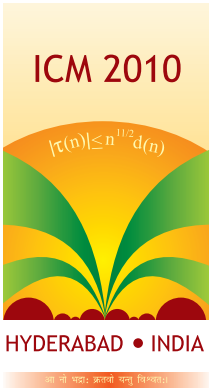
ICM 2010

HYDERABAD • INDIA

International Congress of Mathematicians

19-27 August, 2010, Hyderabad

Conference Program



International Congress of Mathematicians
ICM 2010
Hyderabad, India
August 19-27, 2010

Programme

Preface

On behalf of the Executive Organizing Committee of ICM 2010, I extend a warm welcome to all the participants of the International Congress of Mathematicians, 2010.

This booklet presents a comprehensive list of all the activities of the ICM: lectures, presentations and other (academic and social) activities for each working day of the Congress. Monday, August 23, is a 'free day'. On all days, plenary and other special lectures are held upto 14:45 hours. Parallel sessions (invited sectional lectures, panel discussions, short communications etc.) start at 15:00 hours and go on up to a maximum of 20:00 hours.

The first page of the programme of any particular day lists all the plenary and special lectures of the day and goes on to summarize the parallel sessions. The next page of the daily programme presents, in tabular format, a bird's eye view of all the activities going on in parallel on that day. The following numbering scheme is used: ITm.n refers to the n-th invited lecture in Section m; the symbol SC(m) refers to a session of short communications in section m. Finally, PS refers to a poster session. There are only two such sessions, both on Saturday, August 21. Other symbols are explained as foot notes to this tabular form.

The booklet also contains some useful practical information, which I hope, will help to make your stay comfortable and enjoyable.

For the first time in the history of ICMs, the volumes of the Proceedings of the Congress are being offered to all participants as soft copies recorded on CDs. This is our effort towards the preservation of the environment by using less paper. Similarly, the programme booklet also aims to conserve the use of paper by only providing the daywise programmes for ready reference to the participants in order that they may decide on which activities to attend each day. A sectionwise search is available on the website of the Congress. Printing it out in the programme booklet would just be a duplication of the same information presented differently.

I take this opportunity to thank all my colleagues on the Programme Committee and the Publications Committee, as well as members of their individual teams, for all the assistance rendered to me in the preparation of the ICM schedule. I also thank all those who readily accepted to chair the various sessions.

The organizers wish you a very fruitful and pleasant stay at Hyderabad and a very successful conference.

With warm regards,

Hyderabad,
August,

S. Kesavan
2010 Chair,
Programme Committee

Contents

Thursday, August 19, 2010

09:30-12:30 **Opening Ceremony** **Halls 3 & 4**
Award of Fields Medals and the Nevanlinna, Gauss and Chern Prizes

12:30-14:00 **Lunch**

14:00-16:30 **Laudations** **Halls 3 & 4**
Chair: **J. Palis Junior**

14:00-14:25 Work of Fields Medallist 1
14:30-14:55 Work of Fields Medallist 2
15:00-15:25 Work of Fields Medallist 3
15:30-15-55 Work of Fields Medallist 4
16:00-16:25 Work of Nevanlinna Prize Winner

16:45-17:45 **Abel Lecture** **Halls 3 & 4**
S. R. S. Varadhan, Courant Institute of Mathematical Sciences, New York University, USA
Large deviations
Chair: **K. R. Parthasarathy**

Friday, August 20, 2010

09:30-12:30	Event connected to the Gauss and Chern Prizes *Chair*: **L. Lovasz**, President, IMU	**Hall 4**
09:30-09:35	Welcome by President, IMU	
09:35-09:45	Greetings from **J. Simons** (on video)	
09:45-10:05	**Ms. May Chu** *Prof. Chern-Reminiscences*	
10:05-10:35	**R. Bryant** *S. S. Chern-His mathematics*	
10:35-11:20	Lecture on the work of the Chern Prize winner	
11:20-11:45	**Coffee Break**	
11:45-12:30	Lecture on the work of the Gauss Prize winner	
12:30-13:45	**Lunch**	
13:45-14:45	Special Lecture by a Fields Medallist (1)	**Hall 4**
15:00-18:00	Invited Lectures, Panel Discussion and Short Communications in Parallel Sessions	
18:00-19:30	**Dance Performance**	**Hall 4**
20:00	**Conference Dinner**	

Friday, August 20, 2010

Hall	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00
H2	PD+	PD+	*****	*****	*****
H3	*****	*****	*****	*****	*****
H4	*****	*****	*****	Dance	Performance
G.01	IT14.1	IT14.2	IT14.3	*****	*****
G.02	*****	*****	*****	*****	*****
G.03	IT11.1	IT11.2	IT11.3	*****	*****
G.04	*****	*****	*****	*****	*****
G.05	IT10.1	IT10.2	IT10.3	*****	*****
G.06	*****	*****	*****	*****	*****
1.01	IT18.1	IT18.2	IT18.3	*****	*****
1.02	IT3.1	IT3.2	IT3.3	*****	*****
1.03	IT13.1	IT13.2	IT13.3	*****	*****
1.04	SC(16)	SC(16)	SC(16)	*****	*****
1.05	IT9.1	IT9.2	IT9.3	*****	*****
1.06	IT17.1	IT17.2	IT17.3	*****	*****
2.03	IT4.1	IT4.2	IT4.3	*****	*****
2.04	*****	*****	*****	*****	*****
T1	SC(2)	SC(2)	SC(2)	*****	*****
T2	SC(5)	SC(5)	SC(5)	*****	*****
T3	SC(6)	SC(6)	SC(6)	*****	*****
T4	SC(8)	SC(8)	SC(8)	*****	*****
T5	SC(12)	SC(12)	SC(12)	*****	*****
T6	SC(15)	SC(15)	SC(15)	*****	*****

PD+ - Panel Discussion, Section 19: Relation between the discipline and school mathematics

Friday, August 20, 2010

Invited Lectures

Section 3: **Number Theory** **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

Section 4: **Algebraic and Complex Geometry** **Room No. 2.03**
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

Section 9: **Functional Analysis and Applications** **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

Section 10: **Dynamical Systems and Ordinary Differential Equations** **Room No. G.05**
Chair: **M. Viana**

15:00-15:45 **10.1 M-C. Arnaud**, Universite d' Avignon et des Pays de Vaucluse, France
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

Friday, August 20, 2010

Section 11: **Partial Differential Equations** **Room No. G.03**
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

Section 13: **Probability and Statistics** **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

Section 14: **Combinatorics** **Room No. G.01**
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. Nesetril**, Charles University, Czech Republic
Sparse combinatorial structures: classification and applications

Section 17: **Control Theory and Optimization** **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

Friday, August 20, 2010

Section 18: **Mathematics in Science and Technology** **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

Section 19: **Mathematics Education and Popularization of Mathematics** **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 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

Short Communications

Section 2: **Algebra**
Chair: **R. C. Cowsik**

15:00-16:00 **Room No. T1**

15:00-15:15 **L. Van Wyk**, Stellenbosch University
Invertibility and Dedekind finiteness in structural matrix rings

15:20-15:35 **S. D. Kumar**, Motilal Nehru National Institute of Technology
Analogue of Eakin Sathaye theorem over Rees Algebra

15:40-15:55 **I. B. S. Passi**, Panjab University
Symmetric ideals in group rings and simplicial homotopy

16:00-17:00 **Room No. T1**

16:00-16:15 **M. Pacini**, Universidade Federal Fluminense
On Abel maps for singular curves

16:20-16:35 **V. K. Bhat**, SMVD University
Associated prime ideals of weak σ-rigid rings and their extensions

16:40-16:55 **S. Ali**, Aligarh Muslim University
*On Jordan *- derivations in rings with involution*

17:00-18:00 **Room No. T1**

17:00-17:15 **H. V. Ha**, Institute of Mathematics
Lojasiewicz inequality at infinity for polynomials in two real variables

17:20-17:35 **C. T. Le**, Quy Nhon University
On equinormalizable deformations of isolated singularities

17:40-17:55 **T. G. Jaiyeola**, Obafemi Awolowo University
New identities in universal Osborn loops

Section 5: **Geometry**
Chair: **N. S. Narasimha Sastry**

15:00-16:00 **Room No. T2**

15:00-15:15 **G. P. F. Bessa**, Universidade Federal do Ceara
The spectrum of the Martin-Morales-Nadirashvili minimal surfaces is discrete

15:20-15:35 **P. Piccione**, Universidade de Sao Paulo
On the semi-Riemannian bumpy metric theorem

15:40-15:55 **Z. Rakic**, University of Belgrade
On duality principle and Osserman condition for algebraic curvature tensors

16:00-17:00 **Room No. T2**

16:00-16:15 **C. Gorodski**, Universidade de Sao Paulo
Isoparametric submanifolds in Hilbert space

16:20-16:35 **J. P. Jaiswal**, Banaras Hindu University
Ricci semi-symmetric and Ricci pseudo-symmetric mixed super quasi-Einstein manifolds

16:40-16:55 **A. Iqbal**, Aligarh Muslim University
On geodesic E-convex sets, geodesic E-convex functions and E-epigraphs

17:00-18:00 **Room No. T2**

17:00-17:15 **M. Wasadikar**, Dr. Babasahib Ambedkar Marathwada University
On graphs derived from posets

17:20-17:35 **S. Nimbhorkar**, Dr. Babasahib Ambedkar Marathwada University
M-modular pairs in multiplicative lattices

17:40-17:55 **A. Tetenov**, Gorno-Altaisk University
Structure and rigidity of self-similar Jordan arcs in Rn

Section 6: **Topology**
Chair: **Parameswaran Sankaran**

15:00-16:00 **Room No. T3**

15:00-15:15 **H. Rodriguez Ordóñez**, Universidad Autonoma de Aguascalientes
A counterexample to Ganea's conjecture with the minimum known dimension

15:20-15:35 **J. Ali**, IIT Kanpur
Common fixed points of nonself mappings in convex metric spaces

15:40-15:55 **R. N. Araújo Dos Santos**, USP/ICMC
Equivalence of real Milnor fibration for quasi-homogeneous singularities

Friday, August 20, 2010

16:00-17:00 **Room No. T3**

16:00-16:15 **D. B. Tejada Jimenez**, Universidad Nacional de Colombia
Butterflies: a new representation of links

16:20-16:35 **A. Pedroza**, Universidad de Colima
On the bounded isometry conjecture

16:40-16:55 **M. Prabhakar**, IIT Ropar
On unknotting numbers

17:00-18:00 **Room No. T3**

17:00-17:15 **M. Gangopadhay**, Calcutta Girls' B. T. College
Separation axioms in a bi-topological space and their consequences

17:20-17:35 **S. K. Singh**, Banaras Hindu University
On two topologies associated with a topology

17:40-17:55 **J. Kim**, Konkuk University
A note on the nearly additivity of knot width

Section 8: **Analysis**
Chair: **K. Parthasarathy**

15:00-16:00 **Room No. T4**

15:00-15:15 **M. Assal**, Faculty of Sciences of Bizerte
Convolution equation on certain hypergroups

15:20-15:35 **A. Pedgaonkar**, Institute of Science
Henstock integral, an abstract approach

15:40-15:55 **J. A. Oguntuase**, University of Agriculture
Hardy type inequalities via superquadratic and subquadratic functions

16:00-17:00 **Room No. T4**

16:00-16:15 **A. E. Gatto**, DePaul University
On singular integrals defined on nondoubling measure metric spaces and Krein's theorem

16:20-16:35 **Y. Rappoport**, Russian Academy of Sciences
Analysis and applications of some modified Bessel functions

16:40-16:55 **D. Kumar**, Centre for Mathematical Sciences
Some connections among generalized hypergeometric functions, q-hypergeometric functions and pathway model and their applications

17:00-18:00 **Room No. T4**

17:00-17:15 **A. P. Singh**, University of Jammu
On escaping sets of entire functions

17:20-17:35 **Y. M. Singh**, Manipur Institute of Technology
Fixed points of φ-weak contractions

17:40-17:55 **L. S. Singh**, D. M. College of Teacher Education
Fixed point theorems under a generalized contractive condition

Section 12: **Mathematical Physics**
Chair: **Krishna Maddaly**

15:00-16:00 **Room No. T5**

15:00-15:15 **P. Braz E Silva**, Universidade Federal de Pernambuco
Eigenvalue bounds for micropolar shear flows

15:20-15:35 **M. L. Smaranda**, University of Pitesti
Optimal bounds on dispersion coefficient in periodic media

15:40-15:55 **Y. D. Sobral**, Universidade de Brasilia
Two dimensional instabilities in fluidised beds

16:00-17:00 **Room No. T5**

16:00-16:15 **A. Khan**, Jai Narain Vyas University
Kelvin-Helmholtz instability of two superposed Oldroydian viscoelastic fluid layers in a horizontal magnetic field

16:20-16:35 **P. K. Sahoo**, BITS-Pilani
Plane symmetric cosmic strings coupled with Maxwell fields in bimetric theory

16:40-16:55 **S. S. Tak**, Jai Narain Vyas University
Thermal radiation with Soret and Dufour effects on MHD mixed convection from a vertical surface in Darcian porous media

17:00-18:00 **Room No. T5**

17:00-17:15 **K. Adhav**, Sant Gadge Baba Amravati University
N-dimensional Bianchi type V universe in creation field cosmology

17:20-17:35 **S. C. Martha**, IIT
Linear flow in three layers of fluid over an arbitrary topography

17:40-17:55 **M. Z. Afsar**, NASA Glenn Research Center
A complete theoretical foundation for the 'two-source' structure of jet noise

Section 15: **Mathematical Aspects of Computer Science**
Chair: **C. R. Subramanian**

15:00-16:00 **Room No. T6**

15:00-15:15 **V. Kasyanov**, Institute of Informatics Systems
Tools for supporting graphs in computer science

15:20-15:35 **M. Yunusi**, Tajik National University
Model of numbers tree and its application

15:40-15:55 **A. Agarwal**, Snolr Labs and Carnegie-Mellon University
A logic game for classification of regular languages

16:00-17:00 **Room No. T6**

16:00-16:15 **K. V. Babitha**, NIT Calicut
On soft set relations

16:20-16:35 **T. K. Shinoj**, NIT Calicut
Intuitionistic fuzzy multisets

16:40-16:55 **S-E. Han**, Chonbuk National University
Digital covering theory and its applications

17:00-18:00 **Room No. T6**

17:00-17:15 **A. Tkacenko**, State University
The generalized transportation model of 'bottleneck' type

17:20-17:35 **M. J. Vielhaber**, HS Bremerhaven/Universidad Austral de Chile Valdivia
The algebraic IV differential attack AIDA: a cryptanalytic tool

17:40-17:55 **P. Girish**, NIT Calicut
Rough multiset and its properties

Section 16: **Numerical Analysis and Scientific Computing**
Chair: **B. V. Ratish Kumar**

15:00-16:00 **Room No. 1.04**

15:00-15:15 **V. Thynesh**, Bharathidasan University College
Parameter-uniform numerical method for singularly perturbed differential equations with discontinuous data

15:20-15:35 **H. Ponnamma Rani**, NIT Warangal
Hydrodynamic stability of free convection from an inclined elliptic cylinder in couple stress fluid

15:40-15:55 **P. Manchanda**, Guru Nanak Dev University
Vector-valued wave packets

16:00-17:00 **Room No. 1.04**

16:00-16:15 **A. B. Bagayogo**, CUSB and INS
Discrete element method for granular flow and cracks propagation

16:20-16:35 **Arshad Khan**, Jamia Millia Islamia
Paramentric septic splines approach to the solution of sixth order two-point boundary value problems

16:40-16:55 **S. M. Quraishi**, Institute of Technology
A second generation wavelet based approach for multiscale solution of biharmonic plate equation

17:00-18:00 **Room No. 1.04**

17:00-17:15 **R. Narasimhan**, Bharathidasan University
Uniformly convergent numerical method for singularly perturbed second order ordinary delay differential equations of convection-diffusion type

17:20-17:35 **V. Bokil**, Oregon State University
Maxwell's equations in dispersive media

17:40-17:55 **N. L. Gibson**, Oregon State University
Polynomial chaos approach for approximating Cole-Cole dispersive media

Other Activities

18:00-19:30 **Dance Performance**
Classical Indian Dances by the troupe of Prof. C. V. Chandrasekhar
Venue: **Hall 4**

20:00 **Conference Dinner**
Venue: Sampradaya Vedika in Shilparamam (This is close to HICC, the Congress Venue. Transport to this venue from HICC will be organized.)

Saturday, August 21, 2010

09:00-10:00	**Artur Avila**, IMPA, Rio de Janeiro, Brazil *Dynamics of renormalization operators* *Chair*: **E. Ghys**	**Hall 4**
10:15-11:15	**Irit Dinur**, Weizmann Institute of Science, Israel *Probabilistically checkable proofs and codes* *Chair*: **H. W. Lenstra**	**Hall 4**
11:30-12:30	**Carlos Kenig**, University of Chicago, USA *The global behaviour of solutions to critical nonlinear dispersive equations* *Chair*: **J. Ball**	**Hall 4**
12:30-13:45	**Lunch**	
13:45-14:45	Special Lecture by the Nenvanlinna Prize Winner	**Hall 4**
15:00-18:00	Invited Lectures, Poster Sessions and Short Communications in Parallel Sessions	
18:00-20:00	*Panel Discussion*: **Pipeline Report**	**Hall 4**

Saturday, August 21, 2010

Hall	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00
H2	PS	PS	*****	PS	PS
H4	IT2.1	IT2.2	*****	PD++	PD++
G.01	IT15.1	IT15.2	IT15.3	*****	*****
G.02	*****	*****	*****	*****	*****
G.03	IT12.1	IT12.2	IT12.3	SC(12)	*****
G.04	*****	*****	*****	*****	*****
G.05	IT7.1	IT7.2	IT7.3	IT7.4	*****
G.06	*****	*****	*****	*****	*****
1.01	IT6.1	IT6.2	IT6.3	*****	*****
1.02	*****	*****	*****	*****	*****
1.03	IT8.1	IT8.2	IT8.3	SC(8)	*****
1.04	*****	SC(18)	SC(18)	SC(18)	*****
1.05	IT16.1	IT16.2	IT16.3	SC(16)	*****
1.06	IT19.1	IT19.2	*****	IMSI*	IMSI*
2.03	IT5.1	IT5.2	IT5.3	*****	*****
2.04	*****	*****	*****	*****	*****
T1	SC(3)	SC(3)	SC(3)	SC(3)	*****
T2	SC(4)	SC(4)	SC(4)	SC(4)	*****
T3	SC(9)	SC(9)	SC(9)	SC(9)	*****
T4	SC(14)	SC(10)	SC(10)	SC(10)	*****
T5	*****	SC(11)	SC(11)	*****	*****
T6	*****	SC(13)	SC(13)	*****	*****

PD++ - Panel Discussion: Pipeline Report
IMSI* - Meeting of the IMSI Institutes

Saturday, August 21, 2010

Invited Lectures

Section 2: **Algebra** **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

Section 5: **Geometry** **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

Section 6: **Topology** **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

Section 7: **Lie Theory and Generalizations** **Room No. G.05**
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

Saturday, August 21, 2010

Section 8: **Analysis** **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, Belgium
Multiple orthogonal polynomials in random matrix theory
17:00-17:45 **8.3 A. R. Its**, IUPUI, USA
Asymptotic analysis of the Toeplitz and Hankel determinants via the Riemann-Hilbert method

Section 12: **Mathematical Physics** **Room No. G.03**
Chair: **D. Brydges**

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

Section 15: **Mathematical Aspects of Computer Science** **Room No. G.01**
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

Section 16: **Numerical Analysis and Scientific Computing** **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

Section 19: **Mathematics Education and Popularization of Mathematics** **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

Short Communications

Section 3: **Number Theory**
Chair: **M. Manickam**

15:00-16:00 **Room No. T1**

15:00-15:15 **J. Singh**, Guru Nanak Dev University
Defining power sums of n and '(n) integers

15:20-15:35 **A. Redondo Buitrago**, I. E. S. Bachiller Sabuco
On continued fraction expansions of the n-th roots of the solutions of certain quadratic equations

15:40-15:55 **D. Shah**, Sir P. T. Sarvajanik College of Science
Interesting properties related with the Tribonacci sequence

16:00-17:00 **Room No. T1**

16:00-16:15 **V. M. Spinadel**, University of Buones Aires
Excess continued fraction expansions

16:20-16:35 **V. K. Gurtu**, Nagpur University
Newer facet of prime number theory

16:40-16:55 **S. K. Jena**, KIIT University
A conjecture on integer powers

Chair: **C. S. Dalawat**

17:00-18:00 **Room No. T1**

17:00-17:15 **K. A. Broughan**, University of Waikato
Shifted primes and semismooth numbers

17:20-17:35 **A. U. O. Kisisel**, Middle East Technical University
On certain products which are never squares

17:40-17:55 **R. Khassa**, Panjab University
Some irreducibility results for truncated binomial expansions

18:00-19:00 **Room No. T1**

18:00-18:15 **N. Manickam**, Depauw University
A dual to Erdös-Ko-Rado theorem (?)

18:20-18:35 **A. A. Glibichuk**, Universidad Nacional Autonoma de Mexico, Campus Morelia
Multilinear exponential sums in an arbitrary finite field under optimal entropy condition on the sources

18:40-18:55 **A. Ubis**, Universidad Autonoma de Madrid
The number of sumsets in a finite field

Saturday, August 21, 2010

Section 4: **Algebraic and Complex Geometry**
Chair: **A. J. Parameswaran**

15:00-16:00 **Room No. T2**

15:00-15:15 **M. Mase**, Tokyo Metropolitan University
Isomorphism among the families of weighted K3 hypersurfaces

15:20-15:35 **M. L. Logares Jimenez**, CSIC
Moduli of parabolic Higgs bundles and Atiyah algebroids

15:40-15:55 **R. Rubio Nuñez**, ICMAT CSIC
Higgs bundles and generalized Cayley correspondence

16:00-17:00 **Room No. T2**

16:00-16:15 **D. C. McFeron**, Ramapo College of NJ
Remarks on some non-linear heat flows in Kähler geometry

16:20-16:35 **E. D. Kozlowska-Walania**, University of Gdansk
On the real nerve of the moduli space of complex algebraic curves

16:40-16:55 **S. D. Lawton**, University of Texas-Pan American
Topology and singularity of free group character varieties

Chair: **Ravi Rao**

17:00-18:00 **Room No. T2**

17:00-17:15 **M. Watari**, Tsuyama National College of Technology
Hilbert schemes of r-points for irreducible plane curve singularities

17:20-17:35 **M. L. Bhupal**, Middle East Technical University
Weighted homogeneous singularities and rational homology disk smoothings

17:40-17:55 **R. M. Garimella**, IIIT Hyderabad
Stochastic chains: matrix power series equations: algebraic geometry: quantity theory

18:00-19:00 **Room No. T2**

18:00-18:15 **D.M. Maingi**, University of Nairobi
On the minimal number of generators of an ideal of general points in a projective space P4

18:20-18:35 **T. Kergilova**, Gorno-Altaisk State University
A characterization of Möbius transformations by use of fixed cross ratios

Section 8: **Analysis**
Chair: **Ratikanta Panda**

18:00-19:00 **Room No. 1.03**

18:00-18:15 **S. Pulickakunnel**, Allahabad Agricultural Institute
Fixed point theorems for various classes of 1-set contraction mappings

18:20-18:35 **M. D. de la Iglesia**, Courant Institute of Mathematical Sciences
Differential properties of orthogonal matrix polynomials

18:40-18:55 **V. V. H. Gollakota**, S. I. W. S. College
The proof of Koebe's general uniformisation theorem for planar Riemann surfaces and its application

Section 9: **Functional Analysis and Applications**
Chair: **Srinivasan Raman**

15:00-16:00 **Room No. T3**

15:00-15:15 **U. C. Gairola**, H. N. B. Garhwal University
Recent development in metric fixed point theory and its applications

15:20-15:35 **T. S. S. R. K. Rao**, Indian Statistical Institute
Banach-Stone theorems for spaces of vector valued functions

15:40-15:55 **B. V. Rajarama Bhat**, Indian Statistical Institute
Inclusion systems and amalgamated products of product systems

16:00-17:00 **Room No. T3**

16:00-16:15 **P. Bandyopadhyay**, Indian Statistical Institute
Ball remotality in Banach spaces

16:20-16:35 **M. M. Madiman**, Yale University
Reverse Brunn-Minkowski and reverse entropy power inequalities for convex measures

16:40-16:55 **V. Manuylov**, Moscow State University
One more pathology of C¤-algebraic tensor products

Chair: **Subhash Bhatt**

17:00-18:00 **Room No. T3**

17:00-17:15 **Y. Rohen Singh**, D. M. College of Science
Related fixed point theorems for two set valued mappings on two uniform spaces

17:20-17:35 **M. Tanveer**, Jawaharlal Nehru University
Some common fixed point theorems of integral type in Menger PM spaces

17:40-17:55 **T. G. Honary**, Tarbiat Moallem University
Automatic continuity of n-homomorphisms between Frechet algebras and topological algebras

18:00-19:00 **Room No. T3**

18:00-18:15 **Z. Wu**, Fangda Group Co., Ltd.
Discrete algebraic equations and discrete operator equations

18:20-18:35 **M. D. Ilyas**, Gaya College
Some classes of operators related to p-hypernormal operator

18:40-18:55 **B. S. Thakur**, IIT Bombay and UM-DAE CBS
Iterative method for finite family of hemicontractive mappings

Section 10: **Dynamical Systems and Ordinary Differential Equations**
Chair: **Tarun Das**

16:00-17:00 **Room No. T4**

16:00-16:15 **P. K. Gupta**, Banaras Hindu University
Approximate analytical solution of fractional Lotka-Volterra equations

16:20-16:35 **T. Nayak**, N. I. T. Rourkela
Omitted values and dynamics of meromorphic functions

16:40-16:55 **R. Jain**, Solapur University
On an abstract nonlinear functional integro-differential equation with nonlocal condition

17:00-18:00 **Room No. T4**

17:00-17:15 **B. S. Desale**, North Maharashtra University
Singular solution of reduced ODEs of rotating stratified Boussinesq equations

17:20-17:35 **E. Perez-Chavela**, Universidad Autonoma Metroploitana-Itzapalapa
The N-body problem in spaces of negative curvature

17:40-17:55 **K. D. Kucche**, Shivaji University
Global existence for Volterra-Fredhölm functional integro-differential equations

18:00-19:00 **Room No. T4**

18:00-18:15 **M. Kisaka**, Kyoto University
Some topological properties of Julia components of transcendental entire functions

18:20-18:35 **V. Gaiko**, National Academy of Sciences of Belarus
Limit cycle problems

18:40-18:55 **L. Xu**, Northwest A & F University
The existence of super-eight solution for the 4-body problem: a golden-sectionassisted proof

Section 11: **Partial Differential Equations**
Chair: **Mythily Ramaswamy**

16:00-17:00 **Room No. T5**

16:00-16:15 **J-P. Gossez**, Université Libre de Bruxelles
Principal eigenvalues for some non-selfadjoint elliptic problems and applications

16:20-16:35 **J. A. Arango Cabarcas**, Universidad del Valle
Critical points of solutions to elliptic problems in planar domains

16:40-16:55 **U. V. Lê**, University of Oulu
On solutions of a semi-linear wave equation with space-time dependent coefficients and a memory boundary-like antiperiodic condition

17:00-18:00 **Room No. T5**

17:00-17:15 **B. Y. Alvarez Samaniego**, Escuela Superior Politécnica del Litoral
Some mathematical results for the Fowler equation

17:20-17:35 **C. M. Khalique**, North-West University
Exact solutions of Zakharov-Kuznetsov equation with power law nonlinearity in (1+3) dimensions

17:40-17:55 **C. P. P. Arceo**, University of the Philippines
The comparison principle in generalizing the solvability of a nonlinear parabolic equation

Section 12: **Mathematical Physics**
Chair: **A. Hasmani**

18:00-19:00 **Room No. G.03**

18:00-18:15 **A. Paul/R. Deka**, Gauhati University
Unsteady convectively driven flow past an infinite vertical cylinder in presence of chemical reaction

18:20-18:35 **K. P. Singh/K. M. Singh**, Ideal Girls' College
String cosmological universes with the bulk viscosity in relativistic cosmology

18:40-18:55 **V. Semenov**, Kuzbass Regional Institute of Education Employment
The 3d Navier-Stokes equations: necessary and sufficient conditions for global solutions

Section 13: **Probability and Statistics**
Chair: **Abhay Bhatt**

16:00-17:00 **Room No. T6**

16:00-16:15 **D. Lesmono**, Parahyangan Catholic University
Mathematical modelling for LQ45 index

16:20-16:35 **S. Simic**, Mathematical Institute
Improvements of some moments inequalities

16:40-16:55 **S. Ravi**, University of Mysore
On entropy convergence of normalized partial maxima of iid random variables

17:00-18:00 **Room No. T6**

17:00-17:15 **V. S. G. Sagi**, Hindu College
On construction of new circular models

17:20-17:35 **F. Merchant**, Tolani Foundation Gandhidham Polytechnic
Statistically, failure of inferential statistics at critical point of time

17:40-17:55 **H. Fernando**, Purdue University North Central
Saddlepoint based inferences for nonlinear regression models

Section 14: **Combinatorics**
Chair: **H. N. Ramaswamy**

15:00-16:00 **Room No. T4**

15:00-15:15 **M. Bousquet-Mélou et al**, University of Antananarivo
Polynomial classes of permutations avoiding exactly two patterns

15:20-15:35 **Vasudeva**, NIT Surathkal
Mod difference digraphs

15:40-15:55 **S. Bagchi**, NIT Durgapur
Square 2-designs on a new family of binary codes

Section 16: **Numerical Analysis and Scientific Computing**
Chair: **N. L. Gibson**

18:00-19:00 **Room No. 1.05**

18:00-18:15 **S. Dey**, ICFAI University
Newtons forward difference interpolation formula-extended

18:20-18:35 **B. Panigrahi**, IIT Kharagpur
Richardson extrapolation of discrete projection method for eigenvalue problem of a two-dimensional compact integral operator

18:40-18:55 **Shuvam Sen**, Tezpur University
Biharmonic computation of the flow past an impulsively started circular cylinder

Section 18: **Mathematics in Science and Technology**
Chair: **J. J. H. Miller**

16:00-17:00 **Room No. 1.04**

16:00-16:15 **R. K. Bhattacharya**, Calcutta University
On wave propagation in a random conducting magneto-generalized thermo-viscoelastic medium

16:20-16:35 **T. Bhusal**, IIT Kanpur
Steven H. Strogatz and problem in nonlinear dynamics

16:40-16:55 **R. J. Sanchez Garcia**, Heinrich Heine Universität
Structure in spectral characteristics in network redundancy

17:00-18:00 **Room No. 1.04**

17:00-17:15 **U. Gupta**, Panjab University
Effect of Hall currents and permeability on double diffusive convection of compressible Rivlin-Eriksen fluid in rotation

17:20-17:35 **P. Andharia**, Bhavnagar University
Effect of longitudinal roughness on magnetic fluid based squeeze film between truncated conical plates

17:40-17:55 **S. S. Sanasam**, Pachhunga University College
Love wave at a layer medium bounded by irregular boundary surfaces

18:00-19:00 **Room No. 1.04**

18:00-18:15 **S. Cuadrado**, Univesridad Autonoma de Barcelona
On a cylin structures cell population model

18:20-18:35 **S. Varadaraj**
Derivation and geometric proofs of corollaries of the developable surface equations and industrial applications

18:40-18:55 **S. Hazra**, TU-Darmstädt
PDE constrained optimization in application

Poster Sessions

Poster Session 1

15:00-17:00 **Hall 2**

Section 1: Logic and Foundations

A. Sukhotin, Tomsk Polytechnic University
Axiom of choice and Euclid axiom 8

Section 10: Dynamical Systems and Ordinary Differential Equations

M. A. D. A. Haggag, Alexandria University at Damanhour
On a perturbed quadratic fractional integral equation of Abel type
C. A. Maquera Apaza, Universidad De Sao Paulo
On integrable codimension-one Anosov actions of R^k
F. M. F. Elsabaa, Faculty of Education
A numerical analysis of chaos in the double pendulum by using the multiple scales method
A. Madzvamuse, University of Sussex
Stability analysis of non-autonomous reaction-diffusion systems: the effect of growing domains
R. Celeste, University of the Philippines
Digraphs of unimodal cycles
S. Kryzhevich, St. Petersburg State University
Chaos near non-hyperbolic equilibria or non-traversal homoclinic points
S. N. Pandey, Motilal Nehru National Institute of Technology
Symmetry and integrability aspects of a generalised damped nonlinear oscillators and systems

Section 11: Partial Differential Equations

J. Hyosuk, Chonnam National University
Some results on the global existence to the Navier-Stokes equations
N. Karjanto, University of Nottingham, Malaysia Campus
Numerical simulation of surface wave group propagation over slowly varying bottom
M. Del Mar Gonzalez, Universidad Politecnica De Catalunya
Global existence and uniqueness of solutions to a model of price formation
M. Molati, National University of Lesotho
Invariant solutions of the mixed Korteweg de Vries equation arising in stratified fluids

Section 13: Probability and Statistics

F. G. Maria De Las Mercedes, UCLM
An application of the response surface methodology (RSM) to the production of pectynolitic enzymes
X. Bardina, Universidad Autònoma De Barcelona
Weak convergence for the stochastic heat equation driven by Gaussian white noise

M. Kaur, Thapar University
Reliability analysis of preventively maintained system using finite element method

Section 14: Combinatorics

K. Dalvi, College of Engineering, Pune
Forbidden-minor characterization for the class of graphic element splitting matroids
V. V. P. R. V. B. Suresh Dara, C. R. Rao AIMSCS, Hyderabad
Dynamics of spanning tree graph operator
S. A. R. Ashrafi Ghomroodi, University of Kashan
The graph equation Sz(G) = W(G) + k and an application in nanoscience
Y. M. Borse, University of Pune
On connected splitting matroid
Nurdin, Hasanuddin University
The total vertex irregularity strength of an amalgamation of stars
G. Seitz, Vienna University of Technology
On the number of inversions in simply generated trees
G. Jacob Victor, JNTU, Hyderabad
An explicit acyclic edge colouring algorithm for a class of complete graphs using near-one factors
P. Csikvari, Eotvos Lorand University
Integral trees of arbitrarily large diameter
F. Shaveisi, K. N. Toosi University of Technology
Minimal prime ideals and cycles in annihilating-ideal graphs
R. Nikandish, K.N. Toosi University of Technology
On the clique and chromatic number of the annihilating-ideal graph
M. Ghanbari, K. N. Toosi University of Technology
On the colouring of the Steiner triple system
S. Zare, Amirkabir University of Technology
Zero-sum flows in graphs
Z. Rezaii, Islamic Azad University, Ardabil Branch
Recursion neural networks for processing directed graphs

Section 17: Control Theory and Optimization

T. Xuan Duc Ha, Hanoi Institute of Mathematics
The Ekeland variational principle for set-valued maps involving coderivatives
H. Dem, Banasthali University
Optimal economic production quantity policy for an imperfect production system of ameliorating items
Z. A. Stempien, Technical University of Lodz
On the optimal control problem and Galerkin approximation for an extensible beam equation
A. M. Debinska-Nagorska, Technical University of Lodz
Comparison of two hemivariational control problems and convergence of their Galerkin approximation
F. J. Aragon Artacho, University of Alicnte
Proximal point method under metric regularity
A. Just, Technical University of Lodz
Optimal control problem of some hemivariational inclusions-Galerkin approximation
I. C. Da Silva Duarte, University of Minho
Optimal life insurance, consumption and investment

B. S. Lee, Konkuk University
Optimal control applied to the Ecstasy model with peer pressure
M. H. Farahi, Ferdowsi University of Mashhad
Measure theory approach in sliding mode control for nonlinear systems with disturbances
Mohit Singh, Meerut Institute of Technology
An inventory model for fair services of internet traffic

Section 18: Mathematics in Science and Technology

A. K. Singh, Indian School of Mines
Shear wave propagation in a heterogeneous irregular monoclinic medium
K. Rubtsov, Belgorod Shukhov State Technological University
Applications of a number notation hyperformat for sicence and engineering
R. Kakarala, Nanyang Technologcal University
Triple correlation on groups
B. Gyöngyi, Kaposvar University
About the method of component-based object comparison for objectivity
I. Gabor, Eotvos Lorand University
Revealing the density-based clustering structure of the Swiss-prot database

Section 19: Mathematics Education and Popularization of Mathematics

M. Del Pilar Canales Chacón, Universidad Austral de Chile
Mathematics by and for the 21st century: goals and strategies
M. P. U. Roczen, Humboldt-Universität zu Berlin
Online presentation of linear algebra

Poster Session 2

Saturday, August 21, 2010

18:00-20:00 **Hall 2**
Section 2: Algebra

H. Lee, Chonnam National University
Minimum rank of line graphs of some graphs
M. T. Sotiropoulos, University School for Pedagogical and Technological Education (ASPETE)
Mathematical theory of concepts: lattices of (sub)classes, distance
A. Asma, Aligarh Muslim University
Derivations on prime near ring
A. Ahanjideh, University of Shahrekord
A characterization of Cn(q) by the set of orders of maximal abelian subgroups
P. Das, Gauhati University
Wreath sum of near rings revisited
K. S. Zeenath/M. George, Mar Ivanios College
Application of finite field in coding theory
Y. Satyendra Singh, Jamia Millia Islamia
Some characterization of regular groupoid lattices

A. Guterman, Moscow State University-M. V. Lomonosov
Frobenius endomorphisms of matrix spaces
A. Tonks, London Metropolitan University
Homotopy Batalin-Vilkovisky algebras
V. Joshi, Pune University
On prime ideal principle in lattices
A. Muthkur, Periyar University
An elementary solution to classical problems in number theory and algebra
S. Tikhonov, National Academy of Sciences of Belarus
Central simple algebras after a scalar extension
M. Vukovic, University of Sarajevo
About Krasner's and Vukovic's paragraduations
R. K. Mishra, Motilal Nehru National Institute of Technology
Lifting of generators of an ideal over Laurent polynomial ring
O. A. S. Karamzadeh, Chamran University
On Artinian modules over Duo rings
B. H. Im, Chonnam National University
Approximate symmetry in certain quasigroups derived from the dihedral group
B. Moslemi, Petroleum University of Technology
On G-domains
S. Kaptanoglu, Middle East Technical University
p-Power points and modules of constant p-power Jordan type
P. P. Pach, ELTE
On the distance of a polynomial near-ring code
G. Pluhár, ELTE
Combinatorics of words over semigroups
N. Zamani, University of Mohaghegh Ardabili
Some characterization results in multiplication modules
A. Madanshekaf, Semnan University
First order infinitesimals in the category of smooth functors

Section 3: Number Theory

V. Chandrasekhar, Sacred Heart College, Tirupattur
Generalized difference operator of the n-th kind and its applications in number theory (Part 1)
S. Stamatopoulos, Pedagogikal Institute
Proof of Fermat's Last Theorem
M. Agarwal, University of Michigan-Dearborn
Bloch-Kato conjecture for convolution L-functions

Section 4: Algebraic and Complex Geometry

A. G. Aleksandrov, Russian Academy of Sciences
Residues of logarithmic differential forms

Section 5: Geometry

R. Villacampa Gutierrez, University of Zaragoza
Balanced metrics by means of evolution equations
J. A. Aledo, University of Castilla-La Mancha
On the existence of affine maximal maps
E. Pak, Kyungpook National University
Existence of proper contact CR-product and mixed foliate contact CR submanifolds

M. Matveev, Moscow Institute of Physics and Technology
A theory of face polytopes
V. Rovenski, University of Haifa
Extrinsic geometric flows on foliated manifolds

Section 6: Topology

S. Maloni, University of Warwick
Top terms of polynomial traces in Kra's plumbing construction
Y. Zelenyuk, University of The Witwatersrand
Ideals in Stone-Cech compactifications
L. Armas Sanabria, Universidad Autonoma Metropolitana
Artin presentations and fundamental groups

Section 7: Lie Theory and Generalizations

E. M. Cañete, Universidad de Huelva
Maximum length of nilpotent Leibniz algebras
L. M. Camacho, Universidad de Sevilla
Naturally graded p-filiform Leibniz algebras
G. M. Jose Ramón, Universidad de Sevilla
On evolution algebras
J. Jung, Seoul National University
Highest weight modules over quantum queer Lie superalgebra Uq(q(n))

Section 8: Analysis

D. Lakshmi Narayana Swamy, University of Mysore
A note on convex combinations
S. Bhatt, H. N. B. Garhwal University
Fixed point theorems for certain contractive mappings in cone metric spaces
M. Joshi, University of Amravati
Characterization of totally bounded subsets of locally compact group G through almost periodic like families
S. D. Purohit, College of Technology and Engineering, Udaipur
A note on certain classes of transformations
P. Agrawal, IIT, Roorkee
Lp-inverse theorem for iterates of Bernstein-Durrmeyer type polynomials
Devendra Kumar, M. M. H. College
Prolate spheroidal wavelet coefficients, frames and double infinite matrices
P. Sahoo, IIT, Kanpur
On a class of harmonic univalent functions defined by a linear operator
R. Malekar, National Defence Academy
Discrete Fourier transform and Jacobi theta function identities
V. R. Lakshmi Gorty, NMIMS University
A Parseval equation and the distributional finite generalized Hankel-Clifford transformation
B. Rubin, Louisiana State University
Radon transforms on the Heisenberg group and transversal Radon transforms
K. K. Singh, IIT, Roorkee
Higher order approximation by iterates of modified beta operators

N. Lal, University of California, Riverside
Spectral analysis on self-similar sets and spectral zeta function of fractals
G. Chen, Donghua University
What does the uncertainty of elements mean
S. Selivanova, Sobolev Institute of Mathematics
On some metrical and algebraic questions for general nonholonomic spaces
R. Jain, M. V. P. G. College
A study of functions associated with mock theta functions

Section 9: Functional Analysis and Applications

N. R. Mangalambal, St. Joseph's College
Abelian and Tauberian theorems for the Laplace transformations on duals of ordered topological vector spaces
S. R. Bokka, Osmania University
On n-normed linear space valued strongly ∇_r-Cesàro and strongly ∇_r-lacunary summable sequences
M-T. Chien, Soochow University
Lucas' theorem and numerical range
I. Park, Korea University
Composition operators on holomorphic Sobolev spaces in Bn
F. J. Fernandez Polo, Universidad de Granada
Weak compactness in the dual space of a JB-triple is commutatively determined*

Section 12: Mathematical Physics

G. Nath, NIT Raipur
Self-similar flow of a rotating dusty gas behind the shock wave with increasing energy, conduction and radiation heat flux
U. Debnath, Bengal Engineering and Science University
Validity of thermodynamical laws in dark energy filled universe
G. Jit Singh, SCD Government College
Thermal convection of Walters b'dusty compressible viscoelastic fluid porous medium with Hall currents
S. Chattopadhyay, Pailan College of Management and Technology
Correspondence between Ricci and other dark energies
T. Sivakumar, Bharathiar University
Convective instability in a vibrating porous layer using a thermal non-equilibrium model
R. P. K. Malmini, University of Sri Jayawardenapura
A simulation based model for price prediction
S. Siddabasappa, Government Science College at Bangalore
Exact solution of special classes of flows in rotating fluids
C. E. Parmeggiani, Mathesis Milano
Quantum inferometry, Euler angles, unitary representations of SU(2)
S. Agarwala, California Institute of Technology
The β-function over curved space-time under ζ-function regularization
B. Sen, Indian School of Mines
A note on the disturbance of SH-type of waves due to the shearing stress discontinuity in a visco-elastic layered half space
S. K. Das, Gauhati University
Exponentially accelerated vertical plate with mass diffusion and variable plate temperature

C. Campbell, University of Queensland
Bethe ansatz solution of an integrable non-abelian anyon chain with D(D3) symmetry
D. Mandal, Indian School of Mines
On the propagation of SH-type waves in elastic isotropic and homogeneous media sandwiched by elastic inhomogeneous medium
H. Kajimoto, Nagasaki University
On several fifth virial coefficients for the hard core potential
A. Komech, Vienna University and IITP
On global attractors of nonlinear hyperbolic PDEs
C. A. Gomez Sierra, Universidad Nacional de Columbia
On intergability of Riccati equation and its relation with some computational methods used to find exact solutions to NLPDEs
D. Bykov, Trinity College Dublin and Steklov Mathematical Institute
Integrability properties of the AdS4 × CP3 string sigma model
M. Sanmartino, UNLP
An alternative well-posedness property and static space-times with naked singularities

Section 15: Mathematical Aspects of Computer Science

R. Sawae, Okayama University of Science
Quantum computations in the bulk ensemble NMR quantum computer
H. Yu, POSTECH, Korea
Classification of some distance-regular graphs
E. Csoka, Eotvos Lorand University
Maximum flow is approximable by deterministic constant-time algorithm in sparse networks
B. Sharma, University of the South Pacific
Tunnel passing manoevres of a team of car-like robots in formation

Section 16: Numerical Analysis and Scientific Computing

N. R. Nandakumar, Delaware State University
Conjugate gradient methods for nonsymmetric systems
T. Hymavathi, Adikavi Nannaya University
Numerical study of visco-elastic fluid flow over an exponentially stretching sheet
M. Mitra, University of Hyderabad
First step into pattern-finding DNA kernel
Y. Quintana, Universidad Simon Bolivar
Some Markov-Bernstein type inequalities and certain class of Sobolev polynomials

Other Activities

18:00-20:00	*Panel Discussion*: **The Pipeline Report**	**Hall 4**
18:00-20:00	**Meeting of the IMSI Institutes**	**Room No. 1.06**

Sunday, August 22, 2010

09:00-10:00	**David Aldous**, University of California, Berkeley, USA *Exchangeability and continuum limits of discrete random structures* *Chair*: **Z-M. Ma**	**Hall 4**
10:15-11:15	**R. Parimala**, Emory University, USA *Arithmetic of linear algebraic groups over two-dimensional fields* *Chair*: **S. Ramanan**	**Hall 4**
11:30-12:30	**Ngo Bao Chau**, Institute for Advanced Study, Princeton, USA *Endoscopy of automorphic forms* *Chair*: **J. Arthur**	**Hall 4**
12:30-13:45	**Lunch**	
13:45-14:45	Special Lecture by a Fields Medallist (2)	**Hall 4**
15:00-18:00	Invited Lectures, Panel Discussion and Short Communications in Parallel Sessions	
18:00-19:00	Short Communications in Parallel Sessions	
19:00	English Play	

Sunday, August 22, 2010

Hall	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00
H2	PD+	PD+	Music-I*	*****	*****
H4	IT3.4	IT3.5	IT3.6		
G.01	IT14.4	IT14.5	IT14.6	SC(14)	*****
G.02	*****	*****	*****	*****	*****
G.03	IT11.4	IT11.5	IT11.6	*****	*****
G.04	*****	*****	*****	*****	*****
G.05	IT10.4	IT10.5	IT10.6	SC(10)	*****
G.06	*****	*****	*****	*****	*****
1.01	IT18.4	IT18.5	IT18.6	*****	*****
1.02	*****	*****	*****	*****	*****
1.03	IT13.4	IT13.5	IT13.6	*****	*****
1.04	SC(16)	SC(16)	SC(16)	SC(16)	*****
1.05	IT9.4	IT9.5	IT9.6	*****	*****
1.06	IT1.1	IT1.2	SC(1)	SC(1)	*****
2.03	IT4.4	IT4.5	IT4.6	IT4.7	*****
2.04	*****	*****	*****	*****	*****
T1	SC(2)	SC(2)	SC(2)	SC(2)	*****
T2	SC(5)	SC(5)	SC(5)	SC(5)	*****
T3	SC(6)	SC(6)	SC(6)	SC(6)	*****
T4	SC(8)	SC(8)	SC(8)	SC(8)	*****
T5	SC(12)	SC(12)	SC(12)	SC(12)	*****
T6	*****	SC(20)	SC(20)	SC(20)	*****

PD+ - Panel Discussion, Section 19: Ethnomathematics, language and sociocultural issues

Music-I* - Lecture on appreciation of classical Indian music by Prof. Sunil Mukhi

Sunday, August 22, 2010

Invited Lectures

Section 1: **Logic and Foundations** **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

Section 3: **Number Theory** **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

Section 4: **Algebraic and Complex Geometry** **Room No. 2.03**
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, France
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

Section 9: **Functional Analysis and Applications** **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

Section 10: **Dynamical Systems and Ordinary Differential Equations** **Room No. G.05**
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

Section 11: **Partial Differential Equations** **Room No. G.03**
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 **11.6 A. Schnirelman**, Concordia University, Canada
to be announced

Section 13: **Probability and Statistics** **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

Section 14: **Combinatorics** **Room No. G.01**
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

Section 18: **Mathematics in Science and Technology** **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

Section 19: **Mathematics Education and Popularization of Mathematics** **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

Short Communications

Section 1: **Logic and Foundations**
Chair: **S. M. Srivastava**

17:00-18:00 **Room No. 1.06**

17:00-17:15 **K. Chowdhury**, Guwahati University
Another arithmetization and Gödel's second incompleteness theorem

17:20-17:35 **B. Loewe**, Universiteit van Amsterdam
Modal logics of forcing

17:40-17:55 **R. Natarajan**, Tata Institute of Fundamental Research
Computer-aided proofs

18:00-19:00 **Room No. 1.06**

18:00-18:15 **B. Khots**, Compressor Controls Corporation
Analogy of Hilbert's tenth problem in observers mathematics

18:20-18:35 **A. Kuzichev**, Moscow State University
Sequential two-level formalization of mathematical theories

18:40-18:55 **G. Ouyang**, Zhangzou Teachers' College
Uncountability of the real number set and the foundation of mathematics

Section 2: **Algebra**

Chair: **Jugal Verma**

15:00-16:00 **Room No. T1**

15:00-15:15 **D. Nagaraju**, Periar Maniammai University
Some dimension conditions in rings with finite dimension

15:20-15:35 **S. P. Kuncham**, Manipal Institute of Technology
Line graphs and quasi total graphs

15:40-15:55 **V. R. Potluri**, Reed College
Finite non-solvable groups having a unique irreducible character of a given degree

16:00-17:00 **Room No. T1**

16:00-16:15 **K-B. Nam,** University of Wisconsin-Whitewater
Automorphism group of a Witt type Lie algebra and the Jacobian conjecture

16:20-16:35 **L. J. Boya**, University of Zaragoza
A different approach to Mathieu groups

16:40-16:55 **N. U. Rehman**, Aligarh Muslim University
On generalized Jordan triple derivations on rings

Chair: **Clare d'Cruz**

17:00-18:00 **Room No. T1**

17:00-17:15 **M. Ashraf**, Aligarh Muslim University
On symmetric generalized (α,β)-biderivations in rings

17:20-17:35 **A. Kamaraju**, R. B. V. R. R. Women's College
Translation plane of order 81

17:40-17:55 **M. R. Darafsheh**, University of Tehran
On factorization of finite groups

18:00-19:00 **Room No. T1**

18:00-18:15 **M. R. Jamal**, Aligarh Muslim University
Orthogonal generalized derivations in Γ-rings

18:20-18:35 **F. Sikander**, Aligarh Muslim University
Some characterizations of submodules of QTAG-modules

18:40-18:55 **S. Veldsman**, Sultan Qaboos University
Convolution rings and some applications

Section 5: **Geometry**

Chair: **Kaushal Verma**

15:00-16:00 **Room No. T2**

15:00-15:15 **H. Ait Haddou**, Institut National Polytechnique de Toulouse
From Lichnerowicz cohomology to Lichnerowicz basic cohomology

15:20-15:35 **M. Karmanova**, Sobolev Institute of Mathematics of SB
On local geometry of Carnot-Caratheodory spaces under minimal assumptions of smoothness

15:40-15:55 **B. Wu**, Minjiang University
Hypersurfaces with two distinct principal curvatures in space forms

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16:00-17:00 **Room No. T2**

16:00-16:15 **V. Balshchenko**, Belarusian State University
Invariant structures on homogeneous k-symmetric spaces

16:20-16:35 **A. Sarkar**, University of Burdwan
A study of three-dimensional quasi-Sasakian manifolds

16:40-16:55 **J. R. Bozeman Jr.**, Lyndon State College
Decide if legislative districts are nicely shaped

Chair: **Mahan Maharaj**

17:00-18:00 **Room No. T2**

17:00-17:15 **L. Ugarte**, Universidad de Zaragoza
Complex geometry of nilmanifolds and special hermitian structures

17:20-17:35 **P. M. Hornung**, University of Bath
Euler-Lagrange equation and regularity for flat minimizers of the Wilmore functional

17:40-17:55 **R. Guo**, University of Minnesota
Combinatorial Yamabe flow on hyperbolic surfaces with boundary

18:00-19:00 **Room No. T2**

18:00-18:15 **X. Xu**, Binghampton University-SUNY
Harnack inequalities and monotonicity of entropy formulas on complete Riemannian manifolds with negative curvature

18:20-18:35 **Y-J. Chiang**, University of Mary Washington
Some properties of biwave maps

18:40-18:55 **J. Barrallo**, The University of the Basque Country
Expanding the Mandelbrot set into 3D and 4D

Section 6: **Topology**
Chair: **Siddhartha Gadgil**

15:00-16:00 **Room No. T3**

15:00-15:15 **F. Azarpanah**, Shahid Chamran University of Ahvaz
Linearly ordered quasi F-spaces

15:20-15:35 **V. Vershinin**, Université de Montpellier 2
Braids and groups, and monoids connected with them

15:40-15:55 **Y. Fukumoto**, Ritsumeikan University
Bounding genus and the spin cobordism category of 3-manifolds

16:00-17:00 **Room No. T3**

16:00-16:15 **A. C. M. Thomas**, Oxford University
Lattices in complete Kac-Moody groups

16:20-16:35 **S. Kuroki**, Korea Advanced Institute of Science and Technology
On cohomological rigidity of toric hyper-Kähler manifolds

16:40-16:55 **M. Eudave Muñoz**, UNAM
The hexatangle II

Chair: **Harish Seshadri**

17:00-18:00 **Room No. T3**

17:00-17:15 **M. Namdari**, Shahid Chamran University
a-Scattered spaces

17:20-17:35 **M. Skopenkov**, Russian Academy of Sciences
When the set of embeddings is finite?

17:40-17:55 **R. P. Devarasu**, Dayalbagh Educational Institute
Path topology and simple connectedness

18:00-19:00 **Room No. T3**

18:00-18:15 **S. Afrooz**, Khoramshahr Marine Sciences and Technology University
$C_\infty(X)$ and related ideals

18:20-18:35 **M. Sheik John**, N. G. M. College
On strongly αg^*-continuous maps in bitopological spaces

18:40-18:55 **A. A. Kustarev**, MSU
Almost complex quasitoric manifolds

Section 8: **Analysis**

Chair: **E. K. Narayanan**

15:00-16:00 **Room No. T4**

15:00-15:15 **A. Singh**, H. N. B. Garhwal University
Some fixed point theorems for a family of hybrid pairs of mappings in metrically convex spaces

15:20-15:35 **K. Jha**, Kathmandu University
A generalized common fixed point theorem in fuzzy metric space

15:40-15:55 **A. K. Mishra**, Berhampur University
A coefficient inequality for a subclass of Carthéodory functions

16:00-17:00 **Room No. T4**

16:00-16:15 **O. P. Ahuja**, Kent State University
Use of shear construction to study harmonic univalent mappings with directional convexity

16:20-16:35 **R. K. Yadav**, J. N. V. University
On q-Mellin transforms of certain basic hypergeometric functions

16:40-16:55 **A. De Pierro**, University of Campinas
On the analytic inverse of a generalized attenuated Radon transform

Chair: **G. Santhanam**

17:00-18:00 **Room No. T4**

17:00-17:15 **Vasudevarao Allu**, IIT Madras
Region of variability for spiral-like functions with respect to a boundary point

17:20-17:35 **S. Khairnar**, Maharashtra Academy of Engineering
Inclusion properties of a subclass of analytic functions defined by an integral operator

17:40-17:55 **A. S. Rawat**, H. N. B. Garhwal University
A common fixed point theorem for strict contractive condition

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18:00-19:00 **Room No. T4**

18:00-18:15 **A. Prasad**, Indian School of Mines
Continuity of pseudo-differential operator hμ,a involving Hankel translation and Hankel convolution on some Gevrey spaces

18:20-18:35 **R. Vyas**, M. S. University
On the absolute convergence of Fourier series of functions of $\Lambda BV^{(p)}$ and $\phi\Lambda BV$

18:40-18:55 **R. C. Dimri**, H. N. B. Garhwal University
Coincidences and common fixed points in intuitionistic fuzzy metric spaces

Section 10: **Dynamical Systems and Ordinary Differential Equations**
Chair: **S. G. Dani**

18:00-19:00 **Room No. G.05**

18:00-18:15 **S. Pal**, University of Kalyani
A model of a plankton-nutrient interaction with instantaneous nutrient recycling

18:20-18:35 **R. Reddy**, University of Hyderabad
Soret and Dufour effects on mixed convection in a micropolar fluid saturated Darcy porous medium

18:40-18:55 **P. M. Oprocha**, Universidad de Murcia
On weak product recurrence

Section 12: **Mathematical Physics**
Chair: **K. M. Tamizhmani**

15:00-16:00 **Room No. T5**

15:00-15:15 **B. Mishra**, BITS-Pilani
Inhomogeneous cosmological model in scale invariant theory

15:20-15:35 **M. Sahni**, Jaypee Institute of Information Technology
Elastic-plastic analysis of thin rotating disc having variable thickness and variable density with edge loading

15:40-15:55 **S. Devi**, Manipur University
Cosmological models of the universe with perfect fluid coupled with massless scalar field

16:00-17:00 **Room No. T5**

16:00-16:15 **S. Singh**, Manipur University
Cosmological models interacting with massive scalar field in Lyra's manifold

16:20-16:35 **M. R. Molaei (Taherabadi)**, University of Kerman
A mathematical model for an observer of a set and its application in physics

16:40-16:55 **R. Bajaj**, Panjab University
The effect of shear flow on thermomagnetic convection in ferrofluids

Chair: **Tamizharasi Tamizhmani**

17:00-18:00 **Room No. T5**

17:00-17:15 **G. Khadekar**, R. T. M. Nagpur University
Higher dimensional cosmological model for ¤-dark energy

17:20-17:35 **S. Paycha**, Blaise Pascal University
Divergent multiple sums and integrals with constraints

17:40-17:55 **F. Mukhamedov**, International Islamic University
On phase transition for countable state p-adic Potts model on the Cayley tree

18:00-19:00 **Room No. T5**

18:00-18:15 **R. Nandkeolyar**, Indian School of Mines
Effects of radiation and rotation on MHD free convection flow past an impulsively started plate emmbedded in a porous medium with ramped wall temperature

18:20-18:35 **A. Hasmani**, Sardar Patel University
Algebraic computation of spin coefficients in Newman-Penrose formalism using Mathematica

18:40-18:55 **R. Flores Espinoza**, Universidad de Sonora
Periodic first integrals for Hamiltonian systems of Lie type

Section 14: **Combinatorics**
Chair: **B. Waphare**

18:00-19:00 **Room No. G.01**

18:00-18:15 **A. K. Das**, University of Calcutta
Forbidden configuration characterization for interval digraphs/bigraphs

18:20-18:35 **E. T. Baskoro**, Institut Teknologi Bandung
On Ramsey (2K2,Pn) minimal graphs

18:40-18:55 **V. Murali**, Rhodes University
Principle of inclusion-exclusion for finite fuzzy subsets

Section 16: **Numerical Ananlysis and Scientific Computing**
Chair: **R. H. Nochetto**

15:00-16:00 **Room No. 1.04**

15:00-15:15 **G. M. Amirali**, Sinop University
A parameter-uniform difference method for a singularly perturbed three-point boundary value problem

15:20-15:35 **J. J. H. Miller et al**, Trinity College at Dublin
A fitted mesh method for a partially singularly perturbed linear system of time dependent reaction-diffusion equations

15:40-15:55 **Natesan Srinivasan**, IIT Guwahati
Parameter-uniform hybrid numerical scheme for singularly perturbed problems of mixed parabolic-elliptic type

16:00-17:00 **Room No. 1.04**

16:00-16:15 **Ramesh Babu**, Bharathidasan University
Streamline-diffusion finite element method for singularly perturbed coupled ellipticelliptic transmission boundary value problem

16:20-16:35 **H. Li et al**, Syracuse University
Analysis of the finite element method for the Neumann and transmission problems

16:40-16:55 **V. Vivek**, IIT Kanpur
Finite element analysis of three-step Taylor-Galerkin approximation for singularly perturbed convection-diffusion equation

Chair: **P. A. Markowich**

17:00-18:00 **Room No. 1.04**

17:00-17:15 **V. K. Kukreja et al**, SLIET
Solution of axial dispersion model using orthogonal Hermite collocation method

17:20-17:35 **Murali Krishna et al**, NIT Warangal
Septic B-spline collocation method for sixth order boundary value problems

17:40-17:55 **G. Arora/R. C. Mittal**, IIT Roorkee
Numerical solution of the Swift-Hohenberg equation using quintic B-spline collocation method

18:00-19:00 **Room No. 1.04**

18:00-18:15 **S. Bisht**, Amity University
An adaptive cubic spline approach to solve a second order singularly perturbed boundary value problem

18:20-18:35 **R. K. Sharma/R. Bhargava**, IIT Roorkee
Unsteady MHD mixed convection heat transfer over a stretching surface embedded in a porous medium with heat source/sink using mesh-free method

18:40-18:55 **M. M. Gupta**, The George Washington University
A compact stream function-velocity method for incompressible viscous flows

Section 20: **History of Mathematics**

Chair: **T. H. Kjeldsen**

16:00-17:00 **Room No. T6**

16:00-16:15 **A. M. Hinz**, LMU
The uncountability of the real numbers

16:20-16:35 **M. B. Dhakne**, Dr. Babasaheb Ambedkar Marathwada University
A look at some research work of B. G. Pachpatte

16:40-16:55 **G. R. De Young**, The American University in Cairo
Early printed Arabic geometry textbooks

17:00-18:00 **Room No. T6**

17:00-17:15 **R. Murawski**, Adam Mickiewicz University
Beginnings of set theory in Poland

17:20-17:35 **I. Bondecka-Krzykowska**, Adam Mickiewicz University
Slonimski's theorem and its implementation in the calculating machine

17:40-17:55 **P. Taneja**, Gurukul Kangri University
Methods of interpolation in Indian astronomy

18:00-19:00 **Room No. T6**

18:00-18:15 **S. Zhang**, Shandong University
Euclid's number theoretic work

18:20-18:35 **M. C. Singh**, University of Calgary
Mathematical concepts, axioms the logic and some of its results viewed from the philosophical knowledge of North Indian saints

18:40-18:55 **Y. H. Kye**, Kosin University
Some differences in mathematics and art of the West and Orient

Other Activities

17:00-18:00 Lecture on appreciation of classical Indian music, Part I — **Hall 2**
Prof. Sunil Mukhi

19:00-21:00 **The Disappearing Number**
A play in English by the UK troupe Complicité
Venue: Global Peace Auditorium, Gachibowli, Hyderabad
For tickets, see the ICM website.

Tuesday, August 24, 2010

09:00-10:00	**A. N. Parshin**, Steklov Mathematical Institute, Russia *Representations of higher adelic groups and arithmetics* *Chair*: **M. S. Narasimhan**	**Hall 4**
10:15-11:15	**Jean-Michel Coron**, Université Pierre et Marie Curie, France *On the controllability of nonlinear partial differential equations* *Chair*: **L. Nirenberg**	**Hall 4**
11:30-12:30	**Shige Peng**, Shandong University, P. R. of China *Backward stochastic differential equations, nonlinear expectations and their applications* *Chair*: **S. R. S. Varadhan**	**Hall 4**
12:30-13:45	**Lunch**	
13:45-14:45	Special Lecture by a Fields Medallist (3)	**Hall 4**
15:00-18:00	Invited Lectures and Short Communications in Parallel Sessions	
18:00-20:00	Short Communications in Parallel Sessions	

Tuesday, August 24, 2010

Hall	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00
H2	Chess	Chess	Chess	Chess	Chess*
H4	IT2.3	IT2.4	Music-II^{+}		
G.01	IT15.4	IT15.5	SC(15)	SC(15)	SC(15)
G.02	*****	*****	*****	*****	*****
G.03	IT12.4	IT12.5	IT12.6	SC(12)	SC(12)
G.04	*****	*****	*****	*****	*****
G.05	IT7.5	IT7.6	IT7.7	SC(7)	SC(7)
G.06	*****	*****	*****	*****	*****
1.01	IT6.4	IT6.5	IT6.6	*****	*****
1.02	SC(18)	SC(18)	SC(18)	SC(18)	SC(18)
1.03	IT8.4	IT8.5	IT8.6	SC(8)	SC(8)
1.04	ZB**	*****	*****	I-F^{++}	*****
1.05	IT16.4	IT16.5	IT16.6	SC(16)	SC(16)
1.06	IT17.4	IT17.5	*****	*****	*****
2.03	IT5.4	IT5.5	IT5.6	SC(5)	SC(5)
2.04	*****	*****	*****	*****	*****
T1	SC(3)	SC(3)	SC(3)	SC(3)	SC(3)
T2	SC(14)	SC(14)	SC(14)	SC(14)	SC(14)
T3	SC(9)	SC(9)	SC(9)	SC(9)	SC(9)
T4	SC(10)	SC(10)	SC(10)	SC(10)	SC(10)
T5	SC(11)	SC(11)	SC(11)	SC(11)	SC(11)
T6	SC(13)	SC(13)	SC(13)	SC(13)	SC(13)

Chess* - Exhibition match: World Champion, GM Viswanathan Anand, plays simultaneously against 40 challengers (see website for details).
Music-II^{+} - Lecture on appreciation of classical Indian Music by Prof. Sunil Mukhi
ZB** - Presentation by Zentralblatt für Mathematik
I-F^{++} - Meeting on Indo-French collaboration

Tuesday, August 24, 2010

Invited Lectures

Section 2: **Algebra 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

Section 5: **Geometry** **Room No. 2.03**
Chair: **R. Kulkarni**

15:00-15:45 **5.4 A. Erschler**, Université de Paris-Sud, Orsay, France
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

Section 6: **Topology** **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

Section 7: **Lie Theory and Generalizations** **Room No. G.05**
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

Section 8: **Analysis** **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

Section 12: **Mathematical Physics** **Room No. G.03**
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
17:00-17:45 **12.6 G. Gibbons**, University of Cambridge, UK
to be announced

Section 15: **Mathematical Aspects of Computer Science** **Room No. G.01**
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

Section 16: **Numerical Analysis and Scientific Computing** **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

Section 17: **Control Theory and Optimization** **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

Short Communications

Section 3: **Number Theory**
Chair: **A. Ivic**

15:00-16:00 **Room No. T1**
15:00-15:15 **F. Luca**, UNAM
On sums of Fibonacci numbers modulo p
15:20-15:35 **K. Vajjha**, St. Patrick's Junior Collge
On Pythagorean triples of the form (i, i + 1, k)
15:40-15:55 **P. N. Sabu**, T. I. M. E.
Proof of Fermat's last theorem

16:00-17:00 **Room No. T1**
16:00-16:15 **Y. G. Chen**, Nanjing Normal University
On a Sierpinski's problem
16:20-16:35 **T. Mincheva**, University of Economics
Lagrange's method in the theory of diophantine equations
16:40-16:55 **J. Zhang**, Shenzhen Senior High School
On primes and the prime factorization of composite numbers in a polynomial sequence

17:00-18:00 **Room No. T1**
17:00-17:15 **R. O. Quintero Contreras**, Universidad de Los Andes
The Josephus problem generalized
17:20-17:35 **J-H. Fang**, Nanjing Normal University
On additive complements
17:40-17:55 **V. V. Rane**, Institute of Science
Instant evaluation of $\zeta(-n, \alpha)$, $\zeta r(-n1,-n2,-n3, \ldots,-nr)$, $\zeta(n),L(n, \hat{A})$

Chair: **B. Ramakrishnan**

18:00-19:00 **Room No. T1**
18:00-18:15 **I. D. Skhredov**, Moscow State University
Combinatorial configurations in dense subsets of two-dimensioanl grid
18:20-18:35 **K. C. Prasad**, Ranchi University
A new point in Lagrange's spectrum near sup of complement of L
18:40-18:55 **E. R. Oberaigner**, University of Leoben
A novel polynomial criterion and algorithm for twin primes

19:00-20:00 **Room No. T1**

19:00-19:15 **J. Bellingham**, Fairfax Media Ltd.
Fermat's last theorem

19:20-19:35 **M. P. Ulas**, Jagiellonian University
Higher twists of elliptic curves with positive rank

19:40-19:55 **O. German**, Moscow State University
Transfer inequalities for diophantine exponents

Section 5: **Geometry**
Chair: **Amiya Mukherjee**

18:00-19:00 **Room No. 2.03**

18:00-18:15 **G. P. Silswal**, H. N. B. Garhwal University
Theorems on bi-recurrent and bi-symmetric Sasakian manifolds

18:20-18:35 **D. Svrtan**, University of Zagreb
Intrinsic geometry of cyclic heptagons/octagons via 'new' Brahmagupta formula

18:40-18:55 **L. Velimirovic**, University of Nis
On the Wilmore energy under infinitesimal bending

19:00-20:00 **Room No. 2.03**

19:00-19:15 **D. Alonso**, Universidad de Zaragoza
On the isotropy constant

19:20-19:35 **M. Djoric**, University of Belgrade
Certain conditions on the second fundamental form of CR submanifolds of maximal CR dimension of complex hyperbolic space

Section 7: **Lie Theory and Generalizations**
Chair: **Riddhi Shah**

18:00-19:00 **Room No. G.05**

18:00-18:15 **B. Ransingh**, NIT Rourkela
Splints of root system of classical Lie superalgebras

18:20-18:35 **M. Schaps**, Bar-Ilan University
A non-recursive criterion for weights of affine Lie albegra representations

18:40-18:55 **P. L. Lilly**, St. Joseph's College
Intuitionistic fuzzy Lie algebra over a fuzzy field

19:00-20:00 **Room No. G.05**

19:00-19:15 **M. M. Mishra**, University of Delhi
Green functions and related boundary value problems on the Heisenberg group

19:20-19:35 **A. Adrega De Moura**, Universidade Estadual de Campinas
Graded characters of minimal affinizations of quantum groups

Section 8: **Analysis**
Chair: **P. K. Ratnakumar**

18:00-19:00 **Room No. 1.03**

18:00-18:15 **A. S. Ranga**, Universidade Estadual Paulista
Related measures and L-orthogonal polynomials

18:20-18:35 **S. Bhatnagar**, Panjab University
Multipliers of $Ap(0,\infty)$ with order convolution

18:40-18:55 **B. Sarma**, M. C. College
Some difference double sequence spaces defined by Orlicz function

19:00-20:00 **Room No. 1.03**

19:00-19:15 **W. Andrzej**, Technological University of Lodz
On some invariant of two-parametrical families of real functions

19:20-19:35 **M. Stoll**, University of South Carolina
On Littlewood-Paley type inequalities for subharmonic functions on domains in Rn

19:40-19:55 **D. P. Datta**, University of North Bengal
Scale free analysis and applications: a brief report

Section 9: **Functional Analysis and Applications**
Chair: **T. S. S. R. K. Rao**

15:00-16:00 **Room No. T3**

15:00-15:15 **G. V. Ravindranadh Babu**, Andhra University
Existence of common fixed points for a pair of generalized weakly contractive maps

15:20-15:35 **M. Argerami**, University of Regina
Weakly continuous Hilbert bundles over Stonean spaces and their C-algebras*

15:40-15:55 **M. Moakher**, National Engineering School at Tunis
Bhattacharya divergence based mean of symmetric positive definite matrices

16:00-17:00 **Room No. T3**

16:00-16:15 **P. Dabhi**, Sardar Patel University
Multipliers on weighted semigroups

16:20-16:35 **S. Bhatt**, Sardar Patel University
Differential structures in C- algebras*

16:40-16:55 **S. George**, NIT Surathkal
Newton's method for nonlinear ill-posed problems

Chair: **Geetha S. Rao**

17:00-18:00 **Room No. T3**

17:00-17:15 **R. P. Pant**, University of Petroleum and Energy Studies
Fixed point theorems for generalized asymptotic contractions

17:20-17:35 **A. Patel**, Sardar Patel University
On two classes of operators

17:40-17:55 **Anita Tomar**, Government Degree College
Coincidence and fixed point theorems satisfying integral type implicit relations in symmetric spaces

18:00-19:00 **Room No. T3**

18:00-18:15 **A. D. Rodríguez Arós**, Universidade de Coruña
Mathematical justification of viscoelastic beam models by asymptotic methods

18:20-18:35 **O. Reynov**, St. Petersburg State University
Banach spaces without approximation properties of type p

18:40-18:55 **B. Djafari Rouhani**, University of Texas at El Paso
Large time behaviour of solutions to some classes of second order evolution equations and difference equations

19:00-20:00 **Room No. T3**

19:00-19:15 **P. C. S. M. Cerejeiras**, Universidade de Aveiro
Reconstruction of analytic signals with prescribed symmetries

19:20-19:35 **J. O. Olaleru**, University of Lagos
Common fixed points for a rational inequality under weakly compatible maps in cone metric spaces

19:40-19:55 **H. K. Nashine**, Disha Institute of Management and Technology
Common fixed point theorem for uniformly Cq-commuting mappings satisfying a generalized asymptotically nonexpansive condition

Section 10: Dynamical Systems and Ordinary Differential Equations
Chair: **F. Rodriguez Hertz**

15:00-16:00 **Room No. T4**

15:00-15:15 **M. Sajid**, Qassim University
Comparative study on the dynamics of certain families of transcendental meromorphic functions

15:20-15:35 **N. Pham Huu Anh**, International University
Stability analysis of delayed neural networks with polytopic type uncertainties

15:40-15:55 **H. L. Tidke**, North Maharashtra University
On approximate solutions of integro-differential equation with nonlocal condition

16:00-17:00 **Room No. T4**

16:00-16:15 **V. Gejji**, Pune University
Dynamical systems of fractional order

16:20-16:35 **G. Röst**, Hungarian Academy of Sciences and University of Szeged
From simple dynamics to chaos through nonmonotone delayed feedback

16:40-16:55 **I. Matveeva**, Sobolev Institute of Mathematics
Asymptotic stability of solutions to delay differential equations with periodic coefficients

17:00-18:00 **Room No. T4**

17:00-17:15 **D. Artamonov**, Moscow State University
The Riemann-Hilbert problem on a compact Riemann surface

17:20-17:35 **A. Singh**, IIT Roorkee
Complexity in a prey-predator delay model of Leslie-Gower type

17:40-17:55 **D. Pachpatte**, Dr. B. A. Marathwada University
Explicit estimates on certain dynamic inequalities in two variables on time scales

Chair: **Shoba Madan**

18:00-19:00 **Room No. T4**

18:00-18:15 **D. Smania Brandao**, ICMC-USP
Differentiation of SBR measures for topological slow recurrent unimodal maps

18:20-18:35 **J. Rodriguez Hertz**, IMERL
Mañé-Bochi theorem in dimension 3

18:40-18:55 **F. Dumortier**, Hasselt University
Slow-fast Bogdanov-Takens bifurcations

19:00-20:00 **Room No. T4**

19:00-19:15 **S. Nakhane**, Tokyo Polytechnic University
Dynamics of Axiom A polynomial skew products on C2

19:20-19:35 **A. Negut**, Harvard University and IMAR
Invisible parts of attractors

19:40-19:55 **M. Asaoka**, Kyoto University
Rigidity and flexibility of some group actions related to real-rank one Lie groups

Section 11: **Partial Differential Equations**

Chair: **A. K. Nandakumaran**

15:00-16:00 **Room No. T5**

15:00-15:15 **Z. Shao**, Fuzhou University
Global structure stability of Riemann solutions for linearly degenerate hyperbolic conservation laws under small BV perturbations of the initial data

15:20-15:35 **G. J. Reddy**, NIT Warangal
Finite difference analysis of couple stress fluid past an infinite vertical cylinder

15:40-15:55 **J. Esquivel-Avila**, Universidad Autonoma Metropolitana
Decay and non-existence in a nonlinear evolution equation

16:00-17:00 **Room No. T5**

16:00-16:15 **R. S. Tungala**, NIT Rourkela
Solution to magnetogasdynamics

16:20-16:35 **T. Jung**, Kunsan National University
The periodic solutions of the nonlinear Hamiltonian system

16:40-16:55 **Q-H. Choi**, Inha University
Nontrivial solutions for the nonlinear hyperbolic system

17:00-18:00 **Room No. T5**

17:00-17:15 **G. Demidenko**, Sobolev Institute of Mathematics
Quasielliptic operators in Rn and Sobolev type equations

17:20-17:35 **J. I. Cossio Betancur**, Universidad Nacional de Columbia
Existence of seven solutions for an asymptotically linear Dirichlet problem

17:40-17:55 **I. Mamadsho**, Academy of Science of Tajikistan
System of chemotaxis with nonlinear diffusion

Chair: **Aloknath Chakrabarti**

18:00-19:00 **Room No. T5**

18:00-18:15 **L. F. Dinu**, Institute of Mathematics of the Romanian Academy
Nonlinearized Fourier aproach and coherence: applications to shock-turbulence interaction

18:20-18:35 **P. Kokocki**, Nicolaus Copernicus University
Periodic solutions for nonlinear evolution equations at resonance

18:40-18:55 **A. P. Ramos**, Università degli Studi di Milano Bicocca
Elliptic problems with a Hardy potential and critical growth in the gradient

19:00-20:00 **Room No. T5**

19:00-19:15 **E. Varvaruca**, Imperial College
On the existence of extreme waves and the Stokes' conjecture with vorticity

19:20-19:35 **M. Bocea**, North Dakota State University
Γ-convergence of power-law functionals with variable exponents and related PDEs

19:40-19:55 **A. Kananthai**, Chiang Mai University
On the parametric interest of the Black-Scholes equation

Section 12: **Mathematical Physics**

Chair: **A. Kupiainen**

18:00-19:00 **Room No. G.03**

18:00-18:15 **E. Kopylova**, Institute for Information Transmission Problems
Asymptotic stability of kinks for relativistic Ginzburg-Landau equation

18:20-18:35 **O. Pitalskaya**, Institute for Computational Modelling
Analytical solutions for three dimensional wind induced motion of viscous homogeneous fluid

18:40-18:55 **K. Saifullah**, Quaid-i-Azam University
Black holes in non-commutative geometry

19:00-20:00 **Room No. G.03**

19:00-19:15 **S. R. Valluri**, University of Western Ontario
The variation of the gravitational constant and the anomalous acceleration of the Pioneer spacecrafts

19:20-19:35 **G. S. Seth**, Indian School of Mines
Unsteady hydromagnetic flow in a rotating channel with perfectly conducting walls

19:40-19:55 **V. A. Cherikuri**, B. M. Birla Science Centre
The ultra relativistic Maxwell and Proca equations

Section 13: **Probability and Statistics**

Chair: **Ravi Sreenivasan**

15:00-16:00 **Room No. T6**

15:00-15:15 **F. J. P. Tjhin**, Parahyangan Catholic University
Valuation of American basket options by a simple binomial tree

15:20-15:35 **V. M. Chacko**, St. Thomas College
On ageing properties, semimarkov system and total time on test transforms

15:40-15:55 **A. Srinivasan**, Bishop Heber College at Tiruchirapalli
A stochastic model for the expected time to recruitment in a single graded manpower system with two thresholds following SCBZ property and correlated interdecision times

16:00-17:00 **Room No. T6**

16:00-16:15 **T-S. Chiang**, Academia Sinica
Asymptotic expansion with double layers of singularly perturbed diffusions

16:20-16:35 **B. Lafuerza-Guillén**, University of Almeria
A study of boundedness in PN spaces

16:40-16:55 **Y-J. Lee**, National University of Kaohsiung
An application of the Siegel-Bargmann transform to the characterization of Levy white noise measures

Chair: **Rana Barua**

17:00-18:00 **Room No. T6**

17:00-17:15 **G. Garg**, IIM Lucknow
Estimation of regression coefficients in a replicated measurement error model under restrictions

17:20-17:35 **R. P. Suresh**, General Motors
A new measure of relationship among qualitative variables

17:40-17:55 **A. Olenko**, La Trobe University
Convergence rate of wavelet expansions of random processes

18:00-19:00 **Room No. T6**

18:00-18:15 **P. N. Rathie**, Universidade de Brasilia
Fitting several data sets to Levy and generalized t-distributions

18:20-18:35 **J. F. López-Fidalgo**, University of Castilla-La Mancha
The EM algorithm and optimal designs for mixtures of distributions

18:40-18:55 **R. C. Dalang**, Ecole Polytechnique Fédérale de Lausanne
Intermittency in a hyperbolic Anderson problem

19:00-20:00 **Room No. T6**

19:00-19:15 **M. Lee**, Yonsei University
Asymptotic and martingale method for a delay financial model

19:20-19:35 **R. Böttcher**, Fern Universität Hagen
Stochastic growth processes based on random segments

19:40-19:55 **E. Shamarova**, University of Porto
Solutions of the Navier-Stokes and Burgers equations via forward-backward SDEs

Section 14: **Combinatorics**

Chair: **Vijayakumar Ambat**

15:00-16:00 **Room No. T2**

15:00-15:15 **N. Malinina**, University of Aerospace Technology
On a principal impossibility to prove P = NP

15:20-15:35 **E. Ghorbani**, Institute for Research in Fundamental Sciences
Graphs with many ±1 or ± √2 eigenvalues

15:40-15:55 **A. Iranmanesh**, Tarbiat Modares University
On ordinary generalized geometric-arithmetic index

16:00-17:00 **Room No. T2**

16:00-16:15 **K. L. Patra**, NISER
Minimizing Laplacian spectral radius of unicyclic graphs with fixed girth

16:20-16:35 **T. K. Maryati**, State Islamic University
Ph-(super) magic labelings of Cn+p

16:40-16:55 **S. Ghosh**, Jadavpur University
Adjacency matrices of probe interval graphs

17:00-18:00 **Room No. T2**

17:00-17:15 **N. Sridharan**, Alagappa University
Γ-half graphs

17:20-17:35 **M. G. Rodríguez Sánchez**, Universidad Autónoma Metropolitana
Graph reductions using the 4-polygon to 4-star transformation

17:40-17:55 **M. Changat**, Kerala University
Transit functions of higher arity

Chair: **T. Tamizh Chelvam**

18:00-19:00 **Room No. T2**

18:00-18:15 **K. V. S. N. Sarma**, Regency Institute of Technology
On certain types of graphs

18:20-18:35 **A. Moreno Cañadas**, Universidad Nacional de Columbia
On some P-partitions and partitions into four cubes

18:40-18:55 **V. Logani**, Chiang Mai University
Algorithm for finding the coefficients of rook polynomials

19:00-20:00 **Room No. T2**

19:00-19:15 **J. M. Ash**, DePaul University
Balanced tournaments for games

19:20-19:35 **J. E. Pommersheim**, Reed College
Sum-integral interpolators and the Euler-Maclaurin formula for polytopes

19:40-19:55 **H-H. Lai**, National Kaohsiung Normal University
Acyclic list edge coloring of planar graphs without short cycles

Section 15: **Mathematical Aspects of Computer Science**
Chair: **Jagmohan Tyagi**

17:00-18:00 **Room No. G.01**

17:00-17:15 **N. Ketu**, University of Delhi
Homomorphic encryption scheme

17:20-17:35 **M. R. Valluri**, Salalah College of Technology
A message authentication code based on quasigroups

17:40-17:55 **A. Pal**, NIT Durgapur
The conditional covering problem on unweighted interval graphs with nonuniform coverage radius

18:00-19:00 **Room No. G.01**

18:00-18:15 **M. Pal**, Vidyasagar University
L(2, 1)-labelling of cactus graphs

18:20-18:35 **S. Sharan**, Indian School of Mines
L-valued automata and associated topology

18:40-18:55 **S. R. Ghorpade**, IIT Mumbai
Affine Grassmann codes

19:00-20:00 **Room No. G.01**

19:00-19:15 **M. Garg**, IIT Roorkee
Fourth-order nonlinearity of monomial partial spread function on 10 variables

19:20-19:35 **C. Surapholchai**, Chulalongkorn University
Proving easy programming languages by denotational semantics

19:40-19:55 **B. Wen**, Tianjin University of Commerce
Answer to question P/NP is P 6= NP

Section 16: **Numerical Analysis and Scientific Computing**
Chair: **Natesan Srinivasan**

18:00-19:00 **Room No. 1.05**

18:00-18:15 **R. I. McLachlan**, Massey University
Multisymplectic integrators for Hamilton wave equations

18:20-18:35 **C. J. Gonzales Fernandez**, University of Valladolid
Exponential type integrators for abstract quasilinear parabolic equations with variable domains

18:40-18:55 **S. Challa**, IIT Hyderabad
Compressive sampling techniques and their application to data regularization

19:00-20:00 **Room No. 1.05**

19:00-19:15 **M-H. Chen**, National Cheng Kung University
A high order discontinuous Galerkin method for elliptic interface problems

19:20-19:35 **Sharath Babu**, NIT Warangal
Artificial diffusion-convection in one dimension: a computational approach

19:40-19:55 **K. I. Kim**, Pohang University of Science and Technology
A H-splitting decoupled scheme for a transient eddy current problem over an unbounded domain

Section 18: **Mathematics in Science and Technology**
Chair: **A. H. Siddiqi**

15:00-16:00 **Room No. 1.02**

15:00-15:15 **A. Bandyopadhyay**, Khalisani Mahavidyalaya
Analytical solution of long waves generated by bottom motion on a beach with variable slope

15:20-15:35 **C. Nagaiah**, University of Graz
Efficient and accurate numerical solution for optimal control of reaction-diffusion systems in cardiac electrophysiology

15:40-15:55 **Yajuvindra Kumar**, IIT Roorkee
Effect of nonhomogeneity on free transverse vibration of orthotropic equilateral triangular plates with linerly varying thickness

16:00-17:00 **Room No. 1.02**

16:00-16:15 **A. S. R. Srinivasa Rao**, Indian Statistical Institute
The role of mathematical models in epidemic control and policy in India

16:20-16:35 **C. Escudero Liebana**, Consejo Superior de Investigaciones Cientificas
Stochastic growth of radial clusters: weak convergence to the asymptotic profile and implications for morphogenesis

16:40-16:55 **S. A. Sahu**, Indian School of Mines
Propagation of sh waves in multilayered viscoelastic medium: a finite difference approach

17:00-18:00 **Room No. 1.02**

17:00-17:15 **B. Booss**, Roskilde University
Intra-cellular control of insulin secretion

17:20-17:35 **S. Baiculescu**, Interdisciplinary Commission of Romanian Academy
Mathematical aspects in complexity of biological, neuropsycological and psychological systems

17:40-17:55 **B. C. Neog**, Jagiroad College
Thermal stratification and radiation effects on MHD free convection flow past an impulsively started infinite vertical plate

Chair: **Akhtar Khan**

18:00-19:00 **Room No. 1.02**

18:00-18:15 **A. T. Eswara**, P. E. S. College of Engineering
MHD flow due to a point sink with localized wall heating (cooling)

18:20-18:35 **P. R. Sharma**, University of Rajasthan
Effect of suction/injection and viscous dissipation on unsteady heat transfer in steady stagnation point flow through porous media

18:40-18:55 **G. Singh**, Birla Institute of Technology Ranchi (Ext. Centre, Jaipur)
A non-isothermal permeable vertical plate in presence of heat source/sink and chemically reacting species

19:00-20:00 **Room No. 1.02**

19:00-19:15 **G. Shyshkanova**, Zaporozhye National Technical University
Integral equation solution for multi-connected contact domain under non-symmetric loading

19:20-19:35 **D. K. Phukan**, Moran College
Analytical solution for axi-symmetric rotating flow of Newtonian conducting fluid past a stretching porous sheet under a transverse magnetic field

19:40-19:55 **N. Kaur**, Thapar University
Modelling the spread of HIV in a stage structured population; effect of awareness

Other Activities

15:00 Chess: **World Champion, GM Vishwanathan Anand**, plays against 40 challengers simultaneously (see website for details regarding participation in this event) **Hall 2**

15:00-15:30 Presentation by **Zentralblatt für Mathematik** **Room No. 1.04**

17:00-18:00 Lecture on appreciation of classical Indian music, Part II, **Prof. Sunil Mukhi** **Hall 4**

18:00-19:00 Discussion meeting on Indo-French collaboration **Room No. 1.04**

Wednesday, August 25, 2010

09:00-10:00	**Stanley Osher**, University of California, Los Angeles, USA *New algorithms in image science* *Chair*: **M. F. Wheeler**	**Hall 4**
10:15-11:15	**Nicolai Reshetikhin**, University of California, Berkeley, USA *Mathematics of quantum field theory* *Chair*: **H. Araki**	**Hall 4**
11:30-12:30	**Claire Voisin**, Institut de Mathématiques de Jussieu, France *On the cohomology of algebraic varieties* *Chair*: **C. S. Seshadri**	**Hall 4**
12:30-13:45	**Lunch**	
13:45-14:45	Special Lecture by a Fields Medallist (4)	**Hall 4**
15:00-19:00	Invited Lectures, Panel Discussion and Short Communications in Parallel Sessions	
19:00	Concert	**Hall 4**

Wednesday, August 25, 2010

Hall	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00
H2	PD+	PD+	LMS++	LMS++	*****
H4	IT3.7	IT3.8	PL*	*****	Concert
G.01	IT14.7	IT14.8	IT14.9	SC(14)	*****
G.02	*****	*****	*****	*****	*****
G.03	IT11.7	IT11.8	SC(11)	SC(11)	*****
G.04	*****	*****	*****	*****	*****
G.05	IT10.7	IT10.8	SC(10)	SC(10)	*****
G.06	*****	*****	*****	*****	*****
1.01	IT18.7	IT18.8	IT18.9	*****	*****
1.02	*****	*****	*****	*****	*****
1.03	IT8.7	IT8.8	IT13.7	IT13.8	*****
1.04	MST	MST	*****	*****	*****
1.05	SC(16)	SC(16)	SC(16)	*****	*****
1.06	IT17.6	IT17.7	SC(17)	SC(17)	*****
2.03	IT4.8	IT4.9	IT5.7	IT5.8	*****
2.04	*****	*****	*****	*****	*****
T1	SC(2)	SC(2)	SC(2)	SC(2)	*****
T2	SC(5)	SC(5)	SC(7)	SC(7)	*****
T3	SC(6)	SC(6)	SC(6)	*****	*****
T4	SC(13)	SC(13)	SC(8)	SC(8)	*****
T5	SC(12)	SC(12)	SC(12)	SC(12)	*****
T6	*****	*****	*****	*****	*****

PD+ - Panel Discussion, Section 19: Communicating mathematics to society at large
LMS++ - Mechanisms for strengthening mathematics in developing countries
PL* - Popular Lecture by Simon Singh

Wednesday, August 25, 2010

Invited Lectures

Section 3: **Number Theory** **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

Section 4: **Algebraic and Complex Geometry** **Room No. 2.03**
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

Section 5: **Geometry** **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

Section 8: **Analysis** **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

Section 10: **Dynamical Systems and Ordinary Differential Equations** **Room No. G.05**
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

Section 11: **Partial Differential Equations** **Room No. G.03**
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

Section 13: **Probability and Statistics** **Room No. 1.03**
Chair: **B. L. S. Prakasa Rao**

17:00-17:45 **13.7 D. Brydges**, University of British Columbia, Canada
Renormalisation group analysis of weakly self-avoiding walk in dimensions four and higher

18:00-18:45 **13.8 A. Van der Vaart**, Vrije Universiteit, Amsterdam, The Netherlands
Bayesian regularization

Section 14: **Combinatorics** **Room No. G.01**
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

Section 17: **Control Theory and Optimization** **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

Section 18: **Mathematics in Science and Technology** **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

Section 19: **Mathematics Education and Popularization of Mathematics** **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

Short Communications

Section 2: **Algebra**
Chair: **S. A. Katre**

15:00-16:00 **Room No. T1**
15:00-15:15 **M. Hebert**, American University in Cairo
What is a finitely related structure, categorically?
15:20-15:35 **S. K. Khanduja**, Panjab University
Prolongations of valuations to finite extensions
15:40-15:55 **A. Khan**, Aligarh Muslim University
Generalized (σ,τ)-higher derivations in prime rings

16:00-17:00 **Room No. T1**
16:00-16:15 **P. Chen**, Shande Training Centre
On the discriminant of a general polynomial in terms of elementary symmetric functions
16:20-16:35 **S. Bhavanari**, Acharya Nagarjuna University
Prime graph of a ring
16:40-16:55 **B. Khosravi**, Amirkabir University of Technology
Quasirecognition of L32(2) by its prime graph

Chair: **S. K. Kandhuja**

17:00-18:00 **Room No. T1**

17:00-17:15 **J. H. Meyer**, University of the Free State
O-primitivity in matrix near rings

17:20-17:35 **M. Sehatkhah**, University of Payam-E-Noor
On the finiteness properties of extension functor and local cohomology module

17:40-17:55 **A. Abdollahi**, University of Isfahan
Cohomologically trivial modules over finite p-groups

18:00-19:00 **Room No. T1**

18:00-18:15 **J. M. P. Balmaceda**, University of the Philippines
Gelfand pairs in alternating groups

18:20-18:35 **J. E. Pantoja**, Pontifica Universidad Catolica de Valparaiso
Generalized Weil representation for classical groups with a Bruhat presentation

18:40-18:55 **B. S. Kedukodi**, Manipal Institute of Technology
Reference points and roughness

Section 5: **Geometry**
Chair: **Shriram Nimbhorkar**

15:00-16:00 **Room No. T2**

15:00-15:15 **E. Saorin Gómez**, Otto von Guericke Universität
How to make quermassintegrals differentiable; solving a problem by Hadwiger

15:20-15:35 **A. L. Albujer Brotons**, Universidad de Córdoba
On the Gaussian curvature of complete spacelike surfaces in Lorentzian products

15:40-15:55 **Z. Nie**, Penn State Altoona
Secondary Chern-Euler forms and the law of vector fields

16:00-17:00 **Room No. T2**

16:00-16:15 **M. Caballero Campos**, Universidad de Córdoba
New Calabi-Bernstein results for maximal graphs and constant mean curvature spacelike graphs

16:20-16:35 **S. Debnath**, Jadavpur University
Ricci soliton and Ricci flow on some type of almost contact manifolds

16:40-16:55 **M. Chaichiraghimi**, Payam-E-Noor University
Geometry of special transformations in Riemannian manifolds

Section 6: **Topology**
Chair: **Birgit Richter**

15:00-16:00 **Room No. T3**

15:00-15:15 **J. Pejsachowicz**, Politecnico di Torino
Elliptic topology and bifurcation

15:20-15:35 **E. Dalyan**, Hitit University
Open book decompositions of links of quotient surface singularities

15:40-15:55 **A. R. Aliabad**, Shahid Chamran University
On the group of torsion elements of C(X)

Wednesday, August 25, 2010

16:00-17:00 **Room No. T3**

16:00-16:15 **A. H. Cruz Cota**, Grand Valley State University
The moduli space of Hex spheres

16:20-16:35 **T. Ramirez Rosas**, Grand Valley State University
Trisecants for knots

16:40-16:55 **S. A. Antonyan**, National University of Mexico
The Gromov-Hausdorff hyperspace of the unit interval

17:00-18:00 **Room No. T3**

17:00-17:15 **S. J. John**, NIT Calicut
Pairwise metacompact spaces

17:20-17:35 **A. Mukherjee**, Tripura University
On δsII generalized closed sets and their applications

Section 7: **Lie Theory and Generalizations**
Chair: **B. S. Kiranagi**

17:00-18:00 **Room No. T2**

17:00-17:15 **J. A. Soto Andrade**, University of Chile
Motion groupoids and geometric Gelfand models

17:20-17:35 **D. N. Verma**, Tata Institute of Fundamental Research
On the G-superalgebra structure for higher syzygies of a projective G-variety

17:40-17:55 **M. Bozicevic**, University of Zagreb
Asymptotic K-character of nilpotent orbits

18:00-19:00 **Room No. T2**

18:00-18:15 **V. Sahai**, Lucknow University
Irreducible (p, q)-representations of the Lie algebra gl(2) and (p, q)-Mellin integral transformation

18:20-18:35 **D. Jakelic**, University of North Carolina
Tensor products and blocks of finite dimensional representations of quantum affine algebras at roots of unity

Section 8: **Analysis**
Chair: **Victor I. Anandam**

17:00-18:00 **Room No. T4**

17:00-17:15 **P. Sharma**, Lucknow University
Some inequalities for harmonic univalent maps involving Wright generalized hypergeometric (Wgh) functions

17:20-17:35 **P. M. Gauthier**, Université de Montréal
Approximation of, and by, the Riemann zeta-function

17:40-17:55 **L. M. Upadhyaya**, Municipal Post Graduate College
A note on a Lauricella-Saran triple hypergeometric function of complex matrix arguments

18:00-19:00 **Room No. T4**

18:00-18:15 **Zafar Ibragimov**, Urgench State University
Quasianalytic functions of several variables in the sense of Gonchar

18:20-18:35 **P. A. Hagelstein**, Baylor University
Recent developments regarding the Halo conjecture

18:40-18:55 **Zair Ibragimov**, California State University
A canonical δ-hyperbolic metric for metric spaces

Section 10: **Dynamical Systems and Ordinary Differential Equations**
Chair: **Nimish A. Shah**

17:00-18:00 **Room No. G.05**

17:00-17:15 **F. Sadirbajevs**, University of Latvia
Asymmetric nonlinear oscillators

17:20-17:35 **H. Baek**, Kyungpook National University
An impulsive two-prey one-predator system with seasonal effects

17:40-17:55 **N. Artamanov**, Moscow State Institute of International Relations
Exponential decay of semigroups for second order non-selfadjoint linear differential equations

18:00-19:00 **Room No. G.05**

18:00-18:15 **D. Pinheiro**, Technical University of Lisbon
An asymptotic universal focal decomposition for a family of mechanical systems

18:20-18:35 **J. P. P. De Almeida**, Instituto Politécnico de Bragan¸ca
Golden tilings

18:40-18:55 **Z. Smarda**, Brno University of Technology
Singular Cauchy problems for certain classes of integro-differential equations

Section 11: **Partial Differential Equations**
Chair: **B. Sri Padmavathi**

17:00-18:00 **Room No. G.03**

17:00-17:15 **U. Kangro**, University of Tartu
Convergence of interior source methods for scattering problems

17:20-17:35 **A. Mandal**, KIIT University
Modelling of surface air temperature and pricing of weather derivatives

17:40-17:55 **B. Singh**, Post Graduate Government College
Wave propagation in a thermally conducting mixture of an elastic solid and a Newtonian fluid

18:00-19:00 **Room No. G.03**

18:00-18:15 **M. T. Jenaliev**, Institute of Mathematics Almaty
On a boundary value problem for spectrally loaded heat operator

18:20-18:35 **T. Leonori**, Universidad de Granada
Gradient bounds for elliptic problems singular at the boundary and application to a stochastic control problem with state constraint

18:40-18:55 **G. Avalishvili**, Tbilisi State University
On some nonclassical problems for non-stationary equations of mathematical physics

Section 12: **Mathematical Physics**
Chair: **K. Srinivasa Rao**

15:00-16:00 **Room No. T5**

15:00-15:15 **V. Khambolja**, B. V. M. Engineering College
Interior black-hole solution with anisotropic fluid

15:20-15:35 **A. Murad**, University of Chittagong
The Stokes flow past shear-free spheroid

15:40-15:55 **M. D. R. Etchechoury**, Universidad Nacional de La Plata
Geometric constraint algorithms for Dirac manifolds

16:00-17:00 **Room No. T5**

16:00-16:15 **L. Kompaniets**, Institute of Computational Modelling
On the analytical solutions for some problems of diagnostic calculations of windinduced flow

16:20-16:35 **R. Dey**, Harish-Chandra Research Institute
Geometric prequantization of various moduli spaces

16:40-16:55 **J. Bernatska**, National University of Kiev-Mohyla Academy
Applications of the method of stereographic parametrization

Chair: **Rukmini Dey**

17:00-18:00 **Room No. T5**

17:00-17:15 **A. Patwardhan**, St. Xavier's College at Mumbai
Euler characteristic in mathematical physics: for statistical physics and field theory

17:20-17:35 **M. K. Awasthi**, IIT Roorkee
Viscous contributions to the pressure for potential flow analysis of electrodynamic Kelvin-Helmhotz instability

17:40-17:55 **O. P. Suthar**, Jai Narain Vyas University
Effect of g-jitter on the onset of thermosolutal viscoelastic convection in the absence of local thermal equilibrium

18:00-19:00 **Room No. T5**

18:00-18:15 **Tulsi Dass**, IIT Kanpur
Supmech: a non-commutative geometry based universal mechanics accommodating classical and quantum mechanics

18:20-18:35 **S. N. Bora**, IIT Guwahati
Scattering of oblique water waves in a two-layer fluid flowing through a channel with bottom deformation

18:40-18:55 **S. Karippadath**, Nagpur University
Hyperbolic geometry and invariant ratio of quark masses

Section 13: **Probability and Statistics**
Chair: **Rahul Roy**

15:00-16:00 **Room No. T4**

15:00-15:15 **H. C. Taneja**, Delhi Technological University
Length biased weighted residual inaccuracy measure

15:20-15:35 **R. K. Bajaj**, Jaypee University of Information Technology
On restricted fuzzy linear regression using fuzzy entropy

15:40-15:55 **N. Gupta**, Jaypee University of Information Technology
On some reliability properties of mean inactivity time order under weighing

16:00-17:00 **Room No. T4**

16:00-16:15 **C. A. Vivacqua**, Universidade Federal Do Rio Grande Do Norte
Comparative study of normal plots for analyzing unreplicated factorial designs

16:20-16:35 **N. Sidarova**, University College London
Phase transitions for dilute particle systems with Lennard-Jones potential

16:40-16:55 **W. Li**, University of Delaware
Small value probabilities

Section 14: **Combinatorics**
Chair: **B. Bommanahal**

18:00-19:00 **Room No. G.01**

18:00-18:15 **G. R. Paseman**, SDFAE
A different approach to Hadamard's maximum determinant problem: update

18:20-18:35 **K-W. Lih**, Academia Sinica
Acyclic list edge coloring of graphs

18:40-18:55 **B. Waphare**, Pune University
On characterization of strong posets

Section 16: **Numerical Analysis and Scientific Computing**
Chair: **J. Xu**

15:00-16:00 **Room No. 1.05**

15:00-15:15 **S. Xiang et al**, Central South University
Clenshaw-Curtin-Filon-type method for highly oscillatory Bessel transforms and applications

15:20-15:35 **A. H. Siddiqi**, Aligarh Muslim University and Sharda University
Wavelets associated with non-uniform vector-valued multiresolution analysis

15:40-15:55 **R. G. Campos et al**, Universidad Michoacana
XFT: a fast discrete fractional Fourier transform

16:00-17:00 **Room No. 1.05**

16:00-16:15 **A. Marica**, Ikerbasque, Basque Foundation for Sciences
High frequency localized solutions and filtering mechanisms for classical and non-conforming semi-discretizations of the wave equation

16:20-16:35 **E. R. Oberaigner**, University of Leoben
An integral equation approach to solve time-dependent heat conduction problems

16:40-16:55 **S. Krishna Murthy**, IIT Kanpur
Darcy mixed convection in a fluid saturated 3D porous enclosure with a centrally buried isothermal cubical structure under suction effect

17:00-18:00 **Room No.1.05**

17:00-17:15 **A. Patel**, The LNM Institute of Information Technology
Lagrange multiplier method with penalty for elliptic interface problems

17:20-17:35 **N. Temirgaliyev**, L. N. Gumilyov Eurasian National University
The exact orders of the computational widths

17:40-17:55 **I. Amirali (Amiraliyeva)**, Sinop University
Difference schemes for singularly perturbed Boussinesq system

Section 17: **Control Theory and Optimization**
Chair: **K. Balachandran**

17:00-18:00 **Room No. 1.06**

17:00-17:15 **J. Dutta**, IIT Kanpur
Revisiting optimality conditions in convex programming

17:20-17:35 **R. P. Agdeppa**, Mindanao University of Science and Technology
More realistic mathematical models of traffic equilibria

17:40-17:55 **E. Rentsen**, National University of Mongolia
Some method and algorithm for solving DC programming

18:00-19:00 **Room No. 1.06**

18:00-18:15 **F. Flores-Bazán**, Universidad de Concepción
Characterizing the lagrangian strong duality in constrained non-convex optimization

18:20-18:35 **S. Bhattacharya**, Tripura University
Some study on fuzzy control theory: special attention on queuing control at air and rail traffic network

18:40-18:55 **M. R. Nagalakshmi**, Nirmala College
Optimization of vehicle routing problem with stochastic demand by variant of ant algorithm

Mathematical Software

Room No. 1.04

Chair: **S. Kumaresan**

15:00-15:15 **MS1 Raazesh Sainudiin**, University of Canterbury
A C++ class library for statistical set processing

15:20-15:35 **MS2 Vembu**, SBK College
Graphsoft

15:40-15:55 **MS3 Tatsuyoshi Hamada**, Fukuoka University
KNOPPIX/Math: Open source desktop environment for mathematics

16:00-16:15 **MS4 William Stein-Sage**, University of Washington at Seattle
Creating a viable open source alternative to Magma, Maple, Mathematica, and Matlab

Other Activities

17:00-18:00	Popular lecture by **Simon Singh**	**Hall 4**
17:00-19:00	London Mathematical Society Mechanisms for strengthening mathematics in developing countries	**Hall 2**
19:00	Hindustani Classical Music Concert **Ustad Rashid Khan** (Vocal)	**Hall 4**

Thursday, August 26, 2010

09:00-10:00	**Thomas J. R. Hughes**, University of Texas, Austin, USA *Isogeometric analysis* *Chair*: **R. Jeltsch**	**Hall 4**
10:15-11:15	**Peter Jones**, Yale University, USA *Eigenfunctions and coordinate systems on manifolds* *Chair*: **I. Daubechies**	**Hall 4**
11:30-12:30	**Kim Plofker**, Union College, USA *Indian rules, Yavana rules: foreign identity and the transmission of mathematics* *Chair*: **D. Mumford**	**Hall 4**
12:30-13:45	**Lunch**	
13:45-14:45	**Hugh Woodin**, University of California, Berkeley, USA *Strong axioms of infinity and the search for V* *Chair*: **J. Nesetril**	**Hall 4**
15:00-18:00	Invited Lectures and Short Communications in Parallel Sessions	
18:00-20:00	**Round Table**: *Use of metrics in evaluating research*	**Hall 4**

Thursday, August 26, 2010

Hall	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00
H2	*****	*****	*****	*****	*****
H4	IT2.5	IT2.6	*****	RT+	RT+
G.01	IT15.6	IT15.7	SC(15)	*****	*****
G.02	*****	*****	*****	*****	*****
G.03	IT12.7	IT12.8	IT12.9	*****	*****
G.04	*****	*****	*****	*****	*****
G.05	IT7.8	IT7.9	*****	*****	*****
G.06	*****	*****	*****	*****	*****
1.01	IT6.7	IT6.8	IT6.9	*****	*****
1.02	SC(17)	SC(17)	SC(17)	SC(17)	SC(17)
1.03	IT13.9	IT13.10	IT13.11	*****	*****
1.04	SC(18)	SC(18)	SC(18)	SC(18)	*****
1.05	SC(19)	SC(19)	SC(19)	*****	*****
1.06	IT20.1	IT20.2	IT20.3	*****	*****
2.03	IT5.9	IT5.10	IT5.11	*****	*****
2.04	*****	*****	*****	*****	*****
T1	SC(3)	SC(3)	SC(3)	*****	*****
T2	*****	*****	SC(2)	SC(2)	*****
T3	SC(9)	SC(9)	SC(9)	*****	*****
T4	SC(8)	SC(8)	SC(8)	SC(8)	*****
T5	SC(10)	SC(10)	SC(10)	SC(10)	SC(10)
T6	SC(11)	SC(11)	SC(11)	*****	*****

RT+ - Round Table: Use of metrics in evaluating research

Invited Lectures

Section 2: **Algebra** **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

Section 5: **Geometry** **Room No. 2.03**
Chair: **R. Schoen**

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

Section 6: **Topology** **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

Section 7: **Lie Theory and Generalizations** **Room No. G.05**
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

Section 12: **Mathematical Physics** **Room No. G.03**
Chair: **N. Reshetikhin**

15:00-15:45 **12.7 Y. Last**, Hebrew University of Jerusalem, Israel
Stability of absolutely continuous spectrum under decaying perturbations: a review of recent developments

16:00-16:45 **12.8 G. Seregin**, Oxford University, UK
Weak solutions to the Navier-Stokes equations with bounded scale-invariant quantities

17:00-17:45 **12.9 V. Mastropietro**, Università degli Studi di Roma, Tor Vergata, Italy
Universality, phase transitions and extended scaling relations

Section 13: **Probability and Statistics** **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

Section 15: **Mathematical Aspects of Computer Science** **Room No. G.01**
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

Section 20: **History of Mathematics** **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

Short Communications

Section 2: **Algebra**
Chair: **A. V. Jayanthan**

17:00-18:00 **Room No. T2**

17:00-17:15 **R. P. Sharma**, Himachal Pradesh University
Connes subgroups and graded semi-rings

17:20-17:35 **T. Vasanthi**, Yogi Vemana University
On the additive and multiplicative structure of semirings

17:40-17:55 **I. Yengui**, University of Sfax
Stably free modules over R[X] of rank > dimR are free

18:00-19:00 **Room No. T2**

18:00-18:15 **S. A. Katre**, Pune University
Matrices over Dedekind domains as sums of k-th powers

18:20-18:35 **T. M. Keller**, Texas State University
Lower bounds for the number of conjugacy classes in finite groups

Section 3: **Number Theory**
Chair: **K. Srinivas**

15:00-16:00 **Room No. T1**

15:00-15:15 **A. Tripathi**, IIT Delhi
Exact results for the Frobenius problem in three variables

15:20-15:35 **G. Soydan**, Isiklar Air Force High School
On the solutions of some specific exponential diophantine equations

15:40-15:55 **D. Shirolkar**, Pune University
Jacobi sums and cyclotomic numbers of order l^2

16:00-17:00 **Room No. T1**

16:00-16:15 **P. Kirschenhofer**, University of Leoben
Shift radix systems-finiteness and periodicity properties

16:20-16:35 **R. Barman**, Tezpur University
A note on Iwasawa μ-invariants of elliptic curves

16:40-16:55 **N. Dasgupta**, Indira Gandhi National Open University
Probability of integers being prime and usage of prime pairs in cryptography

17:00-18:00 **Room No. T1**

17:00-17:15 **A. Ivic**, Serbian Academy of Sciences
On the mean square of $|\zeta(1 + it)|$

17:20-17:35 **D. Gusic**, University of Sarajevo
On the prime geodesic theorem for hyperbolic with cusps

17:40-17:55 **T. Okada**, Fukushima Medical University
Applications of a multinomial measure to the digital sums

Section 8: **Analysis**
Chair: **Ajit Iqbal Singh**

15:00-16:00 **Room No. T4**

15:00-15:15 **P. Das**, Jadavpur University
Two valued measure and summability of double sequences

15:20-15:35 **A. Clop**, Universidad Autonoma de Barcelona
Uniqueness of normalized solutions to nonlinear Beltrami equations

15:40-15:55 **N. Memic**, University of Sarajevo
Fourier multipliers on totally disconnected groups

16:00-17:00 **Room No. T4**

16:00-16:15 **M. D. Bolt**, Calvin College
A global characterization of tubed surfaces in C2

16:20-16:35 **W. O. Urbina Romero**, Roosevelt University
Riesz potentials, Bessel potentials and fractional derivatives on function spaces for Gaussian measure

16:40-16:55 **M. Avdispahic**, University of Sarajevo
Differentiation on local fields

Chair: **S. Kumaresan**

17:00-18:00 **Room No. T4**

17:00-17:15 **L. Lorentzen**, NTNU
Continued fractions and linear fractional transformations: why do continued fractions converge so well?

17:20-17:35 **S. Piric**, University of Tuzla
Determination of jumps by Fourier-Jacobi coefficients

17:40-17:55 **N. Bokayev**, L. N. Gumilyov Eurasian National University
On integrability with weight of the sum of series with respect to multiplicative systems

18:00-19:00 **Room No. T4**

18:00-18:15 **M. More**, Maharashtra Academy
Inclusion properties of a certain subclass of strongly close-to-convex functions

18:20-18:35 **L. M. Tovar Sanchez**, Escuela Superior de Fisica y Matematicas
Like-hyperbolic Bloch-Bergmann classes

18:40-18:55 **E. Shcherbakov**, Kuban State University
A new approach to the study of equilibrium of a pendant drop

Section 9: **Functional Analysis and Applications**
Chair: **A. K. Vijayarajan**

15:00-16:00 **Room No. T3**

15:00-15:15 **U. Kähler**, Universidade de Aviero
Discrete monogenic signals

15:20-15:35 **M. Skopina**, St. Petersburg State University
p-adic wavelets

15:40-15:55 **A. Mahato**, Indian School of Mines
Continuity of Bessel wavelet transform on some distribution spaces

16:00-17:00 **Room No. T3**

16:00-16:15 **J. S. Aujla**, Dr. B. R. Ambedkar National Institute of Technology
Convex functions and matrix inequalities

16:20-16:35 **A. Singh**, Jai Narain Vyas University
On Weierstrass transform of tempered Boehmians

16:40-16:55 **L. Zhang**, Renmin University of China
The characterization of a class of quantum Markov semigroups and the associated Dirichlet forms based on Hilbert C-modules*

17:00-18:00 **Room No. T3**

17:00-17:15 **M. Sal Moslehian**, Ferdowsi University of Mashhad
Refinements of operator Jensen's inequality

17:20-17:35 **A. L. Brown**, University College London
Metric projections onto finite dimensional subspaces of continuous functions

17:40-17:55 **I. B. Dadashova**, Baku State University
Rational approximation on closed curves

Section 10: **Dynamical Systems and Ordinary Differential Equations**
Chair: **P. Bernard**

15:00-16:00 **Room No. T5**

15:00-15:15 **J. Diblik**, Brno University of Technology
Stability of solutions of linear differential systems of neutral type with constant coefficients

15:20-15:35 **E. Karulina**, Moscow State University of Economics, Statistics and Informatics
On some estimates for the first eigenvalue of the Sturm-Liouville problem with third type boundary conditions

15:40-15:55 **I. Astashova**, Moscow State University of Economics, Statistics and Informatics
On qualitative behaviour of solutions to nonlinear ordinary differential equations of higher order

16:00-17:00 **Room No. T5**

16:00-16:15 **F. Sahraoui**, University of Sidi Bel Abbès
The dynamics of holomorphic germs tangent to the identity near a smooth curve of fixed points

16:20-16:35 **P. K. Srivastava**, IIT Kanpur
Modeling and analysis of HIV infection and drug therapy

16:40-16:55 **B. Lakshmi**, J. N. T. University
Chaotic dynamics in some pendulum type equations

Chair: **J. S. Aujla**

17:00-18:00 **Room No. T5**

17:00-17:15 **H. Jafari**, University of Mazandaran
Iterative methods for solving fractional differential equations

17:20-17:35 **B. Ishwar**, BRA Bihar University
Nonlinear stability in the generalized photogravitational restricted three body problem with Poynting-Robertson drag

17:40-17:55 **N. K. Thakur**, Indian School of Mines
Diffusive driven instabilities and spatio-temporal patterns in a predator-prey system

18:00-19:00 **Room No. T5**

18:00-18:15 **S. Thakar**, Shivaji University
Application of Noether's theorem to non-linear oscillators through canonical transformations

18:20-18:35 **J. Knezevic-Miljanovic**, Belgrade University
Asymptotic properties of some nonlinear differential equations

18:40-18:55 **V. Piramanantham/E. Thandapani**, University of Madras
Oscillation criteria for second order nonlinear neutral type dynamic equation on time scales

19:00-20:00 **Room No. T5**

19:00-19:15 **J. Bhattacharya/S. Pal**, Carey High School
Coexistence of competing predators in coral reef ecosystem

19:20-19:35 **R. K. Upadhyay**, Indian School of Mines
Spatio-temporal dynamics and pattern formation in aquatic predator-prey systems
A. Chatterjee, Mirzapur H.S.C. High School
Nutrient-phytoplankton-zooplankton interaction in an open marine system-model based study

Section 11: **Partial Differential Equations**
Chair: **T. Amaranath**

15:00-16:00 **Room No. T6**

15:00-15:15 **A. M. Bertone**, Universidade Federal de Uberl^andia
Analytic solution for a miscible displacement model in heterogeneous porous media

15:20-15:35 **L. G. F. Dias**, Universidade Federal de Minas Gerais
Global rough solutions to the critical generalized KdV equation

15:40-15:55 **D. Shepelskiy**, Verkin Institute for Low temperature Physics
The Riemann-Hilbert problem approach to the Camassa-Holm equation and the longtime asymptotics

16:00-17:00 **Room No. T6**

16:00-16:15 **S. K. Mohanty**, IIT Kharagpur
A Fourier type expansion formula for problems in hydroelasticity

16:20-16:35 **V. Imaykin**, Research Institute for Innovative Strategies in Education Development
Scattering asymptotics for Maxwell-Lorentz system

16:40-16:55 **M. Kwak**, Chonnam National University
Regularity for 3D Navier-Stokes equations with large data

17:00-18:00 **Room No. T6**

17:00-17:15 **E. Its**, IUPUI
Riemann-Hilbert approach to scattering problems in elastic media

17:20-17:35 **Amit Tomar**, IIT Roorkee
Self-similar shocks in non-ideal gas

17:40-17:55 **A. G. Zarnescu**, Oxford University
Mathematical problems of the Q-tensor theory

Section 15: **Mathematical Aspects of Computer Science**
Chair: **Sudhir Ghorpade**

17:00-18:00 **Room No. G.01**

17:00-17:15 **G. Ganesan**, Adikavi Nannaya University
Various operators on rough fuzzy groups-an impact on information systems

17:20-17:35 **S. Devdas**, Government Arts College (Autonomous)
A note on ambiguous probabilistic deterministic finite state automata

17:40-17:55 **D. Haridas et al**, Advanced Data Processing Research Institute
Application of non-associative algebraic structure: quasigroup to cryptography

Section 17: **Control Theory and Optimization**
Chair: **H. Frankowska**

15:00-16:00 **Room No. 1.02**

15:00-15:15 **V. Obukhovskiy**, Voronezh State University
Topological methods in controllability problems for some classes of systems governed by differential inclusions in Banach spaces

15:20-15:35 **G. Haeser**, University of Sao Paulo
Sequential optimality conditions for smooth constrained optimization

15:40-15:55 **M. Barbero Linan**, Queen's University
High order sufficient conditions for tracking some mechanical control problems

16:00-17:00 **Room No. 1.02**

16:00-16:15 **A. Dhara**, IIT Kanpur
Approximate optimality conditions for minimax programming problems

16:20-16:35 **Surendra Kumar**, IIT Roorkee
Controllability of second order Volterra integro-differential equations with nonlocal conditions

16:40-16:55 **T. Tadumadze**, Tbilisi State University
On the optimality of the initial data for delay differential equations

Chair: **S. Iwata**

17:00-18:00 **Room No. 1.02**

17:00-17:15 **S. Atreya**, D. N. College
Partial outsourcing in a two warehouse supply chain production inventory model

17:20-17:35 **A. A. Khan**, Rochester Institute of Technology
Inverse problems for ill-posed variational and quasivariational inequalities

17:40-17:55 **S. J. Yang**, Yonsei University
Asymptotic analysis of portfolio optimization with stochastic volatility

18:00-19:00 **Room No. 1.02**

18:00-18:15 **S. D. Jabeen/R. N.Mukherjee**, University of Burdwan
Vibration control of a vehicle with passengers using hybdrid genetic algorithm

18:20-18:35 **M. George et al**, Mar Ivanios College
A new solution concept of matrix games in fuzzy environment

18:40-18:55 **T. Parreira/A. Pinto**, University of Porto
Hotelling model with uncertainty on the production cost and networks

19:00-20:00 **Room No. 1.02**

19:00-19:15 **K. Balachandran**, Bharathiar University
Controllability of nonlinear fractional integrodifferential systems

Section 18: Mathematics in Science and Technology
Chair: **P. Manchanda**

15:00-16:00 **Room No. 1.04**

15:00-15:15 **M. Kanoria**, University of Calcutta
Use of state-space and eigenvalue approaches in two temperature generalized thermoelasticity in presence of a spherical cavity

15:20-15:35 **A. Arora**, Kanya Mahavidyalaya
The effect of pore alignment on seismic reflection amplitudes

15:40-15:55 **B. S. Mudagi**, Nowrosjee Wadia College
An investigation into effect of electromagnetic fields on generalized Couette flow with heat transfer

16:00-17:00 **Room No. 1.04**

16:00-16:15 **S. E. Guseynov**, Institute of Mathematical Sciences and Information Technologies
Inverse problems for PDE and ODE systems with incomplete information originated in molecular biology

16:20-16:35 **R. K. Deka**, Gauhati University
Stability of narrow gap Taylor-Dean flow with radial heating: stationary critical modes

16:40-16:55 **M. K. Sharma**, Guru Jambheshwar University of Science and Technology
Pulsatile two phase flow model of blood through stenosed artery

Chair: **C. Schuette**

17:00-18:00 **Room No. 1.04**

17:00-17:15 **Sanjeev Kumar**, Government College at Mandi
Effect of suspended particles on thermosolutal instability in elastico-viscous Rivlin-Eriksen fluid

17:20-17:35 **S-H. Park**, Yonsei University
Asymptotic option pricing under the CEV diffusion

17:40-17:55 **B. M. Paz Mendez de Oliveira**, FCNAUP and LIAAD
Immune response dynamics by T cells

18:00-19:00 **Room No. 1.04**

18:00-18:15 **O. D. Makinde**, Cape-Peninsula University of Technology
Thermal stability of a strong exothermic chemical reaction in cylindrical pipe with variable thermal conductivity and heat loss

18:20-18:35 **G. Chattopadhyay**, Pailan College of Management and Technology
Correspondence between monsoon rainfall over India and sunspot numbers: a view through spectral analysis and neural network

18:40-18:55 **M. Mishra**, IIT Ropar
Mathematical modelling of the sample solvent effects on the chromatography peak shape of analytes

Thursday, August 26, 2010

Section 19: **Mathematics Education and Popularization of Mathematics**
Chair: **Shailesh Shirali**

15:00-16:00 **Room No. 1.05**

15:00-15:15 **Ajit Kumar**, Institute of Chemical Technology
Mathematics training and talent search programme

15:20-15:35 **M. M. Garcia Pupo**, Universidad Antonio Noriño
A dialectical invariant for a didactic approach of mathematics

15:40-15:55 **M. N. Pourkazemi**, Shahid Beheshti University
Application of mathematics in economics and management and the appropriate method for teaching mathematics in these fields

16:00-17:00 **Room No. 1.05**

16:00-16:15 **U. Malaspina**, Pontifica Universidad Catolica de Peru
Intuition and optimization problems in the teaching-learning processes in basic education

16:20-16:35 **W. Ogana**, University of Nairobi
Promoting mathematics in Africa: AMMSI perspective

16:40-16:55 **L. Radhakrishna**, Bangalore University
Principles of professional writing

17:00-18:00 **Room No. 1.05**

17:00-17:15 **H. V. Jain**, Devi Ahilya University
Practical approach in mathematics education

17:20-17:35 **N. D. Calkins**, Dominican University of California
Cave man math

17:40-17:55 **S. Dey**, ICFAI University
The unique calendar

Other Activities

18:00-20:00 **Round Table** **Hall 4**
The use of metrics in evaluating research

Friday, August 27, 2010

09:00-10:00	**Hillel Furstenberg**, Hebrew University of Jerusalem, Israel *Ergodic structures and non-conventional ergodic theorems* *Chair*: **M. S. Raghunathan**	**Hall 4**
10:15-11:15	**R. Balasubramanian**, Institute of Mathematical Sciences, India *Highly composite* *Chair*: **J-M. Deshouillers**	**Hall 4**
11:30-12:30	**Richard Schoen**, Stanford University, USA *Riemannian manifolds of positive curvature* *Chair*: **M. de León**	**Hall 4**
12:30-13:45	**Lunch**	
13:45-14:45	**Emmy Noether Lecture** **Idun Reiten**, Norwegian University of Science and Technology, Norway *Cluster categories* *Chair*: **C. Voisin**	**Hall 4**
15:00-18:00	Invited Lectures and Short Communications in Parallel Sessions	
18:00	**Closing Ceremony**	**Hall 4**

Friday, August 27, 2010

Hall	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00
H2	IAMP*	*****	*****	*****	*****
H4	IT3.9	IT3.10	IT3.11	Closing	Ceremony
G.01	IT4.10	IT4.11	IT4.12	*****	*****
G.02	*****	*****	*****	*****	*****
G.03	IT11.9	*****	*****	*****	*****
G.04	*****	*****	*****	*****	*****
G.05	IT10.9	IT10.10	SC(10)	*****	*****
G.06	*****	*****	*****	*****	*****
1.01	IT6.10	IT6.11	IT6.12	*****	*****
1.02	SC(17)	SC(17)	SC(17)	*****	*****
1.03	IT13.12	IT13.13	SC(13)	*****	*****
1.04	SC(18)	SC(18)	SC(18)	*****	*****
1.05	SC(16)	SC(16)	SC(16)	*****	*****
1.06	IT1.3	IT1.4	SC(1)	*****	*****
2.03	IT5.12	IT5.13	*****	*****	*****
2.04	*****	*****	*****	*****	*****
T1	SC(2)	SC(2)	SC(2)	*****	*****
T2	SC(14)	SC(14)	SC(14)	*****	*****
T3	SC(19)	SC(19)	SC(19)	*****	*****
T4	SC(8)	SC(8)	SC(8)	*****	*****
T5	SC(12)	SC(12)	SC(12)	*****	*****
T6	SC(20)	SC(20)	*****	*****	*****

IAMP* - Meeting of the International Association of Mathematical Physicists

Invited Lectures

Section 1: **Logic and Foundations** — **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

Section 3: **Number Theory** — **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

Section 4: **Algebraic and Complex Geometry** — **Room No. G.01**
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

Section 5: **Geometry** — **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

Friday, August 27, 2010

Section 6: **Topology** **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

Section 10: **Dynamical Systems and Ordinary Differential Equations** **Room No. G.05**
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

Section 11: **Partial Differential Equations** **Room No. G.03**
Chair: **M. Vanninathan**

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

Section 13: **Probability and Statistics** **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

Short Communications

Section 1: **Logic and Foundations**
Chair: **H. Woodin**

17:00-18:00 **Room No. 1.06**

17:00-17:15 **G. Vasanti**, Andhra University
Some properties of images and inverse images of L-intuitionistic or L-vague fuzzy subsets

17:20-17:35 **S. Salehi**, University of Tabriz
Herbrand consistency and bounded induction

17:40-17:55 **B. Razet**, Tata Institute of Fundamental Research
Effective Eilenberg machines

Section 2: **Algebra**
Chair: **U. K. Anandavardhanan**

15:00-16:00 **Room No. T1**

15:00-15:15 **V. Yanchevskii**, National Academy of Sciences of Belarus
On special homomorphic images of SU(1,D)/[U(1,D),U(1,D)]

15:20-15:35 **A. Khaksari**, Payam-E-Noor University
Generalization of prime ideals and prime submodules

15:40-15:55 **J. W. Lim**, POSTECH
Prüfer v-multiplication domains and related domains of the form A + B[¡¤]

16:00-17:00 **Room No. T1**

16:00-16:15 **P. T. Toan**, Pohang University of Science and Technology
Krull dimension in power series rings

16:20-16:35 **S. Murthy**, Oxford Brookes University
Probabilistic algorithms and results for the complexity of group theoretic matrix multiplication

17:00-18:00 **Room No. T1**

17:00-17:15 **C. Guddati**, Andhra University
On prime filters in normal almost distributive lattices

17:20-17:35 **P. Murgel Veloso**, Universidade Federal de Minas Gerais
Alternating units in integral group rings

17:40-17:55 **O. R. Devi**, Manipur University
A study on fuzzy ideals of N-groups

Section 8: **Analysis**
Chair: **B. S. Komal**

15:00-16:00 **Room No. T4**

15:00-15:15 **S. K. Vodopyanov**, Sobolev Institute of Mathematics
Lp spaces of differentiable forms and mappings with controlled distortion

15:20-15:35 **P. Srivastava**, Lucknow University
Certain generalized classes of p-valent analytic functions involving convolution

15:40-15:55 **M. Pathak**, Lucknow University
Some characterization properties of classes of p-valent analytic functions involving certain integral operators

16:00-17:00 **Room No. T4**

16:00-16:15 **A. I. Singh**, Indian Statistical Institute
Involutions in algebras arising from groups and hypergroups

16:20-16:35 **J. Singh**, Dr. B. R. Ambedkar National Institute of Technology
Matrix versions of some classical inequalities

16:40-16:55 **P. Gochhayat**, Sambalpur University
Sandwich type theorems of some subclasses of multivalent functions associated with a differential operator

17:00-18:00 **Room No. T4**

17:00-17:15 **J. A. Adepoju**, University of Lagos
Effectiveness of Gregory type set of interpolatory polynomials

17:20-17:35 **S. George**, Mangalore University
Subsets of the square with the continuous and order preserving fixed point property

17:40-17:55 **M. Arunkumar**, Sacred Heart College
Additive functional equations

Section 10: **Dynamical Systems and Ordinary Differential Equations**
Chair: **W. de Melo**

17:00-18:00 **Room No. G.05**

17:00-17:15 **S. Kendre**, Pune University
On existence results of impulsive integro-differential inclusions

17:20-17:35 **T. K. Dutta**, Gauhati University
Determination of periodic orbits with bifurcation values, strange attractor, Lyapunov exponents and various fractal dimensions on two-dimensional discrete systems

17:40-17:55 **S. Pandey**, Allenhouse Institute of Technology
Controlling the spread of malaria using bacteria: a mathematical approach

Section 12: **Mathematical Physics**
Chair: **Tulsi Dass**

15:00-16:00 **Room No. T5**

15:00-15:15 **K. Pileckas**, Vilnius University
On a plane steady exterior Navier-Stokes problem

15:20-15:35 **P. S. R. Murthy**, Gitam University
MHD two-phase flow and heat transfer between two parallel porous walls in a rotating system

15:40-15:55 **D. M. Packwood**, University of Canterbury
On the conceptual interpretation of Brownian motion driven stochastic differential equations

16:00-17:00 **Room No. T5**

16:00-16:15 **S. C. Pandey**, Banasthali University
Computable extensions of generalized fractional kinetic equations in astrophysics

16:20-16:35 **J. Krol**, University of Silesia
Small exotic smooth R4 and string theory

16:40-16:55 **J. Vala**, National University of Ireland
Topological phases and superconducting states in Kitaev-like lattice models

17:00-18:00 **Room No. T5**

17:00-17:15 **N. Ahmed**, Gauhati University
MHD transient flow past an impulsively started horizontal porous plate in a rotating fluid with Hall current

17:20-17:35 **H. Comman**, Pontifica Universidad Catolica de Valparaiso
LDP for periodic states quantum spin systems

17:40-17:55 **C. W. D. Daenzer**, University of California at Berkeley
Metric stacks and Gromov-Hausdorff distance

Section 13: **Probability and Statistics**
Chair: **R. L. Karandikar**

17:00-18:00 **Room No. 1.03**

17:00-17:15 **A. Karczewska**, University of Zielona Gora
Convolution type stochastic Volterra equations in Hilbert space

17:20-17:35 **Vikas Kumar**, Delhi College of Engineering
On dynamic Renyi cumulative residual entropy measure

17:40-17:55 **R. Srivastava**, Harish-Chandra Research Institute
Non-additive entropy measure based residual lifetime distributions

Section 14: **Combinatorics**
Chair: **S. S. Sane**

15:00-16:00 **Room No. T2**

15:00-15:15 **T. Tamizh Chelvam**, Manonmaniam Sundaranar University
Domination parameters of circulant graphs

15:20-15:35 **A. S. Lakshmanan**, St. Xavier's College for Women at Aluva
On b-perfect graphs and b-chromatic number of regular graphs

15:40-15:55 **R. Pawale**, University of Mumbai
Characterization of quasi-symmetric designs in terms of residuals of biplanes

16:00-17:00 **Room No. T2**

16:00-16:15 **V. Shlyk**, National Academy of Science of Belarus
Polyhedral approach to integer partitions

16:20-16:35 **B. Basavanagoud**, Karnatak University
On Chainos total-ctree graph of a graph

16:40-16:55 **P. Karuvachery**, CUSAT
Root graphs of anti-Gallai graphs

17:00-18:00 **Room No. T2**

17:00-17:15 **D. Sinha**, Banasthali University
C-consistency of signed line structures

17:20-17:35 **R. S. Bhat**, Manipal Institute of Technology
Strong (weak)edge-edge domination number of a graph

17:40-17:55 **P-Y. Tsai**, Academia Sinica
The strong chromatic index of Halin graphs

Section 16: **Numerical Analysis and Scientific Computing**
Chair: **Rajen Sinha**

15:00-16:00 **Room No. 1.05**

15:00-15:15 **D. S. Dilip**, Sacred Heart College
Sums of reciprocal of generalized factorial

15:20-15:35 **J. R. Sharma/R. K. Guha**, Sant Longowal Institute of Engineering and Technology
An efficient root-finding method with eighth-order convergence

15:40-15:55 **K. Srinivasan et al**, Sacred Heart College
Properties of infinite series solutions of 2nd order generalized difference equation

16:00-17:00 **Room No. 1.05**

16:00-16:10 **F. de la Hoz**, University of the Basque Country
Numerical study of a geometric flow of curves that develop singularities in finite time

16:20-16:35 **E. Alberdi et al**, UPV/EHU
Reasons why the ODE45 performs better than the ODE15s in some stiff problems

16:40-16:55 **P.S. Rao**, Indian School of Mines
Efficiency of direct parallel algorithm applied to thermohydrodynamic lubrication

17:00-18:00 **Room No. 1.05**

17:00-17:15 **S. Das**, Institute of Chemical Technology
Numerical studies of thermal stratification in a cylindrical vessel

17:20-17:35 **G. Awanou**, Northern Illinois University
Good numerical solutions of fully nonlinear elliptic equations

Section 17: **Control Theory and Optimization**
Chair: **Q. H. Ansari**

15:00-16:00 **Room No. 1.02**

15:00-15:15 **M. K. Srivastava**, University of Delhi
Approximate controllability of non-densely defined first order semilinear integrodifferential control systems

15:20-15:35 **K. Manthripragada**, National Institute of Ocean Technology
Time for un-doing!-What is the mantra? Inversion techniques and optimization

15:40-15:55 **A. K. Bhunia**, University of Burdwan
GA based reliability optimization in stochastic domain

16:00-17:00 **Room No. 1.02**

16:00-16:15 **H. P. Singh**, IIT Roorkee
An adaptive tracking control of robot manipulators in task-space under uncertainties using neural network

16:20-16:35 **N. K. Son**, Vietnam Academy of Science and Technology
The structured distance to non-surjectivity and its application to calculating the controllability radius of linear systems under multi-perturbations

16:40-16:55 **C. O. Kiselman**, Uppsala University
Local minima, marginal functions and separating hyperplanes in discrete optimization

17:00-18:00 **Room No. 1.02**

17:00-17:15 **Z. J. Bartosiewicz**, Bialystok University of Technology
Local observability of analytic systems on time scales

17:20-17:35 **L. Lelevkina**, Kyrgyz Russian Slavic University
Optimal control of the inductive heating process of oil-well casing in cold, intermediate and hot modes

17:40-17:55 **A. Belmiloudi**, INSA
Regulation of uncertain nonlinear systems : a differential equation approach to robust control design with applications to biological systems

Section 18: **Mathematics in Science and Technology**
Chair: **K. I. Kim**

15:00-16:00 **Room No. 1.04**

15:00-15:15 **H. I. Ferreira**, University of Minho
Modelling human decisions with game theory

15:20-15:35 **R. Mondal**, IIT Kharagpur
An expansion formula for wave structure interaction problems in three dimensions

15:40-15:55 **S. Lalwani**, Birla Institute of Scientific Research
Using ABS algorithm to schedule medical residents

16:00-17:00 **Room No. 1.04**

16:00-16:15 **O. Prosorov**, St. Petersburg Department of the Steklov Instituteof Mathematics
Topologies and sheaves in linguistics

16:20-16:35 **Prashant Kumar**, Pohang University of Science and Technology
A moored ship motion analysis with the resonant frequency waves in the POSCO New Harbour

16:40-16:55 **A. Adrego Pinto**, University of Porto
Universality in the financial market

17:00-18:00 **Room No. 1.04**

17:00-17:15 **S. Arora**, SLIET
Modelling of washing zone of Brown stock washer

17:20-17:35 **L. M. Ferreira et al**, FCNAUP and LIAAD
R & D dynamics on costs

17:40-17:55 **Sunil Mathew**, NIT Calicut
A novel approach to cancer detection

Section 19: **Mathematics Education and Popularization of Mathematics**
Chair: **S. Pattanayak**

15:00-16:00 **Room No. T3**

15:00-15:15 **F. Ronning**, Norwegian University of Science and Technology
How artefacts, motives and goals influence the content of mathematical discourse

15:20-15:35 **M. Mallikarjuna Rao**, Princeton Degree College
A framework for internet based teaching and learning mathematics

15:40-15:55 **R. Desfitri**, University of Bung Hatta
Students' algebraic thinking in middle school level

16:00-17:00 **Room No. T3**

16:00-16:15 **M. D. Sánchez**, Instituto Fray Luis de Granada
The Lilavati's legend

16:20-16:35 **K. Pjanic**, University of Sarajevo
The role of teaching and learning settings in solving ordinary differential equations in various contexts

16:40-16:55 **C. Fernandez Sanchez**, Colegio de Bachilleres Del Estado de Tlaxcala México
Teaching strategy adaptation of the Ishikawa's cause-effect diagram for math problems

17:00-18:00 **Room No. T3**

17:00-17:15 **A. H. Durfee**, Mount Holyoke College
Polyhedral differential geometry

Section 20: **History of Mathematics**
Chair: **N. Schappacher**

15:00-16:00 **Room No. T6**

15:00-15:15 **A. B. Padmanabha Rao**, Walchand College of Arts and Science
The relevance of Bhaskara's methods in the present context

15:20-15:35 **M. T. Borgato**, University of Ferrara
Residual analysis versus analytical functions

15:40-15:55 **L. Pepe**, University of Ferrara
Numerical analysis in the 18th century: the Euler-Mascheroni constant

16:00-17:00 **Room No. T6**

16:00-16:15 **N. Shivakumar**, R. V. College of Engineering
Jaina mathematician of canonical group

16:20-16:35 **S. L. Singh**, Gurukula Kangri Vishwavidyalaya
Vedic binary systems and Fibonacci numbers

16:40-16:55 **O. J. Abdounur**, Instituto de Matematica da USP
Mathematics and music, a historical approach on a scientific dissemination context

Other Activities

15:00-16:00 Presentation by the International Association of Mathematical Physicists: *IAMP and funding opportunities not only for Mathematical Physics* **Hall 2**

Practical Information

- **Location of the Congress**
  Hyderabad International Convention Centre
  Novotel and HICC Complex (Near Hitec City)
  P O Bag 1101, Cyberabad Post Office
  Hyderabad - 500 081, India
  Telephone : + 91 40 66824422/ 66134422
  Fax : + 91 40 66844422
  Email : bvenkat@hicc.com

  This convention centre is located within the newly-developed Cybercity that has facilities and offices of some of the world's leading consulting and software companies. The new Rajiv Gandhi International airport is wellconnected to the city by many roads and an expressway. It is about 40 minutes' drive from HICC. The main railway station at Secunderabad is 12 kms away and is a 40 minutes' drive. There are many taxi services on call.

  Connection from Hyderabad Airport to the Conference Centre: Taxis/Cabs are available at the Airport and cost about Rs. 550; they take about 35 minutes to reach the Conference centre by the Outer Ring Road.

  By AERO EXPRESS (Airport Shuttle): These coaches operate on the route Airport - Shilparamam - Airport which would take about 60 mins one way in peak hours and 45 mins in normal traffic hours. These coaches will run every one hour from Airport throughout the day. The fare is Rs. 150 (one way). The convention centre is a couple of kilometres from Shilparamam.

  Connection from Train Stations to Congress Centre: Taxis/cabs can be hired to reach Congress centre - From Secunderabad Railway Station it costs about Rs. 450, from Nampally Railway Station it costs about Rs. 350 and from Kacheguda Railway Station it is about Rs. 400. The other option is to take MMTS train to reach Hi-tech city station and from there to take an autorickshaw to reach Congress centre. This would cost about Rs. 60.

- **Registration Counter**
  At the registration desk, registered participants will be provided with badges, documents, and vouchers for all events that have been confirmed. These documents will not be mailed before the Congress. In the case of fees which have been forwarded late and have therefore not yet been credited to the account of ICM 2010 on the day of arrival, a copy of the remittance order must be presented.

  The Conference Registration Counter is located on the ground floor rightside lobby of the Hyderabad International Convention Centre, where participants will be able to pick up their badges and conference material at the following hours (only badges will be issued; for security reasons, issue of conference bags and other material will start only on August 19th at 14:00):

Wednesday, August 18	11:00 - 19:00
Thursday, August 19	14:00 - 19:00
Friday, August 20	08:00 - 19:00
Saturday, August 21	08:00 - 19:00
Sunday, August 22	08:00 - 19:00
Monday, August 23	Closed
Tuesday, August 24	08:00 - 19:00
Wednesday, August	25 08:00 - 19:00

- **Bank Services**
  Banks are open Monday through Friday from 10.30 am till 4 pm though some banks work longer hours. There are many ATMs throughout the city which handle foreign accounts and dispense Indian currency. The convention centre also has an ATM facility. Money can be exchanged at most star-rated hotels. For instance the hotel Novotel adjacent to HICC will exchange money for you. Not all banks will convert foreign exchange for Rupees. Only those authorized to deal in foreign exchange will do so. Some travel agents like Cox and Kings or Thomas Cook will also exchange money for you.

  Currency: The currency in India is the Rupee, which comes in denominations of 1, 2, 5, 10, 20, 50, 100, 500 and 1,000. (The rupee is made up 100 paise; coins in the denomination of 50 paise are in use.) Please use authorized money changers and banks to change currency. They will issue a certificate of exchange which is required at the time of re-conversion of any unused currency. Under the Foreign Exchange Management Act 1999, it is an offence to exchange foreign currency other than through authorized money changers or banks. You can check the conversion rate from your own currency to INR at www.xe.com

  Credit Cards: Visa and Mastercard credit cards are accepted in all three star and upward hotels in Hyderabad. They are accepted in most supermarkets, upmarket shops and railway stations. You may do online air and train bookings using Visa and Mastercard credit cards. Normally bills below Rs. 100 cannot be paid by credit card though some shops have a higher minimum limit.

- **Contact Information**
  International Direct Dialing: The Country Code for India is '91' followed by the Hyderabad City Code '40', followed by the telephone number, e.g. 91 40 XXXX XXXX. E-Mail A Cybercafe will be provided in one of the halls of HICC where delegates can check their email. The venue HICC will also have wifi facility for those carrying their laptops.

  Personal Messages: There will be a message board in the main foyer of the Hyderabad International Convention Centre (HICC), the venue of the Congress, where participants wishing to exchange personal messages can post their messages.

- **Miscellaneous**
  Local Time: Indian Standard Time (IST) is GMT + 5:30 hrs

  Electricity: Electrical supply in India is 220 volts, 50 Hz. Sockets accept plugs with two or three (grounded) round pins of British Standard 546 type.

  Smoking Policy: All conference rooms, the convention centre and public areas are no-smoking areas.

  Tips: You are not compelled to tip anyone for any service rendered. The normal tip to your waiter in a restaurant is 10 percent.

Social Programmes

- **Opening Ceremony**
  There will be an opening ceremony on the morning of August 19. Prior registration is necessary to attend the opening ceremony as security will ask for your registration badge.

- **Conference Dinner**
  There will be a conference dinner in the evening of August 20, starting at 20:30 hours, for all registered participants and registered accompanying persons.

- **Dance Performance**
  There will be a Bharat Natyam Dance Performance by Prof. C.V. Chandrasekhar of Chennai and his group on the evening of August 20, from 18:00 to 20:00 hours.

- **Vocal Music Recital**
  There will be a vocal music recital of Hindustani Music on the evening of August 25, starting at 19:00 hours, by Ustad Rashid Khan of Kolkata. He will be accompanied by a Tabla player and a Harmonium player. This is open to all registered participants and registered accompanying persons.

Pre and Post Conference Tours

1. Pink City Tour-Jaipur-3 days and 2 nights. Hyderabad-Delhi (by air) - Jaipur-Delhi (by bus)-Hyderabad (by air).

Jaipur, founded in 1727, is the first well planned city of India and located in the desert. The trip covers Amber Fort, the Hawa Mahal, or palace of winds), Nahargarh Fort and the old city as also Sawai Jai Singh's observatory, Jantar Mantar.

The Delhi part of the trip includes visits to Qutub Minar, Humayun's Tomb and Bahai Temple, Rashtrapati Bhavan, Parliament House and India Gate in Delhi.

2. Taj Mahal Tour 3 days and 2 nights. Delhi-Agra-Delhi (by bus or train).

This opulent trip that takes in no less than five World Heritage Sites – the Agra Fort, Fatehpur Sikri, the incomparable Taj Mahal, Humayun's Tomb and Qutub Minar.

The tour also covers the Bahai Temple, Parliament House, Rashtrapati Bhavan and India Gate.

3. Golden Triangle Tour-4 days and 3 nights-Delhi-Agra-Jaipur-Delhi.

Combines the two trips above. For details see www.icm2010.org.in

4. Mumbai Aurangabad-3 nights and 2 days. Hyderabad-Mumbai-Aurangabad - Mumbai-Hyderabad (all by air).

Aurangabad is commonly used as a base for a visit to the World Heritage Sites of Ajanta and Ellora and Amber Fort. The city tour of Mumbai includes Gateway of India, Afghan Church, Marine Drive, Jain temple and Hanging Gardens, Chowpatty, Kamala Nehru Park and also Mani Bhavan where Mahatma Gandhi stayed during his visits to Mumbai, Haji Ali Mosque, the 'Dhobi Ghat', Crawford market and Flora fountain.

5. Mysore and Bangalore 3 days and 2 nights-Bangalore-Mysore-Bangalore by bus.

In Bangalore: The Vidhan Soudha(the legislative assembly), Cubbon Park, Lal Bagh, Bangalore Palace, Venkatappa Art Gallery, Tipu's Palace and the adjoining fort, the Aquarium. Srirangapatnam enroute to Mysore: Tipu's Palaces, Darya Daulat and Jumma Maseedi. Excursion to Somnathpur-the Kesava and Somnath Temples. Mysore: Maharaja Palace (1857), Chamundeswari Temple, the giant Nandi Monolith (1659).

6. Goa 3 days and 2 nights

Panaji, Vasco da Gama, Margao. Beaches, Mangueshi Temple, Shantadurga Temple, Sahakari Spice Plantation, the Basilica of Bom Jesus and Se Cathedral.

7. Kerala God's Own Country 3 days and 2 nights.

Kochi, formerly known as Cochin: Jewish Synagogue, the Mattancherry Palace, Fort Cochin, St.Francis Church. Kumarakom: Bird Sanctuary, the Vembanad Lake, the largest backwater in Kerala, have an Ayurvedic massage. Alleppey: boating in the backwaters.

Single day and half day tours

(1) Half day Golconda and Qutab Shahi Tour.
(2) Half day Mecca Masjid, Salarjung Museum and Charminar Tour.
(3) Half day Pearl and Jewelry Shopping Tour.
(4) Half day Charminar heritage walk.
(5) Half day Kilwat heritage walk.
(6) Full day Nagarjuna Tour (Nagarjunkonda, Nagarjunasagar dam, Etipotala waterfall and Nagarjunkonda Museum).
(7) Full day Pochampalli Tour (see the weavers make cotton and silk material).
(8) Full day Ramoji Film City Tour.

General Information About Tours

The local tour costs include -

1. Transportation from HICC back in an air-conditioned coach.
2. Services of a Guide.
3. Mineral water in coaches.
4. Lunch (for full day tours only).
5. Entrance fee wherever applicable.

The cost of camera fee, video camera fee wherever applicable is not included in the rates, and tickets for these must be purchased by the participants themselves.

Activities for Accompanying Persons

Accompanying persons are invited to join the Congress tours described above.
Please check the websites given below for further information on Hyderabad, and you can also contact the Congress Travel agent for assistance.
www.andhratourism.com
www.tourisminap.com
www.bharatonline.com/andhra-pradesh/

Contact details of Congress Travel agent : Sanjay Bhatt

Tel:+91 11 41653100 +91 11 41653100 Ext: 293
Fax: +91 11 41653101
Mobile no:+91 9818111361
email: sanjaybhatt@iceindia.in

Relevant websites with useful information are:

www.andhratourism.com
www.touristplacesinindia.com/hyderabad/
www.indianholiday.com
www.southindiatourtravel.com
www.fullhyd.com

Committees

I. Local Organizing Committees

- **National Advisory Committee**
  M. S. Narasimhan, T.I.F.R.-C.A.M., Bangalore, *Chair*
  M. S. Raghunathan, T.I.F.R., Mumbai, Secretary
  Seyed E. Hasnain, University of Hyderabad
  Anil Kakodkar, Former *Chair*man, Atomic Energy Commission, Government of India
  T. Ramasami, D.S.T., New Delhi
  P. Rama Rao, I.S.R.O. Brahm Prakash Distinguished Professor
  C. S. Seshadri, Chennai Mathematical Institute

- **Executive Organizing Committee**
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  S. Kesavan, I.M.Sc., Chennai
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  R. M. Puri, I.C.P.B., New Delhi
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  Dinesh Singh, University of Delhi

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  G. Rangarajan, I.I.Sc., Bangalore
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  R. Tandon, University of Hyderabad

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  Shobha Madan, I.I.T., Kanpur
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  G. Rangarajan, I.I.Sc., Bangalore
  T. S. S. R. K. Rao, I.S.I., Bangalore
  I. S. Shivakumara, Bangalore University

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  V. Srinivas, T.I.F.R., Mumbai
  M. Vanninathan, T.I.F.R.-C.A.M., Bangalore

ICM Official Hotels Information

- **At Home Apt. Budget Class**
  +91 40 2311 8800
- **At Home Apt. Business Class**
  Survey No.9, White Fields,
  Kondapur, Hyderabad
  +91 40 2311 0000
- **Centre for Organisation Development**
  +91 40 2311 8889
- **Courtyard by Marriott**
  1-3-1024, Lower Tankbund Road,
  Hyderabad
  +91 40 2752 1222
- **Ellaa Suites**
  H.NO. 2-55/H/H, Kancha Gachibowli,
  ISB Road, hyderabad-500032
  +91 40 2300 2488
- **Falcons Service Apartments**
  Falcons Garden View Inn Enclave,
  Plot No. 16, Lane Behind Fresh Super
  Market, White Fields, Kondapur,
  Hyderabad
  +91 40 6631 4126
- **Imperial Suites**
  1-48/1, Behind ING Vysya Bank,
  Madhapur, Hyderabad-81
  +91 98495 83056
- **Infosys**
  +91 40 6642 0000
- **ISTA**
  Plot No. 7 , IT Park, Nanakramguda,
  Gachi Bowli, Hyderabad -500019
  +91 40 4450 8888
- **ITC Kakatiya**
  6-3-1187, Begumpet, Hyderabad -500016
  +91 40 4008 1828
- **Ivory Sands**
  Plot No. 11, Brundavan Colony,
  Near Nectar Gardens,
  Durgamcheruvu Road, Madhapur,
  Hyderabad - 81
  +91 92468 02580
- **JustA - The Residence**
  Necklace Road, Hyderabad
  +91 40 6633 6644
- **Kasani GR**
  Hi-Tech City, Madhapur,
  Hyderabad -500081
  +91 40 4040 9988
- **Livewell Impex Luxury Service Apt.**
  G-2,Montecarlo,Kothaguda # Roads,
  Hyderabad -5000081
  +91 40 2311 5799
- **Marri Chenna Reddy Human Resource Develpoment Institute of Andhra Pradesh**
  +91 99660 64441
- **Marriott**
  Opp.Hussain Sagar Lake, Tank Bund Road,
  Hyderadab - 500080
  +91 40 2752 2999
- **National Academy of Construction**
  +91 40 2311 1916
- **Novotel HICC**
  Novotel & HICC Complex, (Near Hitec
  City) P.O. Bag 1101,Cyberabad Post Office
  Hyderabad - 500081
  +91 40 6682 4422
- **Oyster Suites**
  Plot No 79. Kavuri Hills, Madhapur,
  Hyderabad - 500034
  +91 40 4435 3535
- **Quality Inn Pearl**
  Gachibowli, Hyderabad-500032
  +91 40 4466 1818
- **Rock View Inn**
  Plot No. 87, Cyber Enclave,
  Behind Cyber Towers, Hi-Tech City,
  Hyderabad -500081
  +91 40 2311 5203
- **Siliconville Gachibowli**
  Plot No9, Jayabheri Enclave,
  Phanse-II, Gachibowli,
  Hyderabad - 500019
  +91 40 3243 4885

- **Spearmint Hotels**
  6-1-1063,Opp, Ranga Reddy Dist
  Collectorate, Lakdi-Ka-Pool,
  Hyderabad - 500004
  +91 40 4435 1234

- **Swagath De Royal**
  2-36,Kothaguda 'x' Road,Kondapur,
  Cyberadab, Hyderabad
  +91 40 2300 1333

- **Taj Banjara**
  Road No 1, Banjara Hills,
  Hyderabad -500034
  +91 40 6666 2323

- **Tara Residency**
  2-91/14/8, "White Fields",
  Kothaguda Post, Kondapur,
  Hyderabad - 500084
  +91 40 2300 2300

- **The Golkonda**
  Masab Tank, Hyderabad-500028
  +91 40 6611 0101

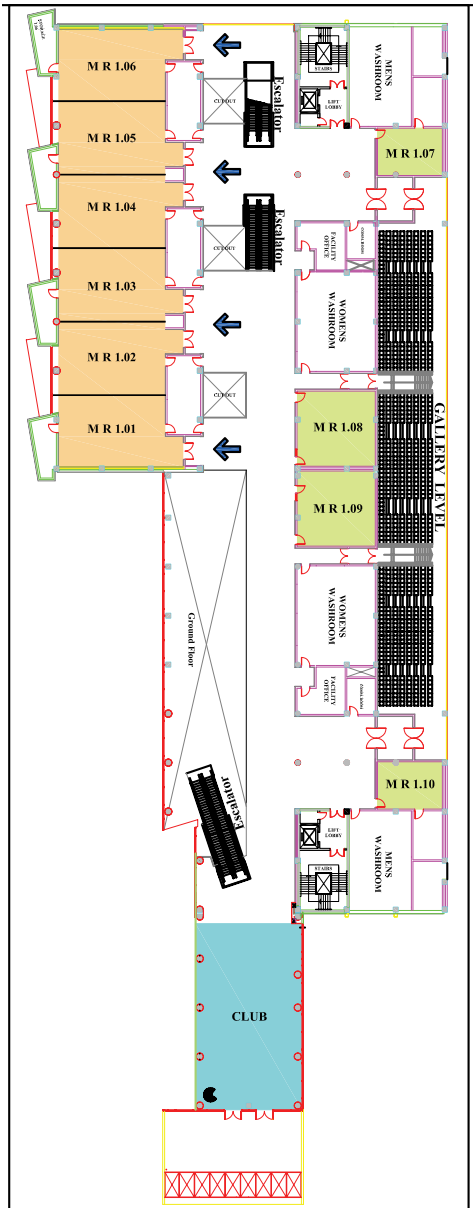
- **The Westin**
  Rheja ITPark, Hi-tech City, Madhapur,
  Hyderadad - 500081
  +91 40 6767 6767

- **Vasantha Valley - Service Apts**
  S.V.S. Apartments, B- Block, Flat no. 503,
  Vasantha Valley, Vasantha Orchids,
  White Fields, Hyderabad
  +91 98851 43262

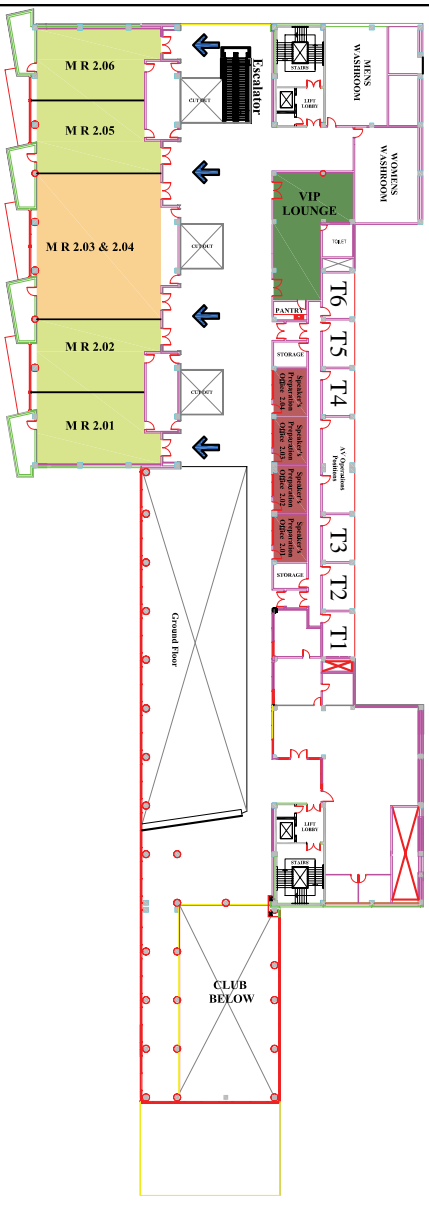
- **Vasantha Valley - Villas**
  S.V.S. Apartments, B- Block, Flat no. 503,
  Vasantha Valley, Vasantha Orchids,
  White Fields, Hyderabad
  +91 98850 03689

- **Walnut Hotel**
  5/76-4-16&17, Raidurgam, Gachibowli,
  Hyderabad
  +91 40 2356 3906

Floor Plan ICM 2010



HICC
FIRST FLOOR PLAN



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SECOND FLOOR PLAN