



INDIAN MATHEMATICAL SOCIETY

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Facsimile of the Commemorative Postage Stamp on the 'Indian Mathematical Society' issued by the Department of Posts (Philately Division, Government of India, to mark the completion of hundred years of the Society. Released on the Inaugural day of the Platinum Jubilee 75th Annual Conference of the Society on 27th December 2009.

80th Annual Conference : Highlights

The 80th Annual Conference of the Indian Mathematical Society was held at the Indian School of Mines (ISM), Dhanbad, Jharkhand during December 27-30, 2014 under the presidentship of Prof. S. G. Dani, IIT, Mumbai. The Conference was attended by more than 260 delegates. Two presidential addresses (General and Technical), one plenary lecture, by Prof. Gopakumar, HRI, Allahabad, four Memorial Award lectures and thirteen invited lectures were delivered. Also, four symposia were organized during the conference and twenty one invited speakers gave talks in the symposia. Moreover, in all 71 research papers were accepted for presentation at the Conference including 16 research papers for the paper presentation competition for various prizes.

The Conference was inaugurated by Shri. R. S. Singh, Director, Steel Plant Project, Electrosteel Castings Ltd., Bokaro. Prof. R. Balasubramanian, Chairman, NBHM was the Chief Guest for the inaugural function. The function was presided over by Prof. S. G. Dani. Prof. G. S. Seth, Head of the Mathematics Department, ISM, offered a warm welcome to the delegates. Prof. D. C. Panigrahi, Director, Indian School of Mines also addressed the gathering. The General Secretary of IMS, Prof. N. K. Thakare spoke about the Indian Mathematical Society and on behalf of the Society expressed his sincere and profuse thanks to the host for organizing the Conference. Prof. N. K. Thakare reported about the academic programmes of the Conference.

Prof. S. G. Dani delivered his Presidential address (General) on “Prizes, Recognitions and Promotion of Mathematics”. The function ended with a vote of thanks by the Local Organizing Secretary, Dr. S. P. Tiwari.

Prof. S. G. Dani delivered his Presidential address (Technical) on “Dynamics of

Contents

IMS Newsletter March/April 2015	1
Important Events	1
80th Annual Conference : Highlights	3
General Body Meeting	8
Memorial Award Lectures	9
IMS Sponsored Lectures	9
Periodicals published by the Society	10
Membership of the Society	11
Guidelines for acceptance of Donations	13
Green initiative taken by the Society - A fervent appeal to all members of the Society	14
 Appendix: Abstracts received for the 80th IMS Con- ference at Dhanbad	 16
Plenary Talk & IMS Memorial Award Lectures	16
The remarriage of mathematics and physics, Rajesh Gopakumar	16
Positivity in C^* -algebras and Hilbert C^* -modules, B.V. Rajarama Bhat	17
Number of solutions of systems of polynomial equations over finite fields, Sudhir R. Ghorpade	17
Rational points and L -functions via the circle method, Ritabrata Munshi	19

Duality for nondifferentiable minimax fractional programming problem involving higher order (C, α, ρ, d) -convexity, Anurag Jayswal, Izhar Ahmad, Krishna Kummari	80
K: Solid Mechanics, Fluid Mechanics, Geophysics and Relativity	81
Mathematical design of vibration & shock isolation systems focusing automobile and aerospace applications, S.N.Bagchi	81
Effect of rigid boundary on torsional surface waves in an inhomogeneous layer over a gravitating anisotropic porous half-space, Shishir Gupta and Abhijit Pramanik	82
Reflection of quasi-P waves in a self-reinforced medium, Mita Chatterjee and Amares Chattopadhyay	83
Reinforcement to the security force in a counter insurgency operation involving range-dependent attrition-rate coefficients, Lambodara Sahu	84
Effect of moving punch in a viscoelastic medium, R.P. Yadav, A.K. Singh and A. Chattopadhyay	85
Propagation of edge wave in fibre-reinforced plate, Anirban Lakshman, Abhishek Kumar Singh and Amares Chattopadhyay	85
SH-wave propagation in an intermediate irregular layer, Kshitish Ch. Mistri, Abhishek Kumar Singh and Amares Chattopadhyay	86
Torsional surface wave propagation in an intermediate viscoelastic layer, Zeenat Parween, Abhishek Kumar Singh and Amares Chattopadhyay	87
L: Electromagnetic Theory, Magneto-Hydrodynamics Astronomy and Astrophysics	88
Rotationally symmetric viscous flow over a rough rotating disk, Bikash Sahoo and Abhijit Das	88

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In this paper, we present new class of higher-order (C, α, ρ, d) -convexity and formulate two types of higher-order duality for a nondifferentiable minimax fractional programming problem. Based on the higher-order (C, α, ρ, d) -convexity, we establish appropriate higher-order duality results. These results extend several known results to a wider class of programs.

K: Solid Mechanics, Fluid Mechanics, Geophysics and Relativity

Mathematical design of vibration & shock isolation systems focusing automobile and aerospace applications

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This is an Industry-academia oriented presentation to highlight the design and selection of Vibration & Shock isolation Systems for Industrial Application. The Vibrations or Oscillations of periodic nature are implicitly connected with almost

everything starting from Atoms & Molecules to the orbital motion of gigantic planets studied in Astrophysics & Astronomy. The Shock is defined as an event in space and hence it requires a fourth dimension of time in addition to space coordinates to define a shock pulse. For industrial calculation the input shock is defined as half sine, Triangular or rectangular pulse in terms of acceleration 'g' and time duration in milli-seconds (ms) for studying the response of shock on mechanical systems or electronic modules, mounted in an aircraft or an aerospace vehicle. The requirement of isolation systems for the landing shock of an aircraft and the lift off & stage separation of a multistage rocket or space vehicle will be explained. By using optimized Vibration and shock isolation systems the force transmission may be reduced substantially which in turn will protect the instruments from severe damage. The mathematical design concepts and the effective reduction in shock transmission achieved by using nonlinear systems will be discussed.

Effect of rigid boundary on torsional surface waves in an inhomogeneous layer over a gravitating anisotropic porous half-space

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The present work aims to deal with the propagation of torsional surface wave in an inhomogeneous layer over a gravitat-