

**International Conference on Applications of Mathematics in
Topological Dynamics, Physical, Biological and Chemical
Systems
(ICAMTPBCS--2016)
(December 9-11, 2016)**



Venue: Calcutta Mathematical Society, “Asutosh Bhavan” AE-374,
Sector-I, Salt Lake, Kolkata 700064, India

PROGRAMME

Friday, December 9, 2016

10:00–11:00 am : **Registration (Ground Floor)**
11:00–11:30 am : **Inaugural Function (First Floor)**
11:30 am–12:00 noon : **Tea Break**
12:00–1:00 pm : **Key Note Address (First Floor)**

Speaker : Prof. Phoolan Prasad , TIFR, Mumbai, India

Topic : KCL-A Mathematical Model to Describe Evolution of Curves and Surfaces (N.R. Sen Memorial Lecture)

Chairperson : Prof. Rajkumar Roychoudhury

1:00–1:30 pm : **Invited Talk 1 (First Floor)**

Speaker : Prof. Anjan Mukherjee, Tripura University, Agartala, India

Topic : Generalization of Fuzzy soft sets in decision making based on game theory and their applications

Chairperson : Prof. L.F. Mao

01:30–02:15 pm : Lunch

2:15–3:00 pm : Plenary Talk 1 (First Floor)

Speaker : Prof. L.F. Mao, Chinese Academy of Mathematics and System Science, Beijing, China

Topic : Biological n- system with Global Stability

Chairperson : Prof. Anjan Mukherjee

3:00–5:15 pm : Paper Presentation Session IA (First Floor)

Chairperson : Prof. Indrajit Lahiri

1: 3:00 -3:15 pm

On covering properties in generalized topological spaces via β -open sets, **Manob Kumar Ghosh**

2: 3:15-3:30 pm

A Fixed Point Result via Generalized wt -Distance in b -Metric Space, **Rima Maitra**

3: 3:30-3:45 pm

Some geometric properties on h-exponential change of Finsler metric, **Anil Kumar Gupta**

3:45-4:00 pm: Tea Break

4: 4:00-4:15 pm

Unique Probabilistic P-Cyclic C-Contraction Results Using Special Type Product T-Norm, **Samir Kumar Bhandari**

5: .4:15-4:30 pm

On Semi-Invariant Submanifolds of a Nearly Trans-Hyperbolic Sasakian Manifold with a Quarter Symmetric Semi-Metric Connection, **Shamsur Rahman**

6: 4:30-4:45 pm

Some Properties of m -Projective Curvature Tensor in Kenmotsu Manifolds, **Shashi Prakash**

7: 4:45-5:00 pm

Brück conjecture and differential polynomial, **Shubhashish Das**

8: 5:00-5:15 pm

A Discourse on Separation Axioms on b -Open Sets in Topological Spaces, **Pallab Kanti Biswas**

3:00–5:15 pm : **Paper Presentation Session IB (Second Floor)**

Chairperson: Prof. Phoolan Prasad

1: 3:00-3:15 pm

Polynomial SSUSY model for Swanson's Hamiltonian under generalized quantum condition, **Abhijit Banerjee**

2: 3:15-3:30 pm

Coretractable Modules, **Abhay Kumar Singh and Amrit Kumar Mahato**

3: 3:30-3:45 pm

Investigation of Chaos and Self Organized Criticality in Solar Flare Index Data, **Shankhachur Mukherjee**

3:45-4:00: Tea break

4: 4:00-4:15 pm

Spacetime geometry of static spherically symmetric perfect fluid spheres, **Ayan Banerjee**

5: 4:15-4:30 pm

Recurrence Matrix Formulation of Associated Weights in Double Exponential Smoothing and its Effect in the Memory of the Linear Homoscedastic Signals, **Gokul Saha**

6: 4:30-4:45 pm

Non-Conservative Mass Transfer with Non Uniform Mass Accretion Rate in Presence of Reverse Flow of Mass in Contact Binary Stars, **Prabir Gharami**

7: 4:45-5:00 pm

Magneto-thermo-elastic Problem and its Discontinuous Solution, **B. Das and A. Lahiri**

8: 5:00-5:15 pm

A model for anisotropic strange stars, **Debabrata Deb , Sourav Roy Chowdhury , Saibal Ray, Farook Rahaman and B.K. Guha**

Saturday, December 10, 2016

10:30–11:30 am : Paper Presentation Session IIA (First Floor)

Chairperson: Prof. Sanjay Sen

1: 10:30-10:45 am

Non (anti) Commutativity in String Theory, **Arindam Ghosh Hazra**

2: 10:45-11:00 am

Modified Solution of the Nonlinear Singular Oscillator by Extended Iteration Procedure, **B. M. Ikramul Haque, M. M. Ayub Hossain, Md. Asifuzzaman and M. Kamrul Hasan**

3: 11:00-11:15 am

Some Discrete Distribution Results Based On (α, β) – Residual Entropy, **Prasanta Paul**

4: 11:15-11:30 am

Statistical Modelling of HIV Infection Risk, **Fulufhelo Ratshisindi**

10:30–11:30 am : Paper Presentation Session IIB (Second Floor)

Chairperson: Prof. S.K. Srivastava

1: 10:30-10:45 am

A New Representation of Group, **Jayanta Biswas**

2: 10:45-11:00 am

On Some Particular Automorphism Group, **Mohd. Altab Hossain and Subrata Majumdar**

3: 11:00-11:15 am

More on *fgs**-Continuous Functions, **Anjana Bhattacharyya**

4. 11:15-11:30 am

Meromorphic Functions Sharing Three Values and a Result of G. Brosch, **Rajib Mukherjee**

11:30 am-12:15 pm: Plenary Talk 2 (First Floor)

Speaker: Prof. Reto Buzano, Queen Mary University, London, UK

Topic : The moduli space of 2 convex embedded spheres (Suddhodan Ghosh Memorial Lecture)

Chairperson: Prof. S.G Dani

12:15-1:00 pm: Plenary Talk 3 (First Floor)

Speaker: Prof. S.G Dani, TIFR, Mumbai, India

Topic: Continued Fraction Expansions of Numbers and Related Geometry (C.E.Cullis Memorial Lecture)

Chairperson: Prof. D.K Ganguly

1:00-1:45 pm: Plenary Talk 4 (First Floor)

Speaker: Dr. Malay Banerjee, IIT Kanpur, India

Topic: Attractors and transients: Ecological interpretations

Chairperson: Prof. R.K. Bera

Lunch 1:45-2:30

2:30-3:00 pm: Invited Talk 2 (First Floor)

Speaker: Prof. Sudhir Srivastava, Gorakhpur University, Gorakhpur, India

Topic: Geodesic flows of manifolds

Chairperson: Prof. Reto Buzano

3:00-3:45: Plenary Talk 5 (First Floor)

Speaker: Thomas Richard, Univ.Paris-Est Creteil, France

Topic: Lower bounds on curvature and c^0 convergence of Riemannian matrices (J.C Saha and K.L. Saha Memorial Lectures)

Chairperson: Prof. Sudhir Srivastava

3:45-5:30: Paper Presentation Session IIIA (First Floor)

Chairperson: Prof. H.P. Mazumdar

1: 3:45-4:00 pm

An analytical technique for solving quadratic nonlinear oscillator, **Md. Helal Uddin Molla**, **Md. Abdur Razzak** and **M.Kamrul Hasan**

2: 4:00-4:15 pm

Motion of a symmetric top: precession to nutation, **Indranath Bhattacharyya**

4:15-4:30 pm: Tea Break

3: 4:30-4:45 pm

On responses of stochastic temperature distributions at the boundary of elastic half space, **Shashi Kant**, **Santwana Mukhopadhyay**

4: 4:45-5:00 pm

A Mathematical model for extremist-role of awareness, **Kusumika Kundu**

5: 5:00-5:15 pm

Developing and validating a model for prognostication of gait abnormalities as a function of arch of foot and body mass index, **Pallab Dasgupta, Arindam Bhattacharyya, Jayita (Ghoshal) Roy, B K Chowdhury, Santanu Kumar Tripathi**

6: 5:15-5:30 pm

An approximate method for evaluating singular integrals and singular initial value problems, **Md. Habibur Rahaman, M. Kamrul Hasan, Md. Suzan Ahmed and M S Alam**

3:45-5:30: Paper Presentation Session IIIB (Second Floor)

Chairperson:.Prof. Joydev Chattopadhyay

1: 3:45-4:00 pm

A New Higher Order Implicit Method for Numerical Solution of Singular Initial Value Problems, **M. Kamrul Hasan, M. Suzan Ahamed, B.M. Ikramul Haque**

2: 4:00-4:15 pm

Extended Newton-type Method and Its Convergence Analysis for Solving Generalized Equations, **Mohammed Harunor Rashid**

4:15-4:30: Tea Break

3: 4:30-4:45 pm

Span method for solving the transshipment problem with mixed constraints, **Nikky Kumari**

4: 4:45-5:00 pm

Effects of variable fluid properties and n th order of chemical reaction on MHD boundary layer flow of upper convected Maxwell fluid past a vertical surface in a doubly stratified porous medium, **P. O. Olanrewaju**

5: 5:00-5:15 pm

A Modified Hybrid Three-Term Conjugate Gradient Method for Unconstrained Optimization, **I. A. Osinuga, I. O. Olofin**

6: 5:15-5:30 pm

Optimization of Weber Location Problem with Special Metrics, **Osinuga, I.A.**

3:45-5:30: Paper Presentation Session III C (Second Floor)

Chairperson: Dr. Arindam Bhattacharyya

1: 3:45-4:00 pm

Entire Functions Sharing a Polynomial with Linear Differential Polynomials, **Goutam Kumar Ghosh**

2: 4:00-4:15 pm

Some I -Convergence of Difference Sequences of Fuzzy Real Numbers, **Bipul Sarma**

4:15-4:30: Tea Break

3: 4:30-4:45 pm

Normality Criteria of Meromorphic Functions Concerning Shared Fixed-Points, **Shyamali Dewan**

4: 4:45-5:00 pm

Fuzzy Radical and Fuzzy Primary Ideal of Γ -Semigroups, **Manasi Mandal and Sujit Kumar Sardar**

5: 5:00-5:15 pm

Fuzzy α -Hyper-connectedness In Fuzzy Topological Spaces, **Dipankar De**

6: 5:15-5:30 pm

Pairwise Connectedness in Fuzzy Bitopological Spaces in Quasi-coincidence sense, **Ruhul Amin and M. S. Hossain**

Sunday, December 11, 2016

10:00-11:30 am: Paper Presentation Session IVA (First Floor)

Chairperson: Dr. Koushik Ghosh

1:10:00-10:15 am

Dynamics of Three Species Ecological model with a Prey, Predator and Competitor
Paparao A. V. and Lakshmi Narayan K.

2: 10:15-10:30 am

Dynamics of a Three Species Syn-ecological Model Comprising Trees and Cows
Ammensal on Grass with Harvestin, **Kondala Rao K.**

3: 10:30-10:45 am

Stability analysis of a viral model with inter cellular delay, **Lakshmi Narayan K. and
Karuna B.N. R.**

4: 10:45-11:00 am

Mathematical Models in Cancer Biology, **Malavika M. and N Vijayarangan**

5: 11:00-11:15 am

Cosmological Correlation in the inflationary Universe, **Prasenjit Paul**

6: 11:15-11:30 am

Dynamical Behavior of Uniform Limit in Discrete Dynamical Systems, **Puneet Sharma**

10:00-11:30 am: Paper Presentation Session IVB (Second Floor)

Chairperson: Prof. Debidas Chattaraj

1: 10:00-10:15 am

T_1 -type Separations in Fuzzy Topological Spaces in Quasi-coincidence Sense, **Saikh
Shahjahan Miah, Mithun Das and Ruhul Amin**

2: 10:15-10:30 am

Degree of Approximation of Function Belonging to the Weighted $\omega(L_p, \xi(t))$ by Summability Method, **Gopal Krishna Singh**

3: 10:30-10:45 am

The Critical Point Equation and Contact Geometry, **Dhriti Sundar Patra**

4: 10:45-11:00 am

Solution and Stability of (A, B, C)-Mixed Type Functional Equation Connected with Homomorphisms and Derivations on Non-Archimedean Algebras: Using Two Different Methods, **V.Govindan, S.Murthy**

5: 11:00-11:15 am

Properties of relative n-annihilators and n-kernels of the Congruence, **M.A. Latif**

6: 11:15-11:30 am

Classification Problem for Minkowski Space with Space Topology, **Gunjan Agrawal and Soami Pyari Sinha**

11:30 am-12:15 pm: Plenary Talk 6 (First Floor)

Speaker: Prof. Sylvain Maillot, University Montpellier 2, France

Topic: Some applications of Ricci Flow in Riemannian Geometry and Topology

Chairperson: Prof. D.K. Ganguly

12:15-1:00 pm: Plenary Talk 7 (First Floor)

Speaker: Prof. Amit Konar, Jadavpur University, Kolkata, India

Topic: Type-2 Fuzzy Sets with Applications in Control and Pattern Recognition

Chairperson: Prof. Sylvain Maillot

1:00-1:45 pm: Plenary Talk 8 (First Floor)

Speaker: Prof. Archan S Majumdar, S. N Bose National Centre for Basic Sciences, Kolkata, India

Topic: Witnesses in Quantum information Theory (S.N. Bose Memorial Lecture)

Chairperson: Prof. Probhas Raychaudhuri

Lunch: 1:30-2:15 pm

2:15-4:30 pm: Paper Presentation Session VA (First Floor)

Chairperson: Dr. Subir Mukherjee

1: 2:15-2:30 pm

Minimal reducing subspaces of a unilateral shift defined on an operator weighted sequence space with non-diagonal operator weights, **Munmun Hazarika, Pearl Sanchayeta Gogoi**

2: 2:30-2:45 pm

Unique Probabilistic P-Cyclic C-Contraction Results Using Special Type Product T-Norm, **Samir Kumar Bhandari**

3: 2:45-3:00 pm

A review on carbon emission reduction in the green supply chain, **S. Sarkar**

4: 3:00-3:15 pm

On the construction of a refined mathematical theory of cryptography & Information: A Neutrosophic estimation, **Santanu Kumar Patro**

5: 3:15-3:30 pm

Restricted - Burst - Error - Correcting Optimal Codes of Length 2 over GF (3), **Vinod Tyagi and Tarun Lata**

6: 3:30-3:45 pm

The Approximate Andexact Solutions of The Fractional-Order Bagley –Torvik Boundary Value Problem Using Collocation Method Based on Shifted Chebyshev Polynomials of First Kind, **Vijay Saw, Sushil Kumar**

7: 3:45-4:00 pm

Effect of point source and inhomogeneity on Love waves in a viscoelastic layer over an isotropic half-space, **Anup Saha and Santimoy Kundu**
8: 4:00-4:15 pm

A Comparative Study of Microscopic Traffic Simulation Tools, **Poonam Kumari**
9: 4:15-4:30 pm

Effect of Rigid Boundary on Propagation of Torsional Surface Waves in Elastic Layer with Void Pores over a Heterogeneous Mantle, **Sandip Kumar Das and Shishir Gupta**

2:15-4:45 pm: Paper Presentation Session VB (Second Floor)

Chairperson: Prof. H.P. Mazumdar

1: 2:15-2:30 pm

Peristaltic Transport of a Nanofluid in Circular Tube, **Sushma S. and G. Neeraja**

2: 2:30-2:45 pm

Dynamic behaviours of an exploited modified Leslie–Gower type eco-epidemiological system on disease persistence and extinction perspective, **Samadyuti Haldar, Kunal Chakraborty, Kunal Das, Chaity Ganguly**

3: 2:45-3:00 pm

Evolution Patterns of Some Boolean Cellular Automata having atmost One Active Cell to Model Simple Dynamical Systems, **Sreeya Ghosh**

4: 3:00-3:15 pm

Bioinformatics prediction of disease outbreak due to H1N1, **Surajit Basak**

5: 3:15-3:30 pm

Geometrical Analysis of Quantum Statistical Energy under Size Quantization in Heterostructured Semiconductors, **Subhamoy Singha Roy**

6: 3:30-3:45 pm

Some new exact solutions of 2D, incompressible, Navier-Stokes Equations: mathematical behaviour and physical significance, **Ayyappadas A. M.**

7: 3:45-4:00 pm

Topological Mixing of the Limit Function of a Sequence of Dynamical Systems, **Khundrakpam Binod Mangang**

8: 4:00-4:15 pm

On the Instability of Rectangular jet, **Ahmad Banji Jafar**

9: 4:15-4:30 pm

A study on inviscid fluid flow over arbitrary bottom using nonlinear theory, **Srikumar Panda**

10: 4:30-4:45 pm

Thermohaline convection with finite amplitude in a rotating porous medium, **B.P. Kumar**

2:15-4:15 pm: Paper Presentation Session VC (Second Floor)

Chairperson: Prof. R.K. Bera

1: 2:15-2:30 pm

Generalized Second Law of Thermodynamics of Evolving Wormhole with Entropy Corrections, **Tanwi Bandyopadhyay, Ujjal Debnath, Mubasher Jamil, Faiz-ur-Rahman, Ratbay Myrzakulov**

2: 2:30-2:45 pm

A Study of Equilibria at Infinity of the Generalised Brusselator Equation using Poincaré Compactification, **B.S. Lakshmi, S.S. Phulsagar**

3: 2:45-3:00 pm

Stochasticity induced mixed-mode oscillations in a time-diversified predator-prey model, **Susmita Sadhu**

4: 3:00-3:15 pm

Inviscid instability of a shear flow in presence of a wall, **Geetanjali Chattopadhyay, Sukhendu Ghosh and R. Usha**

5: 3:15-3:30 pm

Unsteady Forchheimer MHD Dusty Viscoelastic Fluid Couette Flow in an Vertical Wavy Channel with Varying Mass Diffusion, **Uma M, Dinesh.P.A and A. Sreevallabha Reddy**

6: 3:30-3:45 pm

New exact solutions of (3+1)-dimensional fractional Jimbo-Miwa equation appearing in mathematical physics, **Subhadarshan Sahoo and Santanu Saha Ray**

7:3:45-4:00 pm

Scattering of electron from hydrogen atom: asymptotic cross section and scaling law, **Sujay Nayek and Arijit Ghoshal**

8: 4:00-4:15 pm

Instantaneous Spectral Analysis for Subsurface Imaging, **Sunjay and Manas Banerjee**

4:45-5:45 pm: Valedictory Session (First Floor)