

Paper Presentations Schedule

*17 December 2012,
Monday*

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session – I

Venue: **SARVATRA** LH

Time: 16.00 – 18.15

Track1: FM1 Atmospheric Sciences and Oceanography

Date: 17 – 12 - 2012

Chairs: A Satya Narayanan and P K Bhaskaran

Sl No	16.00-16.15	Sunanda Saha	Trapped Modes in a Two Layer Fluid of Finite Depth Bounded above by a Rigid Lid
1	16.15-16.30	Md. Hassan	Diffraction of Water Waves by a Pair of Coaxial Cylinders in Water of Finite Depth
2	16.30-16.45	Santu Das	Reflection of Ocean Water Waves by a Vertical Rectangular Porous Structure atop horizontal Bottom
3	16.45-17.00	Kaushik Sasmal	Implementation of an Eddy Viscosity Formula into GOTM and Comparison of the Performance with Mellor Yamada Model during a Storm
4	17.00-17.15	Subbareddy Bonthu	Comparative Study of Plume Dispersion with and without Turbulent Anisotropy Models
5	17.15-17.30	M.K. Rana	Improved CCW Predications Describing Isothermal Motion of Hydromagnetic Cylindrical Shock Waves in Self Gravitating Rotating Gas
6	17.30-17.45	P.K. Bhaskaran	Coupled Wave Current Modeling System and its Validation for Thane Cyclone
7	17.45-18.00	C. Gnanaseelan	Impact of Indian Ocean Dipole and EL Nino/Southern Oscillation Wind Forcing on Equatorial Indian Ocean Dynamics
8	18.00-18.15	Sarat Chandra Mohapatra	Effect of Submerged Membrane on the Attenuation of Structural Response of Floating Structures

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session - II

Venue: **SAGARIKA** LH

Time: 16.00 – 18.00

Track2: FM7 Experimental Methods in Fluid Mechanics

Date: 17 - 12 - 2012

Chair: Arun Shukla

16.00-16.15	Ravish Vinze	Experimental Analysis of Heat Transfer by Jet Impingement on Dimpled Surface
16.15-16.30	Sreeram Reddy	Gas Particle Flow Characteristics Between Heated Vertical Plates
16.30-16.45	Sachin S. Naik	Experimental Investigation of Vortex Tube using Natural Substances

Track2: FM12 Statistical Mechanics

Venue: **SAGARIKA** LH

Date: 17 -12 - 2012

Chair: K C Deshmukh

16.45-17.00	Mayoordhwaj C Meshram	Modified-Zero Fourth-Order-Cumulant-Expansion Approximation Method for Investigation of Turbulence with Reacting and Mixing Chemical Elements.
17.00-17.15	Kirti Sahu	Lewis-Kraichnan Space Time Functional Formalism for the Investigation of Magnetohydrodynamic Turbulence
17.15-17.30	Tarun Kumar Dey	Theoretical Study of Hard Convex Body Fluid Mixtures
17.30-17.45	Anjana Kumari	Transport Properties for Square Well Fluid
17.45-18.00	Mukesh Kumar Sinha	Transport Properties of a Semiconductor in a Transverse Magnetic Field

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session - III

Venue: **KANCHAN** LH

Time: 16.00 – 18.00

Track3:FM4 Compressible Flow

Date: 17 -12 - 2012

Chair: Avinoam Nir

16.00-16.15	Bineeta Nath	Magnetogasdynamic Shock Wave in a Non Ideal Gas Under a Gravitational Field with Heat Conduction and Radiation Heat Flux
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Track3: FM8 Flow through Porous Media

Venue: **KANCHAN** LH

Chair: Avinoam Nir

Date: 17 – 12 - 2012

16.15-16.30	Sargam Wasu	Heat Transfer and Entropy Generation on MHD Squeezing Flow between Two Parallel Rotating Plates using Brinkman Model
16:30-16.45	Jaweriya Sultana	Mixed Convection Flow in a Vertical Channel Filled with Porous Medium with Robin Boundary Conditions with Heat Source/sink-Brinkman Model
16.45-17.00	J.C. Umavathi	Effect of Thermal Modulation on the Onset of Convection in a Porous Medium Layer Saturated by Nanofluid
17.00.17.15	Sowmay T.	Linear and Nonlinear Stability Analysis of Porous Medium Layer Saturated by Nanofluid
17.15-17.30	Monica B. Mohite	Effect of Conductivity and Viscosity Variation and Cross Diffusion on the Onset of Convection in a Porous Medium Layer Saturated by Nanofluid
17.30-17.45	P. Muralidhar	Effect of Chemical Reaction and Radiation Absorption on Hydro-Magnetic Convective Heat and Mass Transfer Flow in a Non-Uniformly Heated Vertical Channel with Heat Generating Sources.
17.45-18.00	B. Neela Rao	Unsteady Two layered Fluid Flow of Conducting Fluids in a Channel between Parallel Porous Plates Under Transverse magnetic field in a Rotating System.

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session - IV

Venue: **BRAHMOS** LH

Time: 03.30 – 06.30

Track4: SM5 Fracture and Crack

Date: 17 – 12 - 2012

Chair: S K Panigrahi

15.30-15.45	Amit Subhas Shedbale	Fatigue Crack Growth Stimulation Using XFEM
15.45-16.00	Sachin Kumar	XFEM Simulation of Stable Crack Growth Using J-R Curve
16.00-16.15	S. Sundaresan	Experimental Determination of Fracture Toughness of M250 Grade Maraging Steel Rocket Motor Case
16.15-16.30	Rahul Chug	Atomistic Simulation to Study Cracking Behavior in Single Crystal Copper
16.30-16.45	Sambit Kumar Parida	Adhesion Failure Analysis of Single Lap Joint made with FGM Adherends

Track4: SM6 Mechanics of Composites

Venue: **BRAHMOS** LH

Chair: N K Gupta

Date: 17 – 12 - 2012

16.45-17.00	K. Sanjay Anand rao	Non-linear Flexural Analysis of Shear Deformable Functionally Graded Material Plates
17.00-17.15	Somnath Majumdar	Static and Free Vibration Analysis of Laminated Orthotropic plates using FEM and B3 Spline Finite strip Method
17.15-17.30	Bibekananda Mandal	Shear Buckling Capacity of Laminated Stiffened Plates with Diverse Stiffener Configurations
17.30-17.45	Durgesh Bahadur Singh	Free Vibration Analysis of Laminated Composite Stiffened Plate based on Higher Order Shear Deformation Theory (HSDT)
17.45-18.00	Sunil Nimje	Stress Analysis of Laminated FRP Composite Single Supported Tee Joint with Rigid Base
18.00-18.15	Anil Vashishth	Interaction of Electro-Acoustic Waves in Porous Piezoelectric Plate Immersed in a Fluid
18.15-18.30	Nilanjan Mallik	Effective Coefficients of Shape Memory Alloy Fiber Reinforced Composites(SMAFRC)

*18 December 2012,
Tuesday*

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session – I

Venue: **SARVATRA** LH

Time: 09.00 – 10.15

Track1: FM3 Boundary Layers

Date: 18 – 12 - 2012

Chair: P N Kaloni

9.00-9.15	P.K. Kameswaran	Nano Fluid Flow due to an Unsteady Stretching Sheet with Thermal Dispersion and Radiation
9.15-9.30	A. Subba Rao	On MHD Flow and heat Transfer of Casson Fluid From a Horizontal Circular Cylinder With Partial Slip.
9.30-9.45	Gurminder Singh	Slip Boundary Layer Flow with Temperature Jump Along a Stretching Cylinder
9.45-10.00	S.B.Sathyanarayana	Approximate Analytical Solution for Compressible Boundary Layer Problem
10.00-10.15	Deepa K Nair	Effects of Nonuniform Basic Temperature Gradients on Electro hydrodynamic Instability in a Dielectric Fluid Layer

Parallel Session - II

Venue: **SAGARIKA** LH

Time: 09.00-10.15

Track2: SM1 Computational Solid Mechanics

Date: 18 – 12 - 2012

Chair: **Binod Sreenivasan**

9.00-9.15	Shivakumar Aradhya	Some Preliminary Studies on the Dynamic Characteristics of a Concrete Arch Dam using Finite Element Method.
9.15-9.30	Amit Roy Chowdhury	Response of the Effective Modulus for Different Percentage of Pore Volume and Pore Size.
9.30-9.45	Jayant Kumar Biswas	Spinal Implant Design for Lower Vertebra Through Finite Element Studies
9.45-10.00	Salil Kanj Jalan	Lift-off Dynamics of a Sounding Rocket Considering Structural Flexibility
10.00-10.15	Saurabh Kumarr Mishra	Finite Element Analysis of Mechanical Behaviors of Cardiovascular Stent

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session - III

Track3: FM5 Computational Fluid Mechanics

Venue: **KANCHAN** LH

Date: 18 – 12 – 2012

Time: 09.00-10.15

Chair: Sanjay Mittal

9.00-9.15	Rajesh Bhatt	Effect of Inter Cylinder spacing on the vortex shedding/Suppression of Flow past Inline Tandem Cylinders Near a Wall.
9.15-9.30	K. Phaneendra	Numerical Solution of Singularly Perturbed Singular Boundary Value Problem via Non Polynomial Spline
9.30-9.45	E.Siva Prasad	Numerical Treatment of Singularly Perturbed Singular Boundary Value Problem via Non Polynomial Spline
9.45-10.00	D. Kumaraswamy	Computational Method for Singularly Perturbed Delay Differential Equations
10.00-10.15	Sunil Chandel	Numerical Investigation of Slurry Flow in a Vertical Pipe Using CFD

Parallel Session-I

Track1: Award Session

Venue: **SARVATRA** LH

Date: 18 – 12 – 2012

Time: 11.00-13.00

Chair: Committee will be nominated:

11.00-11.15	Rajashree S.	Analytical Study of the Effect of Heat Source on Heat Transport by Darcy Benard Convection
11.15-11.30	Meenakshi N.	Effects of Free Stream Velocity, Suction and Magnetic Field on the Flow of a Newtonian Fluid due to a Linearly or an Exponentially Stretching Sheet
11.30-11.45	Shreenivas R. Kirsur	Analytical Solution of MHD Stretching Sheet Problem with Suction and Injunction
11.45-12.00	Madhavi	Approximate Computational Methods for Evaluation of Integrals with Application to Integral Equations and Their Uses.
12.00-12.15	Sona Raj	Numerical Solution of One Dimensional Solute Transport Equation in Fractal Porous Media Using Differential Quadrature Method
12.15-12.30	B. Punnam Chandar	Effects of Slip on Pulsating Flow of Micropolar Fluid Through a Porous Medium between Horizontal Parallel Plates with an Imposed uniform Magnetic Field
12.30-12.45	Ranjan Pramanik	Smoothed Particle Hydrodynamics Procedures for Analyzing Failure Process in Rock Medium
12.45-13.00	Jitapriya Das	Effects of Stacking Sequence on the First Ply Failure Load of a Laminated Composite Plate

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Parallel Session-II

Track2: FM8 Flow through Porous Media

Venue: **SAGARIKA LH**

Date: 18 – 12 - 2012

Time: 11.00-13.00

Chairs: V C C Raju and Manoranjan Mishra

11.00-11.15	Nazibuddin Ahmed	Hall Effect on Transient MHD Free Convective Flow Past an Impulsively Started Vertical Plate with Ramped Temperature in a Porous Medium with Rotation and Heat Absorption
11.15-11.30	Sujan Sinha	Soret Effect on an Oscillatory MHD Mixed Convective Mass Transfer Flow Past an Infinite Vertical Porous Plate with Variable Suction
11.30-11.45	Sayantan Sil	Hodograph Method in Non Newtonian MHD Transverse Fluid Flows Through Porous Media
11.45-12.00	Achala L Nargund	Study of Effect of Thermal Radiation on the Hydro Magnetic Flow
12.00-12.15	Nityajyoti Kalita	Prandtl Number Dependence MHD Flow past an Infinite Vertical Plate
12.15-12.30	A. Mohan	Transient Flow Induced by an Instantaneous Point Force in an Infinite Porous Medium
12.30-12.45	D. Srinivasacharya	Effects of Slip on Pulsating Flow of a Micro polar Fluid Through a Porous Medium between Horizontal Parallel Plates with an Imposed Uniform magnetic Field
12.45-13.00	Sujit Talukdar	Transient MHD Flow of a Visco Elastic Fluid Past an Infinite Vertical Porous Plate Imbedded in a Porous Medium with Hall Current and Slip Condition in a Rotating System

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-III

Track3: FM6 Drops, Bubbles and Multi-Phase flows

Venue: **KANCHAN** LH

Date: 18 – 12 – 2012

Time: 11.00-13.00

Chair: I C Liu and J. C. Umavathi

11.00-11.15	Shreedevi Kalyan	Effects of Chemical Reaction Heat, Mass Transferred of Immiscible Viscous Fluids in a Vertical Channel
11.15-11.30	Rama Rao Y	Effect of Viscous Dissipation on Mixed Convective Flow of Two immiscible Viscous Fluids in a Vertical Channel using Robin Boundary Conditions
11.30-11.45	Shekar M.	Flow and Heat Transfer of a Viscous Fluid Sandwiched between Micro polar Fluid Layers
11.45-12.00	J. Prathap Kumar	Effect of Electro Magnetic Field on Free Convective Heat Transfer in a Vertical wavy Channel Divided by a Perfectly Conductive Baffle
12.00-12.15	Basawaraj M Biradar	Mixed Convection Electrically Conductivity and Non Conducting Fluids in Vertical Enclosure
12.15-12.30	Shivkumar M. Biradar	Dispersion of a Solute in Hartmann Two Fluid Flow between Two Parallel Plates
12.30-12.45	U. P. Ganguly	Correlation of the order of the process of Sedimentation of Aqueous Coal Slurry in Non Neutral Medium

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-I

Track1: FM8 Flow through Porous Media

Venue: **SARVATRA** LH

Date: 18 – 12 – 2012

Time: 15.30-18.15

Chair: **B V Rathish Kumar**

15.30-15.45	Manoranjan Mishra	Effect of Korteweg Stresses on the Viscous Fingering of a Miscible Slice in Porous Medium
15.45-16.00	Devulapalle Sastry RVSRK	Effect of MHD on Heat Transfer Over a Marangoni Nanofluid Flow past a Falt Plate
16.00-16.15	Deepti Mishra	Application of Homotopy Perturbation Transforms Method for Imbibitions Phenomena Arising in Heterogeneous Porous Media
16.15-16.30	Himanshu V. Chapani	B-Spline Finite Element Solution of Instability Phenomenon of Two Phase Flow Through Porous Media
16.30-16.45	Khayati Desai	Homotopy Perturbation Solution of Imbibition Phenomenon in Homogeneous Porous Media with Gravity in Weekly Water Wet Systems
16.45-17.00	V.C.C. Raju	Aligned Magnetic Field Effect on Free Convective Flow Past a Vertical Flat Plate Through Porous Medium with Temperature Dependent Heat Source
17.00-17.15	Vipin Kumar Tyagi	Hydromagenetic Stability of Viscoelastic Fluids in an Anisotropic Porous Medium Heated and Soluted from Below
17.15-17.30	Jaimala	Soret Dufour Driven Thermosolutal Convection in Micropolar Rotating Fluids in Hydromagnetics in Porous Medium

Track1: SM9 Vibration and Control

Venue: **SARVATRA** LH

Date: 18 – 12 – 2012

Chair: J S Rao

17.30-17.45	Partha Sudhir Joshi	Free Vibration Analysis of Simply Supported Square Plates with Square Perforation Pattern of Square Holes
17.45-18.00	Priyankar Datta	On Obtaining Exact Modal Parameters by Removing Effects of Probe and Exciter
18.00-18.15	Vijayabaskar Narayanamurthy	Effect Of Geometric Misalignments On Modal Response Of Torsion Rod-Flexure Assembly

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-II

Venue: **SAGARIKA** LH

Time: 15.30-18.00

Track2: FM10 Low Reynolds number Flow

Date: 18 – 12 - 2012

Chair: D Srinivasacharya

15.30-15.45	Bali Ram Gupta	Axisymmetric Creeping Flow of a Micropolar Fluid over a Sphere Coated with a Thin Fluid Film.
15.45-16.00	Debarjyoti Choudhuri	Convection-Diffusion -Reaction Inside Pellets- Some Flux Conditions
16.00-16.15	Krishna Prasad M	Slow Steady Rotation of a Porous Spherical Shell in a Spherical Container
16.15-16.30	Singru	Second Law Analysis of Flow of Immiscible Micropolar Fluids in a Channel.
16.30-16.45	M. Phani kumar	Uniform Flow of Viscous Fluid Past a Sphere by Homotopy Analysis
16.45-17.00	J. Kalpana	MHD Run Up Flow of a Viscous Incompressible Fluid

Track2: FM2 Biomechanics

Date: 18 – 12 – 2012

Venue: **SAGARIKA** LH

Chair: **S K Das**

17.00-17.15	Vamsi Krishan Narla	Time Dependent Peristaltic Transport in Curved Channels: Applications to Gastrointestinal Tract and Similar Physiological Systems
17.15-17.30	J.V. Ramana Reddy	Resistance to the Flow of Micropolar Fluid Through Unsymmetric Stenosis Effects of Catheter and Slip Velocity

Track2: FM9 Geophysical and Environmental Fluid Dynamics **SAGARIKA** LH

Chair: **S K Das**

Date: 18 – 12 – 2012

17.30-17.45	A. Satya Narayanan	Standing Kink Waves in Flux Tubes with Uniform Flows
17.45-18.00	B. N. Prasad	Solution of Strong Shock near the Surface of a Star

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-III

Track3: SM8 Wave Propagation

KANCHAN LH

Date: 18 – 12 – 2012

Time: 15.30-18.00

Chair: Jasobanta Jena and J Prathap Kumar

15.30-15.45	Vishakha Gupta	Two Dimensional Wave Propagation in Smart Materials
15.45-16.00	Omprakash Anandrao	Damping Ratio Estimation of Single Degree Freedom Torsional System by Least Squares
16.00-16.15	A.K.Srivastav	Role of Microwave Propagation Under Adverse Atmospheric Condition
16.15-16.30	Gaurav Ashok Kumar Jain	Damping Ratio Estimation of Single Degree Freedom Torsional System by Least Squares
16.30-16.45	Chandrashekhar Suresh Dharanka	The Analysis of Single DOF Vehicle Model with Directionally Asymmetric Damping Authors.
16.45-17.00	Priyankaben Maheshbhai Patel	Travelling Wave Solutions of Burger Equation by Modified F-Expansion Method
17.00-17.15	Shubhankar Bhowmick	Large Amplitude Dynamic Study of Rotating Disks Carrying Attached Masses
17.15-17.30	Lokanna Hoskoti	Propagation of symmetric fundamental lamb mode through a metal-composite adhesive joint

Track3: SM2 Control of Structures

KANCHAN LH

Date: 18 – 12 – 2012

Chair: Sanjay Ananda Rao

17.30-17.45	Gurmail S. Benipal	Modal Analysis of Planer Pendulous Motion
17.45-18.00	Bhaben Kalita	Design of a Manipulator for Minimally Invasive Surgery with Haptic Feedback

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-IV

BRAHMOS LH

Time: 15.30-18.15

Track4: FM5 Computational Fluid Dynamics

Date: 18 – 12 – 2012

Chairs: S Saravanan and S Pranesh

15.30-15.45	Jai Kumar Prasad	Aerodynamic and Performance of a Projectile in Ground Proximity at Supersonic Speed.
15.45-16.00	Syed Mohd Yahya	Numerical Investigation of Turbulent Flow and Heat Transfer in High Temperature Solar Receiver
16.00-16.15	Prasad Gangadhar Chhapkhane	Numerical Modeling of Indoor Air Circulation
16.15-16.30	Upendra Mendu	Mixed Convection in MHD Micropolar Fluid with Soret and Dufour Effects
16.30-16.45	K. Kaladhar	Natural Convection Flow of Chemically Reacting Couple Stress Fluid in a Vertical Channel with Soret and Dufour Effects.
16.45-17.00	G. Swamy Reddy	Natural Convection on a Vertical Plate Embedded in a Power-law Fluid Saturated Porous Medium in Presence of Double Stratification Effects.
17.00-17.15	O. Surender	Non-Darcy Free Convection in Double Stratified Porous Medium
17.15-17.30	Y. Showri Raju	Quintic B-Spline Collocation Method for Tenth Order Boundary Value Problems

Track4: FM11 Mathematical Modeling

BRAHMOS LH

Date: 18 – 12 – 2012

Chair: **V H Pradhan**

17.30-17.45	G.S.K. Chaitanya	A note on modified decomposition method applied to MHD fluid flows
17.45-18.00	Jayesh M. Dhodiya	Mathematical Model for Migration based Population Growth and Its Effect on Indian Economy
18.00-18.15	Arundhati Warke	Mathematical Modeling Of Removal Of Moisture From Bagasse By Microwave Heating

*19 December, 2012,
Wednesday*

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-I

Venue: **SARVATRA** LH

Time: 11.00-13.00

Track1: FM3 Boundary Layers

Date: 19 – 12 – 2012

Chair: R Ganapathy and J C Mandal

11.00-11.15	M.Satyakrishna	Unsteady Laminar Boundary Layer Flow over a Moving Wall in the Presence of an Applied Magnetic Field due to Impulsive Motion of the Wall
11.15-11.30	L. Venkata Reddy	Study of MHD Flow and Heat Transfer in a Newtonian Liquid Over an Inclined exponentially Stretching Sheet
11.30-11.45	S. Panigrahi	Shear Flow of Viscoelastic Fluid Past a Porous Plate Subject to Suction or Blowing
11.45-12.00	Satish Vasantrao Desale	Keller Box Solution For Thermal Boundary Layer Flow In Presence Of Radiation Of A Micropolar Fluid
12.00-12.15	S. Pranesh	Linear And Non-Linear Stability Analyses Of Double-Diffusive Electroconvection In A Micropolar Fluid
12.15-12.30	T.V. Joseph	Effect of Gravity Modulation and Electric Field on the Onset of Double Diffusive Convection in a Micropolar fluid
12.30-12.45	Anjana K	The Effect Of Time Periodic Body Force On The Onset Of Rayleigh Bénard Convection In A Weak Electrically Conducting Rotating Boussinesq-Stokes Suspension
12.45-13.00	Kiran R.V.	The Study Of Effect Of Suction-Injection-Combination On The Onset Of Rayleigh-Bénard-Magnetoconvection In A Micro polar Fluid Using Maxwell-Cattaneo Law

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-II

Venue: **SAGARIKA** LH

Time: 11.00-13.00

Track2: FM5 Computational Fluid Dynamics

Date: 19 – 12 – 2012

Chairs: Akira Nakayama and P V S N Murthy

11.00-11.15	B. Srinivasulu	Numerical Solution of Fourth Order Boundary Value Problems by Galerkin Method with Cubic B-Splines
11.15-11.30	A. Benerji Babu	Rotating Convective KL Instability due to Thermal and Compositional Buoyancy
11.30-11.45	K.N.S.Kasiviswanadham	Septic B-Spline Collocation Method for Eighth Order Boundary Value Problems
11.45-12.00	Chetteti Ramreddy	Convective Flow Over a Cone in the Presence of Thermal and Solutal Dispersion
12.00-12.15	P. Murali Krishna	Nonic B-Spline Collocation Method for Eighth Order Boundary Value Problem
12.15-12.30	T.V.Joseph	Effect of Gravity Modulation and Electric Field on the Onset of Double Diffusive Convection in a Micro polar fluid
12.30-12.45	M.N. Rajasekhar	Effect of Radiation on Unsteady MHD Heat and Mass Transfer Flow of a Chemically Reacting Fluid past an Impulsively Started Vertical Plate
12.45-13.00	Jafar Bagheri	Medelling of Shallow Water Equations by Using Implicit Compact MacCormack Type Scheme with Application to Dam Break Flow Problem

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-III

Venue: **KANCHAN** LH

Time: 11.00-13.00

Track3: SM1 Computational Solid Mechanics

Date: 19 – 12 – 2012

Chair: Romesh Batra and **Anil Vashisth**

11.00-11.15	Vinod Kumar Verma	Buckling of beam partly in compression and partly in tension
11.15-11.30	B. Sreedharbabu	A computational Study of Factors Affecting the Characterization of Nanoindentation on Ti-6Al-4V Alloy
11.30-11.45	Shweta Pathania	Effect of Fluid Depth on Free Vibration of Circular Plate with Partially Wet Surface.
11.45-12.00	Subhomoy Chatterjee	Design of Customized Hip Replacement Prosthesis
12.00-12.15	Azher Jameel	Numerical Simulation of Fractional Contact Problems Using EFGM
12.15-12.30	Chitrallekha Dey	Finite Element Analysis of Metallic Sandwich Plate with Tetrahedral Truss Core
12.30-12.45	Jonathan Monteriro	Degenerated Shell Elements Accounting Thickness Stretch for Mechanical Loads
12.45-13.00	Biplab Chatterjee	Finite Element Based Multiple Normal Loading Unloading of an Elastic Plastic Spherical Stick Contact Under Varying Tangent Modulus and Hardening Rule

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session- I

Venue: **SARVATRA** LH

Time: 16.00-17.45

Track1: FM8 Flow through Porous Media

Date: 19 – 12 – 2012

Chair: P G Sidhdheshwar

16.00-16.15	Amruta R. Daga	Application of Modified Variational Iteration Method for Solving non Linear Partial Differential Equation in Fluid Flow Through Porous Media
16.15-16.30	Mistry Piyush Ratilal	An Analytic Solution of Boussineq's Equation by Variational Iteration Method
16.30-16.45	S. Manjunath	Regular Perturbation Solution for Flow Through a Porous Channel with Effect of Inertia Boundary and Buoyancy
16.45-17.00	Asmita C. Patel	Application of Wavelet Galerkin Method for Solving Non Linear Problems in Fluid Mechanics
17.00-17.15	Abhijit Sutradhar	The Double-Diffusive Free Convection Flow past an Inclined Plate In Non-Darcy Porous Medium Saturated With Nanofluid
17.15-17.30	Reema Singh	The Effect of Vertical Through flow on Thermal Instability of a Nanofluid Saturated in a Porous Medium - A numerical Study
17.30-17.45	A.K. Sinha	Modelling of Unsteady Couple Stress Fluid Flows in Porous Parallel Plates

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-II
Track2: FM5 Computational Fluid Dynamics

Venue: **SARVATRA** LH
Date: 19 – 12 – 2012

Time: 16.00-18.00
Chairs: S P Anajali Devi and Shivkumar Aradhya

16.00-16.15	S. Saravanan	Natural Convection in a Differentially Heated Cavity with Parallel Heat Generating Baffles
16.15-16.30	N. Nitya Devi	Natural Convection Flow of an enclosure with a Square Solid Body in the Presence of Heat Generation
16.30-16.45	P. Uma Devi	Magnetoconvection in Partially Heated Enclosure with Temperature Dependent Heat Source
16.45-17.00	A. Shamadhani Begum	Combined Surface Tension and Buoyancy Driven Convection in an Open Enclosure with Partially Bottom heating Effect of Magnetic Field
17.00-17.15	N.P. Chandrashekhara	Influence of a Second Diffusing Component on Thermal Convection in Boussinesq-Stokes Suspension Occupying a Rectangular Box
17.15-17.30	Jawed Mustafa	Prandtl Number Effects On Natural Convection Heat Transfer In Concentric Vertical Cylindrical Annuli

Track2: SM1 Computational Solid Mechanics

Venue: **SARVATRA** LH
Date: 19 – 12 – 2012

Chairs: S P Anajali Devi and Shivkumar Aradhya

17.30-17.45	Kamal Chandra Das	An Enhanced Numerical Procedure for Modelling Fully Grouted Bolts Intersected by Rock Joint.
17.45-18.00	R. Marimuthu	Hybrid Stress (Zero Energy Modes)- Displacement Finite Elements for Viscoelastic Analysis

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-III
Track3: SM3 Elasticity

Venue: **KANCHAN LH**
Date: 19 – 12 – 2012

Time: 16.00-18.00
Chair: **D G Thakur**

16.00-16.15	Arijit Khan	Analytic and Numerical Cross Review of Twin Tunnel Elasticity Problem in Half –Space
16.15-16.30	Ganesh Dinkarrao Kedar	Non Homogeneous Steady State Heat Conduction Problem in a Rectangular Plate and Its Thermal Stresses
16.45-17.00	J.S.Rao	Optimization And Analysis Unified
17.00-17.15	K C Deshmukh	Non Homogeneous Steady-State Heat Conduction Problem in a sphere and Its Thermal Stresses

Track3: SM4 Experimental methods in Solid Mechanics

Venue: **KANCHAN LH**

Chair: Vijayabaskar Narayanamurthy

Date: 19 – 12 – 2012

17.15-17.30	Digendranath Swain	Experimental Investigation of Elasto-Plastic Concentration Factors due to Two Circular Holes in a Tensile Plate
17.30-17.45	Ravi Sankar H.	Behavior of Thin Walled Cylinders under Pulse Loading: An Experimental and Numerical Investigation
17.45-18.00	Subhranshu Sekhar Nanda	Vibration Isolation of a Mixer Grinder System using Different base Materials
18.00-18.15	Niranjan Sahoo	Experimental Investigation of a Stiffness Based Force Balance for Short Duration Measurement

57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)

Parallel Session-IV

Venue: **BRAHMOS** LH

Time: 16.00-17.45

Track4: FM11 Mathematical Modeling

Chair: Christian Rohde

Date: 19 – 12 – 2012

16.00-16.15	Srikumar Panda	Oblique Wave Scattering by Small Undulation of the Porous Bottom in a Two layer Fluid
16.15-16.30	Masoud Baghfalaki	Modeling of Response Amplitude Operator for Roll Motion of a Floating Body and analogy to Free Damped Vibration
16.30-16.45	M. Xavier James Raj	Minimum Energy Earth Departure Trajectories to Venus
16.45-17.00	Shraddha Gupta	Analysis on Five Special Types of Orbits around Mars
17.00-17.15	Jasobanta Jena	Singular Surface and Steepening of Waves in a Dusty Gas
17.15-17.30	Mansha Kotwani	Two Dimensional Finite Element Model to Study the Diffusion of Calcium in Fibroblasts Cell

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Thursday*

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Parallel Session- I

Venue: **SARVATRA** LH

Time: 11.00-12.30

Track1: FM3 Boundary Layers

Date: 20 – 12 – 2012

Chair: T. Linga Raju

11.00-11.15	Sameena Tarannum	Linear And Non-Linear Analyses Of Gravity Modulation On The Onset Of Rayleigh-Bénard Electro-Convection In A Micropolar Fluid
11.15-11.30	S.P. Anjali Devi	Numerical Investigation of Hydromagnetic Boundary Layer Flow over a Stretching Sheet with Variable Thickness
11.30-11.45	R. Prakash	Thermorheological and Magnetorheological Effects on Thermal Convection in Ferromagnetic Liquids with Heat Source

Track1: FM8 Flow through Porous Media

Venue: **SARVATRA** LH

Chair: M N Mehta

11.45-12.00	Twinkle R. Singh	A Note on Water Transport Phenomenon by Homotopy Analysis
12.00-12.15	Bibaswan Dey	Separation of Species in Presence of Oscillatory Flow in a Circular Porous Pipe
12.15-12.30	G P Raja Sekhar	Estimating the dynamic permeability of an assembly of soft spherical particles

Parallel Session-II

Venue: **SAGARIKA** LH

Time: 11.00-12.30

Track2: SM6 Mechanics of Composites

Date: 20 – 12 – 2012

Chair: A Kumaraswamy

11.00-11.15	Moon Banerjee	Analysis of Stress Concentration for Rectangular Plate with Hole Under Transverse Loading by Three Dimensional Finite Element Analyses
11.15-11.30	Nishant Kumar Singh	Effective Coefficients Of Shape Memory Alloy Fiber Reinforced Composites (SMAFRC)
11.30-11.45	Sanjeev Singh	Effective Coefficients Of Piezoelectric Particulate Composites Using Eshelby Tensor Method
11.45-12.00	Pawan Kumar	Effective Coefficients Of Angular Piezoelectric Fiber Reinforced Composites (PFRC)
12.00-12.15	Kopal Agarwal	Dynamic Analysis of Magnetorheological Elastomers based Cantilevered Sandwich Beam using Timoshenko Beam Theory