

International Conference on Vibration Problems (ICoVP)
19-22 January, 2009

IIT Kharagpur - 721 302, India

Tentative Presentation Schedule

19 January, 2009 (Monday)

8:00-8:30 Registration + Breakfast

8:30-9:00 Inauguration: Gargi Auditorium

9:00-10:40 Plenary: Gargi Auditorium, *Chairperson:* Peter Hagedorn

9:00-9:50 Keynote I: Jayanta K. Bhattacharjee - *Renormalization Group and Nonlinear Oscillators*

9:50-10:40 Keynote II: Marian Wiercigroch - *Dynamics of Non-Smooth Mechanical Systems*

Tea (10:40-10:55)

10:55-11:55 Parallel Session I-A: Gargi Auditorium, *Chairperson:* Arun Misra

- *Vibro-acoustics of impact oscillator in a closed rigid enclosure* - Subrahmanya Prasad Narla, Kartik Venkatraman
- *Control of Friction-Induced Vibration by Time-Delayed Position Feedback* - Ashesh Saha and Pankaj Wahi
- *Clustering of Huygens' clocks* - K. Czolczynski, P. Perlikowski, A. Stefanski, T. Kapitaniak

10:55-11:55 Parallel Session I-B: Maitreyee Auditorium, *Chairperson:* K. Sathish Kumar

- *Natural frequency of laminated sandwich plate with soft core* - M.K. Pandit, B.N. Singh and A.H. Sheikh
- *Vibration analysis of woven fiber Glass/Epoxy Composite Plates* - P. Nayak , J. Mohanty and S. K. Sahu
- *Free vibration analysis of geometrically nonlinear laminated composite cylindrical shell panel using nonlinear FEM* - S. K. Panda1 and B. N. Singh

12:00-13:00 Parallel Session II-A: Gargi Auditorium, *Chairperson:* Anindya Chatterjee

- *Analytical and Computational Investigations of Non-linear Dynamics of Mutually Coupled Biological Oscillators* - Vikas Rastogi, Ram Niwas, Vivek Kumar, Amalendu Mukherjee
- *Effects of Ball Size Variation and Number of Balls on Nonlinear Vibrations Associated With High Speed Unbalanced Rotor Supported By Rolling Element Bearings* - Sanjay Upadhyay, S.C. Jain, S.P. Harsha
- *Non-stationary response of orthotropic bridge deck to moving vehicle* - Prasenjit Paul and S. Talukdar

12:00-13:00 Parallel Session II-B: Maitreyee Auditorium, *Chairperson:* Sreyashi Das(nee Pal)

- *Free Vibration Study of Stiffened Composite Conoidal Shell Roofs* Hari Sadhan Das and Dipankar Chakravorty
- *Free vibration of laminated composite skewed spherical shell panel by finite element method* - Aditi Majumdar and Salil Haldar
- *Recent Advances on Low Velocity Impact Response of Laminated Composite: Plates and Shells - A Review* - Biswanath Halder, Suman Chatterjee, Amit Karmakar, Dipankar Chakravorty

Lunch (13:00-14:30)

14:30-16:10 Plenary: Gargi Auditorium, *Chairperson:* Asok Mallik

14:30-15:20 Keynote III Avinash Khare - *Different Facets of Solitons*

15:20-16:10 Keynote IV Esin Inan - *Microstretch Solids*

Tea (16:10-16:25)

16:25-17:25 Parallel Session III-A: Gargi Auditorium, *Chairperson:* S. Talukdar

- *Dynamic Effect of the Rail/Wheel Irregularities on Typical Indian Railway Track System* - Ganesh Babu, C. Sujatha

- *Effect of machine-structure and soil-structure interactions on the dynamic response of turbo-generator rotor* - K. Sathish Kumar, K. Muthumani, N. Gopalakrishnan, R. Sreekala and G.V. Rama Rao
- *Seismic vibration control of piping systems using passive energy dissipation* - K. Sathish Kumar, K. Muthumani, N. Gopalakrishnan, R. Sreekala and G.V. Rama Rao

16:25-17:25 Parallel Session III-B: Maitreyee Auditorium, *Chairperson:* Salil Haldar

- *Vibration Analysis of Nonlocal Elastic Nanoplates using Differential Quadrature Method* - J.K. Phadikar, A. Roy and S C Pradhan
- *Whirling of rotors from a prestressed continuum formulation using harmonic elements* - Pradeep Mahadevan and Anindya Chatterjee
- *A C0 finite element for free vibration analysis of shear deformable FGM plate* - Mohammad Talha¹ and B. N. Singh

Dinner (19:00)

20 January, 2009 (Tuesday)

Breakfast (8:00-8:30)

8:30-10:10 Plenary: Gargi Auditorium, *Chairperson:* Jayanta K. Bhattacharjee

8:30-9:20 Keynote V: Peter Hagedorn - *Ultrasonic Piezoelectric Motors: an Overview and Recent Developments*

9:20-10:10 Keynote VI: Asok Mallik - *Significance of nonlinearity in vibration control*

Tea (10:10-10:25)

10:25-11:25 Parallel Session IV-A: Gargi Auditorium, *Chairperson:* S.P. Harsha

- *Singularity in the discrete-time model of impacting mechanical systems* - Soumya Kundu, and Soumitro Banerjee
- *Fault identification for misaligned rotor system - A model based approach* - A. K. Jalan and A. R. Mohanty
- *Effect Of Labyrinth Seals on Rotordynamics* - Niranjana Behera, A.S.Sekhar

10:25-11:25 Parallel Session IV-B: Maitreyee Auditorium, *Chairperson:* Muralimohan Banerjee

- *Vibration Analysis of Nonuniform Nano-size Beams based on Nonlocal Elasticity Theory and Differential Quadrature Method* - T. Murmu and S. C. Pradhan
- *Nonlinear vibration analysis of rotating thin disk through a numerical domain mapping technique* - Debabrata Das, Prasanta Sahoo and Kashinath Saha
- *Free vibration analysis of non-planar coupled shear walls using continuous connection method* - C.D. Turkozer, O. Aksogan, E. Emsen and R. Resatoglu

Tea (11:25-11:40)

11:40-12:40 Parallel Session V-A: Gargi Auditorium, *Chairperson:* Nandan Kumar Sinha

- *Limit cycle continuation using splines in phase space* - K. Nandakumar, Anindya Chatterjee

- *Wavelet Analysis of chaotic Oscillations in a glow discharge plasma* - A.N. Sekar Iyengar, Md. Nurujjaman and Ramesh Narayanan
- *Non-linear Analysis of a Typical Nose Landing Gear Model with Torsional Free Play* - B Sateesh and Dipak K Maiti

11:40-12:40 Parallel Session V-B: Maitreyee Auditorium, *Chairperson:* C.S. Manohar

- *Effect of Soil Amplification on the Seismic Response of Bridge Structures* - Goutam Ghosh, Yogendra Singh and Shashi Kant Thakkar
- *Vibrations of damaged structures with bonded piezoelectric strips and subjected to aerodynamic loads* - Dan Mateescu, Arun Misra and Yong Han
- *Design and Simulation of Bulk Micromachined Differential Capacitive In-Plane Accelerometer for Vibration Sensing* - R. Mukhiya, T. Praveen Singh and T. K. Bhattacharyya

Lunch (12:40-14:00)

14:00-15:40 Plenary: Gargi Auditorium, *Chairperson:* Marian Wiercigroch

14:00-14:50 Keynote VII: Biren N. Mandal - *Wave scattering by a circular cylinder half-immersed in water with an ice-cover*

14:50-15:40 Keynote VIII: Julius Kaplunov - *Localised dynamic phenomena in elastic solids*

Tea (15:40-15:55)

15:55-16:55 Parallel Session VI-A: Gargi Auditorium, *Chairperson:* Julius Kaplunov

- *Dynamics of Flexible Tethered Satellite System with Kite-like Tether Configuration* - Krishna D. Kumar
- *On the Ballooning Motion of Hyperelastic Strings* - S. Sarangi, R. Bhattacharyya, A. K. Samantaray
- *Computing Periodic Orbits and Bifurcations of an Electrodynamic Tethered Satellite System (ETSS) Model using Numerical Continuation* - Nishanth Lingala, Manogna Naviny and Nandan Kumar Sinha

15:55-16:55 Parallel Session VI-B: Maitreyee Auditorium, *Chairperson:* O. Aksogan

- *Vibration and buckling of beam with transverse crack* - U.K. Mishra, S.K. Sahu
- *Finite element analysis of free and transient vibration in stiffened composite 1-fold plates* - Sreyashi Das(nee Pal), A. Guha Niyogi
- *Investigating of the Dynamic Response in the Problem of Moving Oscillators on the Rectangular Plates* - M. Asghari, A.R. Ghahremani and E. Ghafoori

Gargi Auditorium

17:15- 18:15 Special Lecture: Sir Michael Berry - *Tsunami asymptotics*

Chairperson: Avinash Khare

19:00 Banquet Dinner

21 January, 2009 (Wednesday)

Breakfast (7:30-8:00)

8:00-9:40 Plenary: Gargi Auditorium, *Chairperson:* Esin Inan

8:00-8:50 Keynote IX: Bikash Chakrabarti - *Two Fractal Overlap Time Series: Similarities in Seismic and Financial fluctuations*

8:50-9:40 Keynote X: C.S. Manohar - *Research into condition assessment of existing structures based on dynamic state estimation methods*

Tea and Snacks (9:40-10:00)

Trip

Dinner (19:00)

22 January, 2009 (Thursday)

Breakfast (7:30-8:00)

8:00-9:00 Parallel Session VII-A: Gargi Auditorium, *Chairperson:* Biren N. Mandal

- *Effect of synchronous longitudinal vibrations of an upstream square cylinder on laminar vortex shedding from inline and stationary square cylinder* - Shaligram Tiwari, Pratish P. Patil
- *Characterization of Liquid Filled Containers considering Fluid-Structure Interaction* - P. Pal, S. K. Bhattacharyya
- *Scattering of gravity waves by floating elastic plate in shallow water* - Joydip Bhattacharjee, Trilochan Sahoo, Debabrata Karmakar

8:00-9:00 Parallel Session VII-B: Maitreyee Auditorium, *Chairperson:* P. Biswas

- *Dynamic characteristics of delaminated composites* - Anjan Kumar Acharyya, Dipankar Chakravorty and Amit Karmakar
- *Free vibration analysis of shear deformation laminated composite plates with uncertain system properties* - Padmanav Dash and B. N. Singh
- *Stochastic Non-Linear Thermal Free Vibration of Laminated Composite Plates Resting On Elastic Foundation with Random Foundation Parameters* - Achchhe Lal, B. N. Singh, Rajesh Kumar

9:00-10:00 Parallel Session VIII-A: Gargi Auditorium, *Chairperson:* Shaligram Tiwari

- *Peristaltic Transport of Blood :Wave Propagation in Small Blood Vessel* - S. Maiti, J.C.Misra
- *Fluctuating Flow of a Couple Stress fluid in a Porous Channel* - S. D. Adhikary, J. C. Misra
- *A study on the coupled frequencies of rectangular fluid filled tanks* - Viswanathan.P, Ganesan.N

9:00-10:00 Parallel Session VIII-B: Maitreyee Auditorium, *Chairperson:* S.K. Sahu

- *Vibration and Buckling behaviour of laminated composite curved panel subjected to biaxial non-uniform edge loading* - L. Ravi Kumar, P. K. Datta and D. L. Prabhakara
- *Transient response analysis of smart composite structures in hygrothermal environment* - P. K. Mahato and D. K. Maiti
- *Thermal buckling, free vibration and damping behavior of clamped-clamped viscoelastic sandwich circular plates with composite facings* - Karthik.P, Ganesan.N

Tea (10:00-10:15)

10:15-11:15 Parallel Session IX-A: Gargi Auditorium, *Chairperson:* Goutam Ghosh

- *Optimization to Reduce Automobile Cabin Noise* - Dilip Mandal, Harold Thomas and Narayanan Pagalapati
- *Active Structural Acoustic Control Using RME Technique* - Partha Bhattacharya, Michael Rose and Olaf Heintze
- *Seismic vibration control of a multi-storied building by the liquid column damper* - Surajit Paul, Aparna (Dey) Ghosh

10:15-11:15 Parallel Session IX-B: Maitreyee Auditorium, *Chairperson:* Achchhe Lal

- *Studies on Vehicle with Hydro-Pneumatic Strut* - S. Ramesh, and C. Sujatha
- *A Review of Detection of Ball Bearing Defects in Presence of External Noise* - V. N. Patel, N. Tandon, and R. K. Pandey
- *Structural health monitoring of an underground rcc duct based on bayesian estimate of identified parameter from dynamic responses* - Debasish Bandyopadhyay, S.K. Bhattacharyya

11:15-12:15 Parallel Session X-A: Gargi Auditorium, *Chairperson:* Partha Bhattacharya

- *Elastically supported strings under moving load: acceleration through the sound wave barrier* - Vitaly Voloshin

- *Gyro Sonics Novel Stimulant for Autonomic Nervous System* - S. K. Ghatak, S.S.Ray, R.Choudhuri and S.Banerjee
- *Observational Analysis of Some Pulsating Variable Stars* - Chhavi P. Pandey, Sanjeev K. Tiwari, U. S. Chaubey and S. Bisht

11:15-12:35 Parallel Session X-B: Maitreyee Auditorium, *Chairperson:* Dilip Mandal

- *A study on the methods of solutions for linear and non-linear vibration of plates* - Muralimohan Banerjee
- *Non-Linear Vibrations of Irregular and Polygonal-Shaped Plates Resting on Nonlinear Elastic Foundation* - B. Karmakar and P. Biswas
- *Practical Methodology for Diagnosis of Rotating Machine Faults* - Chinmaya Kar and Bantwal Venkataramana
- *Inflation dynamics of a circular membrane* - K.R. Jayaprakash and Anirvan DasGupta

Lunch (12:35)