

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

Friday, August 27, 2010

Room No. G03

Chair: M. Vanninathan

15:00 - 15:45

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

Room No. G03

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

Room No. G03

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

Room No. G03

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

ℓ_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

13.8 A. Van der Vaart, Vrije Universiteit, Amsterdam, The Netherlands

Bayesian regularization

(Note: Lecture 13.7 by D. Brydges is **cancelled**)

Thursday, August 26, 2010

Room No. 1.03

Chair: S. N. Evans

15:00 - 15:45

13.9 J. Quastel, University of Toronto, Canada

Weakly asymmetric exclusion and KPZ

16:00 - 16:45

13.10 P. Chaudhuri, Indian Statistical Institute, Kolkata, India

On quantiles in finite and infinite dimensional spaces

17:00 - 17:45

13.11 S. Sheffield, MIT, USA

to be announced

Friday, August 27, 2010

Room No. 1.03

Chair: B. V. Rao

15:00 - 15:45

13.12 S. N. Evans, University of California, Berkeley, USA

Time and chance happeneth to them all: mutation, selection and recombination

16:00 - 16:45

13.13 A. Bose, Indian Statistical Institute, Kolkata, India

Patterned random matrices and the method of moments

14 Combinatorics

Friday, August 20, 2010

Room No. G01

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

Room No. G01

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 Turán type problems

Wednesday, August 25, 2010

Room No. G01

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 CO₂

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

to be announced

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

Room No. 1.01

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

Room No. 1.01

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

Mathematicalising behavioural finance

Wednesday, August 25, 2010

Room No. 1.01

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

17:00 - 17:45

18.9 J. Y. t. Mugisha, Makerere University, Uganda

to be announced

19 Mathematics Education and Popularization of Mathematics

Friday, August 20, 2010

Hall 2

15:00 - 17:00 Panel Discussion

Relation between the discipline and school mathematics

Chair: **T. Gowers**, University of Cambridge, UK

Speakers: **C. Bosch**, Instituto Tecnológico Autónomo de México, México

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

Room No. 1.06

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

Hall 2

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

Hall 2

15:00 - 17:00 Panel Discussion

Communicating mathematics to society at large

Chair: **G. M. Ziegler**, Technische Universität, 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