INDIAN MATHEMATICAL SOCIETY

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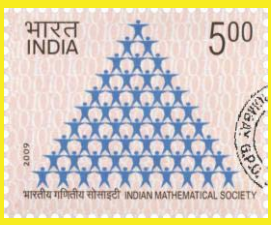

Facsimile of the Commemorative Postage Stamp on the 'Indian Mathematical Society' issued by the Department of Posts (Philately Division, Government of India, to mark the completion of hundred years of the Society. Released on the Inaugural day of the Platinum Jubilee 75th Annual Conference of the Society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

80^{th} Annual Conference : Highlights

The 80^{th} 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

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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

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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-