Seventh International Conference on Dynamic Systems and Applications & Fifth International Conference on Neural, Parallel, and Scientific Computations

May 27-30, 2015
Morehouse College, Atlanta, Georgia

Wednesday Morning and Afternoon Sessions

Wednesday, May 27, 2015 **9:00 - 10:00**
Welcome Ceremony (Bank of America Auditorium)

Wednesday, May 27, 2015 **10:30 - 11:20**
Ronald E. Mickens, Clark Atlanta University, Atlanta, GA (Bank of America Auditorium)
Chair: Duane Copper

Wednesday, May 27, 2015 **11:40 - 12:30**
G. S. Ladde, University of South Florida, Tampa, Florida (Bank of America Auditorium)
Chair: Alfred Msezane

Wednesday, May 27, 2015 **2:00 - 2:50**
Ravi P. Agarwal, Texas A &M University-Kingsville, TX (Bank of America Auditorium)
Chair: Ronald E. Mickens

Wednesday, May 27, 2015 **3:10 - 5:40**

Applied Mathematics - I (Room # 148)
Chairs: Benedict K. Nmah and R. Sivasamy
Differential Equations and Applications-I (Room # 150)
Chairs: Kale Oyedeji and Ronald E. Mickens
Dynamical Systems and Applications-I (Room # 152)
Chair: Serdal Sahin and Mehmet Onur Fen
Partial Differential Equations and Applications-I (Room # 154)
Chairs: Wafik A. Wassef and M. Sowmya
Workshop on Advances in Dynamic Equations on Time Scales-I (Room # 244)
Chairs: Akin Elvan, Murat Adivar, Youssef Raffoul, and Raegan Higgins
Workshop on Boundary Value Problem and Applications -I (Room # 242)
Chairs: Lingju Kong, and Min Wang
Workshop on Evolution Equations: Stability, Control and Optimization -I (Room: # CF)
Chairs: N. U. Ahmed and T.E. Govindan
Computational Methods and Applications -I (Room # 240)
Chairs: Kailash C. Patidar and Torre Mills
Social Networks
Chair: Tuwaner Lamar (Room: # BE)

Wednesday, May 27, 2015 **5:50 - 6:40**
John R. Graef, University of Tennessee at Chattanooga, TN (Bank of America Auditorium)
Chair: Casey T. Cremins

Wednesday, May 27, 2015 **6:40 - 7:30**
Reception (Room # AD)

Thursday Morning Sessions

Thursday, May 28, 2015 **8:30 - 9:20**

Mohan K. Kadalbajoo, I.I.T. Kanpur, India (Bank of America Auditorium)
Chair: Kailash C. Patidar

Thursday, May 28, 2015 **9:40 - 11:40**

Differential Equations and Applications -II (Room # 150)
Chairs: Susmita Sadhu and Yan Wu
Dynamical Systems and Applications-II (Room # 152)
Chairs: T. Feagin and Mutlu Akar
Workshop on Advances in Dynamic Equations on Time Scales -II (Room # 244)
Chairs: Akin Elvan, Murat Adivar, Youssef Raffoul, R Raffoul, and Raegan Higgins
Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Sys & Appl-I (Room # 154)
Chair: Aghalaya S. Vatsala
Workshop on Boundary Value Problem and Applications -II (Room # 242)
Chairs: Lingju Kong, and Min Wang
Workshop on Evolution Equations: Stability, Control and Optimization -II (Room # CF)
Chair: N. U. Ahmed and T.E. Govindan
Workshop on Recent Advances in Applied Analysis and Applications -I (Room # 148)
Chair: C. Y. Chan
Workshop on Stochastic Analysis and Application -I (Room # BE)
Chairs: G. S. Ladde and S. Sathananthan
Theory and Applications of Fuzzy Systems- I (Room # 240)
Chairs: R. Sivasamy and Hiroaki Uesu

Thursday, May 28, 2015 **11:50-12:40**

N. U. Ahmed, University of Ottawa, Ottawa, Canada (Bank of America Auditorium)
Chair: Irena Lasiecka

Thursday Afternoon Sessions

Thursday, May 28, 2015 **2:00-2:50**

C. Y. Chan, University of Louisiana at Lafayette, Lafayette, LA (Bank of America Auditorium)
Chair: W. Y. Chan

Thursday, May 28, 2015 **3:10 - 5:40**

Differential Equations and Applications-III (Room # 150)
Chair: Athanasios A. Pantelous and Vijay Jung Kunwar
Workshop on Advances in Dynamic Equations on Time Scales-III (Room # 244)
Chairs: Akin Elvan, Murat Adivar, Youssef Raffoul, and Raegan Higgins
Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Sys & Appl-II (Room # 154)
Chair: Aghalaya S. Vatsala
Workshop on Boundary Value Problem and Applications -III (Room # 242)
Chairs: Lingju Kong, and Min Wang
Workshop on Evolution Equations: Stability, Control and Optimization -III (Room # CF)
Chair: N. U. Ahmed and T.E. Govindan
Workshop on Operator Theoretic Techniques in the Theory of Nonlinear Equations-I (Room # 152)
Chair**:** Dhruba Adhikari and Weihua Ruan
Workshop on Recent Advances in Applied Analysis and Applications -II (Room # 148)
Chair: C. Y. Chan
Workshop on Stochastic Analysis and Application -II (Room # BE)
Chairs: S. Sathananthan and Shuya Kanagawa
Computational Methods and Applications -II (Room # 240)
Chairs: Giovanni Calderón and Anilkumar Devarapu

Thursday, May 28, 2015 **5:50-6:40**

Irena Lasiecka, University of Memphis, Memphis, TN (Bank of America Auditorium)
Chair: T.E. Govindan

Kailash C. Patidar, University of the Western Cape, South Africa (Room # CF)
Chair: Mohan K. Kadalbajoo

Thursday, May 28, 2015 **7:00-8:30**
Banquet (Chivers Lane Dining Hall)

Friday Morning Sessions

Friday, May 29, 2015 **8:30 - 9:20**

Aghalaya S. Vatsala, University of Louisiana at Lafayette, LA (# Bank of America Auditorium)
Chair: Amit Setia

Friday, May 29, 2015 **9:40 - 11:40**

Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Sys. with Appl-III (Room # 154)
Chair: Aghalaya S. Vatsala
Workshop on Boundary Value Problem and Applications-IV (Room # 242)
Chairs: Lingju Kong and Min Wang
Workshop on Dynamic Systems and Applications in Physics –I (Bank of America Auditorium)
Chair: Alfred Msezane
Workshop on Operator Theoretic Techniques in the Theory of Nonlinear Equations -II (Room # 152)
Chair: Jin Liang and Bapurao Dhage
Workshop on Stochastic Analysis and Application -III (Room # BE)
Chairs: S. Sathananthan and Shuya Kanagawa
Workshop on Application of Artificial Intelligence/Neural Network-I (Room # 148)
Chair: Taysseer Sharaf and Hansapani Rodrigo
Workshop on Bayesian Decision Analysis in Health Sciences –I (Room # 150)
Chair: Ram Kafle
Workshop on Business Simulation and Applications –I (Room # CF)
Chair: N. S. Nilakantan

Friday, May 29, 2015 **11:50 - 12:40**

Lyudmila K. Kuzmina, Kazan Aviation Institute (NRU) , Russia (Room # CF)
Chair: N. S. Nilakantan

Alfred Z. Msezane, CTSPS, Clark Atlanta University, Atlanta, Georgia (# Bank of America Auditorium)
Chair: Fisseha Abebe

Friday Afternoon Sessions

Friday, May 29, 2015 **2:00 - 2:50**

D. Kannan, University of Georgia, Athens, Georgia (Room # BE)
Chair: Hong Zhang

N. S. Nilakantan, K J Somaiya Inst. of Management Studies and Research, India (Bank of America Auditorium)
Chair: Zhijun Wang

Friday, May 29, 2015 **3:10 - 5:40**

Dynamical Systems and Applications-III (Room # 152)
Chair: Khalil Dajani and Xiaoying Han
Workshop on Dynamic Systems and Applications in Physics –II (Bank of America Auditorium)
Chair: Alfred Msezane
Workshop on Multiplicity of Solutions for Nonlinear Problems and Applications (Room: # CF)
Chair: Biagio Ricceri
Workshop on Stochastic Analysis and Application -IV (Room # BE)
Chair: D. Kannan and S. Sathananthan
Workshop on Stochastic and Deterministic Control, Fuzzy Prog. and Control, and Appl–I (Room # 154)
Chair: Negash G. Medhin
Workshop on Application of Artificial Intelligence/Neural Network –II (Room # 148)
Chair: Taysseer Sharaf and Hansapani Rodrigo
Workshop on Bayesian Decision Analysis in Health Sciences –II (Room # 150)
Chair: Ram Kafle
Theory and Applications of Fuzzy Systems II (Room # 240)
Chair: Kimiaki Shinkai and Kalaimani Sivasamy

Friday, May 29, 2015 **5:50 – 6:40**

Benny Hon, City University, Hong Kong (Bank of America Auditorium**)**
Chair: C. Y. Chain

Biagio Ricceri, University of Catania, Italy (Room: # CF)
Chair: Lingju Kong

Saturday Morning Sessions

Saturday May 30, 2015 **8:30 – 9:40**

N. G. Medhin, North Carolina State University, Raleigh, NC (Bank of America Auditorium)
Chair: Wei Wan

Saturday , May 30, 2015 **9:40 - 11:40**

Difference Equations and Applications (Room # 148)
Chair: N. Vijayalakshmi and Sanjeev Kumar
Dynamical Systems and Applications-IV & Integral Equations and Applications (Room # BE)
Chairs: Ahmed Elhassanein and Lin Li
Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Sys. With Appl -IV (Room # 154)
Chair: Aghalaya S. Vatsala
Workshop on Dynamic Systems and Applications in Physics –III (Room: # CF)
Chair: Alfred Msezane
Workshop on Functional and Longitudinal Data Analysis-I (Room # 150)
Chairs: Bhikhari Tharu and Ram C. Kafle
Workshop on Stochastic and Deterministic Control, Fuzzy Prog. and Control, and Appl –II (Room # 152)
Chair: Negash G. Medhin

Wednesday, March 27, 2015 9:00 – 3:10

9:00 - 10:00 **Welcome Ceremony** **Bank of America Auditorium**

Break **10:00 - 10:30**

Chair: Duane Copper Bank of America Auditorium

10:30 - 11:20 **Ronald E. Mickens**, Clark Atlanta University, Atlanta, GA

The Square Functions

Break **11:20 - 11:40**

Chair: Alfred Msezane Bank of America Auditorium

11:40 - 12:30 **G. S. Ladde**, University of South Florida, Tampa, Florida

Dynamic and Static Processes

Lunch **12:30 - 2:00** Chivers Lane Dining Hall

Chair: Ronald E. Mickens Bank of America Auditorium

2:00 - 2:50 **Ravi P. Agarwal**, Texas A &M University-Kingsville, TX
Upper and Lower Solution Method for n th Order BVPs on an Infinite Interval

Break **2:50 - 3:10**

Wednesday, May 27, 2015 3:10 – 5:40

Applied Mathematics - I **Room: # 148**

Chairs: Chairs: Benedict K. Nmah and R. Sivasamy

3:10 **Hadi Alkahby**, Dillard University, New Orleans, LA
Propagation, Reflection and Dissipation of Magneto Hydrodynamic Wave in Solar Atmosphere

3:40 **Juan Felix Avila-Herrera**, Universidad Nacional de Costa Rica, Costa Rica
Logical Analysis of Data with Multiple Classes An integer Linear Program Approach

4:10 **Jon A. Higbie**, Revenue Analytics, Atlanta, Georgia
Impacts of Model Misspecification, Erroneous Assumptions, and Parameter Estimation Error on Pricing and Revenue Management Systems

4:40 **S. Harisingh Naik**, Osmania University, India,
Thermohaline Convection with Variable Viscosity

5:10 **Benedict K. Nmah**, Morehouse College, Atlanta, GA,
Preliminary Computational Results of an Algorithm for Reliability Optimization

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Differential Equations and Applications-I **Room: # 150**

Chairs: Kale Oyedeji and Ronald E. Mickens

3:10 **Garrett A. Divens**, Morehouse College, Atlanta, GA
(Another) Exactly Solvable SIR Model

3:40 **Kale Oyedeji**, Morehouse College, Atlanta, GA.
A Dynamic Consistent Law of Cooling

4:10 **Sandra Rucker**, Clark Atlanta University, Atlanta, GA.
Geometric Analysis of the Leah Differential Equation

4:40 **Torina Lewis**, Clark Atlanta University, Atlanta, GA
Square Functions As A Dynamic System

Dynamical Systems and Applications-I **Room: # 152**

Chairs: Serdal Sahin and Mehmet Onur Fen

3:10 **T. Feagin**, University of Houston-Clear Lake, TX
The Efficient Solution of Kepler's Equation Using a Cubic Approximation and Rational Functions

3:40 **Mutlu Akar,** Yildiz Technical University, College of Arts and Sciences, Turkey
Higher-Order Poles Under the One-Parameter Planar Dual Motion

4:10 **Dimplekumar N. Chalishajar**, Virginia Military Institute, VA
Trajectory Controllability of Nonlinear Systems- An analytical and a numerical approach

4:40 **Ali Dagdeviren,** Yildiz Technical University, Turkey
Some Algebraic Properties on n-Dimensional Dual Lorentzian Space

5:10 **Serdal Sahin**, Yildiz Technical University, Turkey
A Formula for Higher-Order Accelerations under the One-Parameter Planar Dual Inverse Motion

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Partial Differential Equations and Applications-I **Room: # 154**
Chairs: Wafik A. Wassef and M. Sowmya

3:10 **Mahmoud M. El-Borai**, Alexandria University, Egypt.
Integrated Semi Groups and Nonlocal Cauchy Problem for Abstract Nonlinear Fractional Differential Equations

3:40 **Navnit Jha**, South Asian University Akbar Bhawan Chanakyapuri, India
Convergence Analysis of Exponential Expanding Meshes Compact-FDM for Poisson Equation in Polar Coordinate System

4:10 **Ti-Jun Xiao**, Fudan University, P. R. China
Cauchy Problem for a System of Coupled Equations with Fading Memory

4:40 **Wafik A. Wassef**, Burlington, Canada
Integral Wave Equation and Application to Superconductivity

5:10 **J. Prakash**, University of Botswana, Botswana
Hall Effects on Unsteady MHD Flow Through Porous Medium in a Rotating Parallel Plate Channel Under the Influence of Impulsive Change, Cosine Sine Oscillations of Pressure Gradient

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Workshop on Advances in Dynamic Equations on Time Scales-I **Room: # 244**
Chairs: Akin Elvan, Murat Adivar, Youssef Raffoul, Raegan Higgins

3:10 **Elvan Akin**, Missouri S&T, Rolla, MO
Classification of Nonoscillatory Solutions of Some Dynamic Equations and Systems

3:40 **Ferhan M. Atici**, Western Kentucky University, Bowling Green, KY
Non-Linear Stochastic Growth Models on Discrete Time Domains

4:10 **Hatice Yaldiz**, Duzce University, Turkey
Hermite-Hadamard's inequalities for fractional integrals and related fractional inequalities

4:40 **Erbil Cetin**, Ege University, Turkey
Existence of Solutions for Third Order Three-Point boundary Value Problems on a Half-Line

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Workshop on Boundary Value Problem and Applications -I **Room: # 242**
Chairs: Lingju Kong, and Min Wang

3:10 **Julia Anderson-Lee**, Iowa State University, Ames, IA
Dynamic Modeling of a Rocking Wall: a Mathematical Approach.

3:40 **Hedia Benaouda**, Ibn Khaldoun University of Tiaret, Algeria.
Positive Solutions for Boundary Value Problems with Fractional Order

4:10 **Xingwang Chen**, Savannah State University, Savannah, GA
Fast Degenerate Kernel Method for Hammerstein Equation

4:40 **Casey T. Cremins**, University of Maryland, College Park, MD
A Fixed Point Theorem for Weakly Inward A-Proper Maps and Application to a Picard Boundary Value Problem

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Workshop on Evolution Equations: Stability, Control and Optimization -I **Room: # CF**
Chairs: N. U. Ahmed and T.E. Govindan

3:10 **Tyrone E. Duncan,** University of Kansas, Lawrence, KS
Ergodic control of Linear Stochastic Partial Differential Equations with Fractional Brownian Motions

3:40 **AbdulRahman Al-Hussein**, Qassim University, Saudi Arabia
Recent Progress on the Maximum Principle of Stochastic Evolution Equations

4:10 **Edward Allen**, Texas Tech University, Lubbock, TX
Mean-Reverting Processes and Environmental Variability in SDE Models of Biological Systems

4:40 **Nina Avdonina**, University of Alaska Fairbanks, Fairbanks, AK
Inverse Problem for Networks of Vibrating Strings with Attached Masses

5:10 **Saroj K Biswas**, Temple University, Philadelphia, PA
Multiagent Control Architecture for Synchronization of Dynamic Systems

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Computational Methods and Applications -I **Room: # 240**
Chairs: Kailash C. Patidar Torre Mills

3:10 **Giovanni Calderón**, Universidad de Los Andes, Venezuela
A Comparative Analysis of Mimetic Methods, Finite Difference and Finite Elements for Stationary Problems

3:40 **Hsin-Chu Chen**, Clark Atlanta University, Atlanta, GA
A Highly Parallel Algorithm for Solving Poisson Equation Using Block Decompositions

4:10 **Anilkumar Devarapu**, Albany State University, Albany, GA
Nonsimilar Solutions of Unsteady Mixed Convection along a Moving Cylinder

4:40 **Jorge Villamizar-Morales**, Universidad Industrial de Santander, Bucarmanga, Colombia
Real Effectiveness of Iterative Methods for Solving Nonlinear Equations

5:10 **Legesse Lemecha Obsu**, Adama Science and Technology University, Ethiopia
Pedestrians' impact on the performance of a roundabout

Social Networks **Room: # BE**
Chair: Tuwaner Lamar

3:10 **Curtis Clark**, Morehouse College, Atlanta, GA
On 2-2 Graph Achievement Games

3:40 **Anurag Misra**, DBS College , India
Study of Measurements of EM Radiation and Power Density Causing Possible Hazard in Urban and Suburban Areas

4:10 **Erdogan Mehmet Ozkan,** Yildiz Technical University, Turkey
On Extended Calculus of Z3-graded Differential Calculus on the Quantum Plane

4:40 **Hongmei Chi**, Florida A&M University, Tallahassee, FL
Analyzing Community Evolution in Complex Networks via Bio-Inspired Computing

5:10 **Hongmei Chi**, Florida A&M University, FL
(Quasi)Random number generators for Cloud Computing

Wednesday, May 27, 2015 5:50 – 7:30

Chair: Casey T. Cremins Bank of America Auditorium

5:50 - 6:40 **John R. Graef**, University of Tennessee at Chattanooga, TN
Functional Differential Equations with Delay and Random Effects

Reception 6:40 – 7:30 Room # AD

Thursday, May 28, 2015 8:30 – 9:40

Chair: Kailash C. Patidar Bank of America Auditorium

8:30 - 9:20 **Mohan K. Kadalbajoo**, I.I.T. Kanpur, India
A Spline Collocation Method for Pricing Options under the Jump Diffusion Model

Break 9:20 - 9:40

Thursday, May 28, 2015 9:40-11:40

Differential Equations and Applications -II **Room # 150**
Chairs: Susmita Sadhu and Yan Wu

9:40 **Athanasios A. Pantelous**, University of Liverpool, UK
Linear Descriptor Differential Equations and its Application to Constrained Mechanical Systems
10:10 **Behzad Djafari Rouhani**, University of Texas at El Paso, El Paso, TX
Asymptotic Behavior for a General Class of Non Homogeneous Second Order Evolution Equations of Monotone Type.
10:40 **Ingle Rajkumar Namdevrao**, Bahirji Smarak Mahavidyalaya, India
Existence Theory for First Order Functional Random Differential Equations
11:10 **Vijay Jung Kunwar**, Albany State University, Albany, GA
Second Order Linear Differential Equations with Regular Singularities

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Dynamical Systems and Applications-II **Room # 152**
Chairs: T. Feagin and Mutlu Akar

9:40 **Khalil Dajani**, Southern Arkansas University, Magnolia, AR
Quantum Computation for Network Communications and Space-Based Devices
10:10 **Mehmet Onur Fen** , Georgia State University, Atlanta, GA
Attraction of Li-Yorke chaos by retarded SICNNs
10:40 **Xiaoying Han**, Auburn University, Auburn, AL
Chemostat in Varying Environments

Workshop on Advances in Dynamic Equations on Time Scales -II **Room # 244**
Chairs: Akin Elvan, Murat Adivar, Youssef Raffoul, and Raegan Higgins

9:40 **Muhammad Islam,** University of Dayton, Dayton, OH
Periodic Solutions of Volterra Type Integral Equation on Non-periodic Time Scales
10:10 **Fatma Tokmak Fen,** Georgia State University, Atlanta, GA
Impulsive Boundary Value Problems with Multiple Positive Solutions on Time Scales
10:40 **Raegan Higgins,** Texas Tech University, Lubbock, TX
Behavior of a Nonlinear Discontinuous Dynamic Equation

Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Systems with Applications-I **Room # 154**
Chair: Aghalaya S. Vatsala

9:40 **Bhuvaneswari Sambandham,** University of Louisiana at Lafayette, Lafayette, LA
Numerical and Analytical Results for Linear Caputo Fractional Differential Equations with Variable Coefficients.
10:10 **M. Sowmya,** R.V. College of Engineering, India
Methodology to Compute Coupled lower and Upper Solutions for Reaction Diffusion Equations.
10:40 **Rossitza S. Marinova,** Concordia University College of Alberta, Canada
Vectorial Operator Splitting Difference Schemes for Multidimensional Advection-Diffusion Problems.
11.10 **Donna Stutson,** Xavier University of Louisiana, New Orleans, LA
Sequential Linear Nonhomogeneous Sub Hyperbolic Caputo Fractional Partial Differential Equation in One Dimensional Space

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Workshop on Boundary Value Problem and Applications -II **Room # 242**
Chair: Lingju Kong, and Min Wang

9:40 **Wenying Feng**, Trent University, Canada
Existence of Positive Solutions for a Class of Nonlinear Operators
10:10 **Marlene Frigon**, University of Montreal, Canada
Systems of Hammerstein Integral Inclusions in Banach Spaces with Mixed Monotone Conditions
10:40 **Christopher Goodrich**, Creighton Preparatory School, Omaha, NE
Boundary Value Problems with Nonlocal, Nonlinear Boundary Conditions

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Workshop on Evolution Equations: Stability, Control and Optimization -II **Room # CF**
Chair: T.E. Govindan

9:40 **Scott Hansen**, Iowa State University, Ames, IA
Boundary Controllability of Schrodinger's Equation with a Delta-Function Potential
10:10 **Jose de Jesus Martinez**, Iowa State University, Ames, IA
Modeling and controllability of a heat equation with singular density.
10:40 **T. E. Govindan**, ESFM-IPN, Mexico
Weak Convergence of Probability Measures of Yosida Approximate Mild Solutions of McKean-Vlasov Type Stochastic Evolution Equations

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Workshop on Recent Advances in Applied Analysis and Applications -I **Room # 148**
Chair: C. Y. Chan

9:40 **Ratinan Boonklurb**, Chulalongkorn University, Thailand
Finite Time Blow Up for Semilinear Heat Equations with Nonlocal Boundary Condition
10:10 **Julio C. Carrillo-Escobar**, Universidad Industrial de Santander, Colombia
Quenching Time for a Singular Parabolic Problem Having a Concentrated Nonlinear Source
10:40 **W. Y. Chan**, Gonzaga University, Spokane WA
Determining Critical Domains of Quenching Problems for Coupled Nonlinear Parabolic Differential Equations
11:10 **M. K. Kwong**, The Hong Kong Polytechnic University, Hong Kong
Blowup of pulsating radial flows of 2D Euler-Poisson equation

Workshop on Stochastic Analysis and Application -I **Room # BE**
Chair: G. S. Ladde and S. Sathananthan

9:40 **Kristina B. Hilton**, University of South Florida, Tampa, FL
Dynamics of Multi-Cultural Networks under Stochastic Perturbations
10:10 **Shuya Kanagawa**, Tokyo City University, Japan
Estimation of Jump-Times of a Jump Diffusion Model for Nikkei 225 Stock Index
10:40 **Irina V. Melnikova**, Ural Federal University, Russia
Generalized Solutions to Infinite Dimensional Stochastic Problems
11:10 **Ho Woo Lee**, Sungkyunkwan University, Korea (South)
Analysis of the Queueing System with Finite Serving Capacity of the Server

Theory and Applications of Fuzzy Systems- I **Room # 240**
Chairs: Thaga K and Hiroaki Uesu

9:40 **Kimiaki Shinkai**, Tokyo Kasei Gakuin University, Japan
Conjoint Analysis of Fuzzy Responses I
10:10 **Kalaimani Sivasamy**, Rani Meyyammai School, India
Fuzzy Theory Based Control Charts Using Transition Probability Approach
10:40 **Satoru Takagi**, Kogakuin University, Japan
A Needs Analysis by Fuzzy Reasoning at Undergraduate Mathematics Lectures
11:10 **Hiroaki Uesu**, Waseda University, Japan
Type-2 Fuzzy Contingency Table Analysis and its Application

Break **11:40 - 11:50**

Thursday, May 28, 2015 11:50 - 2:00

Chair: Irena Lasiecka Bank of America Auditorium

11:50 -12:40 **N. U. Ahmed**, University of Ottawa, Ottawa, Canada
Measure Valued Solutions of Neutral Evolution Equations on Banach Spaces and Their Control

Lunch 12:30 - 2:00 Chivers Lane Dining Hall

Thursday, May 28, 2015 2:00 - 3:10

Chair: W. Y. Chan — Bank of America Auditorium

2:00 B 2:50 **C. Y. Chan**, University of Louisiana at Lafayette, Lafayette, LA
Quenching Behavior Due to Nonlinear Concentrated Sources

Break 2:50 - 3:10

Thursday, May 28, 2015 3:10 - 5:40

Differential Equations and Applications-III **Room # 150**
Chair: Athanasios A. Pantelous and Vijay Jung Kunwar

3:10 **Susmita Sadhu**, Georgia College & State University, Milledgeville, GA
Existence of a radial stagnation flow on a stretching cylinder subjected to wall transpiration.
3:40 **Qing Wang**, Shepherd University, Shepherdstown, WV
A Calibrated Immuno-chemotherapy Model to Treat Cancer
4:10 **Yan Wu**, Georgia Southern University, Statesboro, GA
Stability Analysis of Interconnected Lorenz Systems with Two Proportional State-Feedback Controllers
4:40 **Cesar Martinez-Garza**, Penn State - Berks, Reading, PA
The Method of Generalized Quasilinearization applied to find the zeros of a Volterra Integral Equation of the Second Kind.
5:10 **Anthony Uyi Afuwape**, Universidad de Antioquia, Colombia
Application of the New Frequency Domain Method in the Fourth Order Non-linear Differential Equation for Uniform Dissipativity

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Workshop on Advances in Dynamic Equations on Time Scales-III **Room # 244**
Chairs: Akin Elvan, Murat Adivar, Youssef Raffoul, and Raegan Higgins

3:10 **Ozkan Ozturk,** University of Science and Technology, Rolla, MO
On Nonoscillatory Solutions of Emden Fowler Dynamic Systems on Time Scales.
3:40 **Ismail Ugur Tiryaki,** Missouri University of Science&Technology, Rolla, MO
On Nonoscillatory Solutions For Three-Dimensional Dynamic Systems
4:10 **Abdullah Ozbekler,** Atilim University, Turkey
Disconjugacy via Lyapunov and Valée-Poussin Type Inequalities for Forced Differential Equations

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Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Systems with Applications-II **Room # 154**
Chair: Aghalaya S. Vatsala

3.10 **Vinodh Kumar Chellamuthu,** University of Louisiana at Lafayette, LA
A Model of the Interaction of Batrachochydrium dendrobatidis, Janthinobacterium lividum, Temperature and Frog Population Dynamics and its Implication for Chytridiomycosis Management.
3.40 **Ross Chiquet,** University of Louisiana at Lafayette, LA
Demographic Analysis Of Sperm Whales Using Deterministic And Stochastic Models.
4.10 **Diego Ramirez** , Lamar University, Beaumont, TX
Existence and Uniqueness of Solutions to a class of Caputo Fractional Boundary Value Problems.
4.40 **Tchavdar Marinov,** Southern University New Orleans, New Orleans, LA
Identification the Boundary-Layer-Thickness in Plane Stagnation Point Flow as an Inverse Problem.
5.10 **Baoling Ma,** University of Louisiana at Lafayette, LA
A General Nonlinear Population-Environment Model: Well-Posedness and Numerical Approximations

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Workshop on Boundary Value Problem and Applications -III **Room # 242**
Chairs: John R. Graef, Lingju Kong, and Min Wang

3:10 **Jeffrey T. Neugebauer**, Eastern Kentucky University, Richmond, KY
An Ordering on Green's Functions for a Family of Two-Point Boundary Value Problems
3:40 **Lingju Kong**, University of Tennessee at Chattanooga, TN
Homoclinic Solutions for a Higher Order Difference Equation with p-Laplacian
4:10 **Mahantesh M. Nandeppanavar**, Government College, Gulbarga University, India
Flow and Heat Transfer of Hydromagnetic Flow of Cu-Water and Ag-Water Nanofluids over a Stretching Sheet with Partial Slip
4:40 **N. L. Khobragade**, Dharampeth M. P. Deo Memorial Science College, India
The Deflection in a Thin Annular Disc Due to a Partially Distributed Heat Supply
5:10 **Gnana Bhaskar Tenali**
T/A

Workshop on Evolution Equations: Stability, Control and Optimization -III **Room # CF**
Chair: N. U. Ahmed and T.E. Govindan

3:10 **Mariusz Michta**, University of Zielona Góra, Poland
Remarks on Unboundedness of Set-Valued Stochastic Integrals
3:40 **Stanislaw Migorski**, Jagiellonian University in krakow, Poland
Nonlinear Variational-Hemivariational Inequalities in Banach Spaces with Applications
4:10 **Arian Novruzi**, University of Ottawa, Canada
Estimates of First and Second Order Shape Derivatives in Nonsmooth Multidimensional Domains and Applications
4:40 **Jayant Singh**, North Dakota State University, Fargo, ND
Stability Analysis of Discrete Time Recurrent Neural Networks

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Workshop on Operator Theoretic Techniques in the Theory of Nonlinear Equations-I **Room # 152**
Chair**:** Dhruba Adhikari and Weihua Ruan

3:01 **Dhruba Adhikari**, Kennesaw State University, Kennesaw , GA
Solvability of Operator Inclusions Involving Homogeneous Maximal Monotone Operators
3:40 **Jin Liang**, Shanghai Jiao Tong University, People's Republic of China
Relation Between Nonlinear Functions and the Norm Functions of Operator Semigroups in Banach Spaces
4:10 **Bhimrao R. Ahirrao**, Z. B. Patil College, India
Approximating Fixed Points of Generalized Nonexpansive Mappings in Banach Spaces
4:40 **Subhash Kendre**, Savtribai Phule Pune University, India
Existence of Iterative Fractional Integrodifferential Equation with Nonlocal Condition
5:10 **Kishor D. Kucche**, Shivaji University, India.
Non-densely Defined Impulsive Functional Integrodifferential Equations with Infinite Delay

Workshop on Recent Advances in Applied Analysis and Applications -II **Room # 148**
Chair: C. Y. Chan

3:10 **H.T. Liu**, Tatung University, Taipei, Taiwan
Blow-Up Problem Due to a Concentrated Nonlinear Source in a Subdiffusive Medium
3:40 **Patcharin Tragoonsirisak Marion**, Fort Valley State University, Fort Valley , GA
Blow-up criteria for a parabolic problem due to a concentrated nonlinear source in RN
4:10 **Douglas NG**, The Open University of Hong Kong, Hong Kong
Mathematical Modelling of Tumor Growth
4:40 **Haiyan Tian**, The University of Southern Mississippi, Hattiesburg, MS
Comparing Two Types of Bases in Solving Elliptic Boundary Value Problems

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Workshop on Stochastic Analysis and Application -II **Room # BE**
Chairs: S. Sathananthan and Shuya Kanagawa

3:10 **S. Sathananthan**, Tennessee State University, Nashville, TN
Robust Control of Markovian Switching Genetic Regulatory Networks with Partially Unknown Transition Probabilities.
3:40 **Jean-Claude Pedjeu**, Tennessee State University, Nashville, TN
Fundamental Existence and Uniqueness of Stochastic Integro-Differential Equations with Markovian Switching
4:10 **Kamil Lukasz Swiatek**, Poznan University of Technology, Poland
Set-Valued Stochastic Integral Driven by a Martingale in the Plane and Set-Valued Stochastic Equations
4:40 **R. Sivasamy**, University of Botswana Gaborone, Botswana
A Class of Discrete Time Queues Operated by Two Heterogeneous Servers under >First Come First Served Queue Discipline
5:10 **M. Seenivasan**, Annamalai University, India.
The Stationary Analysis of a Retrial Queue With Unreliable Servers

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Computational Methods and Applications -II **Room # 240**
Chairs: Giovanni Calderón and Anilkumar Devarapu

3:10 **Tuwaner Lamar**, Morehouse College, Atlanta, GA
A Method for Constructing Networks
3:40 **Harihar Khanal**, Embry-Riddle Aeronautical University, Daytona Beach, FL
Time Integration Schemes for Collisional Radiative Laser Ablation Model
4:10 **Torre Mills**, Albany State University, Albany, GA
Modeling and Parameter Estimation of Gene Regulatory Networks
4:40 **Robert Steven Owor**, Albany State University, Albany GA
The Design and Development of a Standard Penetration Testing Index
5:10 **Amit Setia**, BITS, Pilani- K. K. Birla Goa Campus, India
Numerical solution of Cauchy singular integral equation with an application to a crack problem

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Break **5:40 - 5:50**

Thursday, May 28, 2015 5:50 - 8:30

Chair: Mohan K. Kadalbajoo — Bank of America Auditorium

5:50 - 6:40 **Kailash C. Patidar**, University of the Western Cape, South Africa
Pseudo Almost Periodic Mild Solutions of Quasilinear Functional Differential Equations With Application to Mathematical Biology

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Banquet 7:00 - 8:30 Chivers Lane Dining Hall

Friday, May 29, 2015 8:30 – 9:40

Chair: Amit Setia — Bank of America Auditorium

8:30 – 9:20 **Aghalaya S. Vatsala,** University of Louisiana at Lafayette, Lafayette, LA
Analysis of Riemann Liouville Versus Caputo Fractional Differential and Integral Equations

Break 9:20 - 9:40

Friday, May 29, 2015 9:40 – 11:40

Workshop on Analysis and Numerical Methods of Nonlinear Dynamic Systems with Applications-III **Room # 154**
Chair: Aghalaya S. Vatsala

9:40 **Amit Setia**, BITS, Pilani- K. K. Birla, Goa Campus, India
Numerical Solution of Fourth Order Fractional Integro-Differential Equation by Using Legendre Wavelets.

10:10 **Abhinandan Chowdhury**, Gettysburg College, Gettysburg, Pennsylvania
A Numerical Study of the Potential Flow Around Two Spheres in Arbitrary Motion Through an Ideal Fluid.

10:40 **Jianmin Zhu**, Fort Valley State University, Fort Valley, GA
Quenching Behavior of the Initial-Boundary Value Problem for a Generalized Euler Poisson Darboux Equation.

Workshop on Boundary Value Problem and Applications-IV **Room # 242**
Chair: John R. Graef, Lingju Kong, and Min Wang

9:40 **Stephen B Robinson**, Wake Forest University, Winston-Salem, NC
A Discrete Version of a Theorem of Schaaf and Schmitt

10:10 **Min Wang**, Equifax Inc.
Green's Functions for Fractional Boundary Value Problems

10:40 **Bo Yang,** Kennesaw State University, Kennesaw, GA
Positive Solutions for a Class of Boundary Value Problems for the Beam Equation

11:10 **Miroslawa Zima**, University of Rzeszow, Poland
Positive Solutions of Non-Local Boundary Value Problem with Singularities in Space Variables

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Workshop on Dynamic Systems and Applications in Physics -I Bank of America Auditorium
Chair: Alfred Msezane

9:40 **Fisseha Abebe**, Clark Atlanta University, Atlanta, GA
Dynamic System Modeling the Whole Transcriptome

10:10 **A. S. Baltenkov**, Institute of Ion-Plasma and Laser Technologies, Uzbekistan
Two Electrons in the Dirac-Bubble Potential Well

10:40 **Zineb Felfli**, CTSPS, Clark Atlanta University, Atlanta, GA
A Regge Pole Approach to Atomic Collisions

11:10 **George Japaridze**, CTSPS, Clark Atlanta University, Atlanta, GA
Recent results from IceCube

Workshop on Operator Theoretic Techniques in the Theory of Nonlinear Equations -II **Room # 152**
Chair: Jin Liang and Bapurao Dhage

9:40 **Rupesh Tulshiram More,** Arts, Commerce and Science College, India
Approximation of Solutions of a Integro-Difference-Differential Equation with Nonlocal Condition
10:10 **Hemant Kumar Pathak,** Pt. Ravishankar Shukla University, India
Existence and Approximation of the Solutions of the IVPs in the Generalized form of p^{th} Order ODE Using Operator Theoretic Techniques
10:40 **Haribhau Laxman Tidke,** North Maharashtra University, India
On a Nonlinear Second Order Volterra Integro-Differential Equation with Nonlocal Conditions
11:10 **Xin Yang Lu**, Carnegie Mellon, PA
Grain Boundary Characteristic Distribution

Workshop on Stochastic Analysis and Application -III **Room: # BE**
Chair: G. S. Ladde and S. Sathananthan

9:40 **Emmanuel Appiah**, University of South Florida, Tampa, FL
Dynamic Modeling of Time to Event Data
10:10 **R. Elangovan**, Annamalai University, India.
Stochastic Model to Determine the Expected Time to Recruitment with Three Sources of Depletion of Manpower under Correlated Interarrival Times
10:40 **Ahmed Elhassanein**, Damanhour University, Egypt
A stochastic Discretized Version of a Stage Structured Predator Prey Model
11:10 **Mohammad Habibi**, Tennessee State University, Nashville, TN
Quantized Stabilization of Stochastic Systems under Markovian Switching.

Workshop on Application of Artificial Intelligence/Neural Network-I **Room # 148**
Chair: Taysseer Sharaf and Hansapani Rodrigo

9:40 **Udhay Ravishanar**, Canada
Understanding the Weight-Space of Neural Networks and the design of a Lyapunov-Based Adaptive and Stable Weight Regularization Algorithm
10:10 **Hansapani Rodrigo**, University of South Florida, Tampa, FL
Neural Network Survival Analysis for Lung Cancer
10:40 **Biswanath Samanta**, Georgia Southern University, Statesboro, GA
Single Multiplicative Neuron Model As An Alternative to Multi-layer Perceptron Neural Network
11:10 **Rui Wang**, National University of Defense Technology, China
Multi-Objective Optimal Design of Hybrid Renewable Energy Systems Using Evolutionary Algorithms

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Workshop on Bayesian Decision Analysis in Health Sciences –I **Room # 150**
Chair: Ram Kafle

9:40 **Hanwen Huang**, University of Georgia, Athens, GA
Bayesian Composite Quantile Regression
10:10 **Jing Zhang**, Georgia State University, Atlanta, GA
Inferring Functional Interaction and Transition Patterns via Dynamic Bayesian Variable Partition Model
10:40 **Netra Khanal**, The University of Tampa, Tampa, FL
Bayesian age-stratified joinpoint regression model: an application to lung and brain cancer mortality
11:10 **Gokarna Aryal**, Purdue University Calumet, Hammond, IN
Kumaraswamy Laplace Distribution and its Applications

Workshop on Business Simulation and Applications –I **Room # 244**
Chair: N. S. Nilakantan

9:40 **Zhijun Wang**, Shepherd University, Shepherdstown, WV
Using Particle Swarm Optimization to Solve a Tumor Cell Population Growth Dynamics Model
10:10 **Chinenye Ofodile,** Albany State University**,** Albany**,** GA
231 Pattern Occurrences in Dumont Permutations
10:40 **N. Vijayalakshmi**, Anna University, Chennai, India
Multi level spam filtering on E-Mail Based Multi Objective classification for Dimensionality Reduction Using Domain Ontology
11:40 **Ramjee Sharma**, DeVry University, Atlanta, GA
Parallel Pseudospectral Method for Nonlinear Partial Differential Equations

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Break **11:40 - 11:50**

Friday, May 29, 2015 11:50 - 2:00

Chair: N. S. Nilakantan Room # CF

11:50 -12:40 **Lyudmila K. Kuzmina**, Kazan Aviation Institute (NRU) , Russia
Methods of Stability Theory and Singularly Perturbed Systems

Chair: Fisseha Abebe Bank of America Auditorium

11:50 -12:40 **Alfred Z. Msezane,** CTSPS, Clark Atlanta University, Atlanta, Georgia
Complex Angular Momentum Investigation of Low-Energy Electron-Atom Scattering and Negative-Ion Photodetachment

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Lunch 12:40 - 2:00 Chivers Lane Dining Hall

Friday, May 29, 2015 2:00 - 3:10

Chair: Hong Zhang Room # BE

2:00 - 2:50 **D. Kannan,** University of Georgia, Athens, Georgia
Stochastic Motion Under Sublinear Expectation

Chair: Zhijun Wang Bank of America Auditorium

2:00 - 2:50 **N. S. Nilakantan,** K J Somaiya Inst. of Management Studies and Research, India
Monte Carlo Simulation in Business Applications

Break 2:50 - 3:10

Friday, May 29, 2015 3:10 – 5:40

Dynamical Systems and Applications-III **Room # 152**
Chair: Khalil Dajani and Xiaoying Han

3:10 **Steven M. Pederson**, Morehouse College, Atlanta, GA
Intersection of Nested Entropy-Carrying Sets
3:40 **Weihua Ruan**, Purdue University, Calumet, IN
A Dynamical System Model of Changing Society
4:10 **Robert Steven Owor**, State University, GA
Investigating the Use of Euler's Knight Tour Algorithms to predict Zero-Day Attacks
4:40 **Saroj Kumar Sahani**, South Asian University, India
Effects of Intracellular Delay and Immune Response Delay in HIV Model

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Workshop on Dynamic Systems and Applications in Physics -II Bank of America Auditorium
Chair: Alfred Msezane

3:10 **S. T. Manson**, Georgia State University, Atlanta, GA
Model Potentials for a C60 Shell
3:40 **Tharanga Nanayakkara**, Clark Atlanta University, Atlanta, GA
Electronic and Magnetic Properties of Nitrophenyl Functionalized Graphene
4:10 **D. Pokhrel**, Clark Atlanta University, Atlanta, Georgia
Quantum Confinement in a Core-Shell Structured Boxes
4:40 **L. Rohani**, Clark Atlanta University, Atlanta, Georgia
Molecular Dynamics Studies of Mutations in p53

Workshop on Multiplicity of Solutions for Nonlinear Problems and Applications–I **Room: # CF**
Chair: Biagio Ricceri

3:10 **Yun-Ho Kim**, Sangmyung University, South Korea,
Existence and Multiplicity of Solutions for Equations of p(x)-Laplace Type Without Ambrosetti and Rabinowitz Condition
3:40 **Lingju Kong**, University of Tennessee at Chattanooga, TN
Two Nontrivial Solutions for Fourth Order Elliptic Problems with p(x)-Biharmonic Operators
4:10 **Lin Li**, Southwest University, Chongqing, China
Existence and Multiplicity of Self-Similar Solutions for the Heat Equation with Indefinite Weight Functions
4:40 **Kisoeb Park**, Sungkyunkwan University, Republic of Korea
Multiple Solutions for Nonlinear Eigenvalue Problems of p(x)-Laplace Type with Nonlinear Boundary Condition.

Workshop on Stochastic Analysis and Application -IV **Room # BE**
Chair: D. Kannan and S. Sathananthan

3:10 **Hong Zhang**, University of Wisconsin Oshkosh, Oshkosh, WI
Stochastic Motion Under Sublinear Expectation: Nelson Stochastic Derivatives
3:40 **Ryan M. Thurman**, University of South Florida, Tampa, FL
On the Generalization of Artificial Neural Networks with Dynamic Excitation
4:10 **S. Madhusudana Verma**, Rayalaseema University, India
Reliability Analysis for Two Dissimilar Units in the Presence of Common Cause Shock Failures
4:40 **Divine Wanduku**, Keiser University, Fort Lauderdale, FL
Static Properties of Scale-Structured Network Delayed Epidemic Dynamic Models
5:10 **Yumi Yahagi**, Tokyo City University, Japan
A Probabilistic Interpretation to One-Dimensional Keller-Segel System

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Workshop on Stochastic and Deterministic Control, Fuzzy Programming and Control, and Applications –I **Room # 154**
Chair: Negash G. Medhin

3:10 Sanjeev Kumar, Dr. B.R. Ambedkar University, Agra, India
A mathematical Model to Diagnose the Level of Diabetes Using Fuzzy Logic System
3:40 **Yuanyuan Peng**, Claflin University, Orangeburg, SC
The Study of Optimal Strategy for Selling Tickets for a Sporting Event
4:10 **Ezekiel O. Ayoola**, University of Ibadan, Ibadan, Nigeria
Existence and Uniqueness of Solutions of a Class of Quantum Stochastic Partial Differential Equations
4:40 **E. Sivajothi**, Anna University, Chennai, India
For an Efficient Approach the Placement of Nodes in Wireless Sensor Networks

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Workshop on Application of Artificial Intelligence/Neural Network –II **Room # 148**
Chair: Taysseer Sharaf and Hansapani Rodrigo

3:10 **Zvi Retchkiman Konigsberg**, Instituto Politecnco Nacional, Mexico
Computing Power of Petri Nets: A Review and Something More...
3:40 **Jose Paz Perez Padron**, Universidad Autonoma de Nuevo Leon, Mexico
Chaos Synchronization for Trajectory Tracking Between Plant, Reference and Recurrent Neural Networks Using Two Control Law
4:10 **Sandeep Kumar Jain**, Dr. B.R. Ambedkar University, India
Estimation for Faults Prediction from Component Based Software Design using Feed Forward Neural Networks

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Workshop on Bayesian Decision Analysis in Health Sciences –II **Room # 150**
Chair: Ram Kafle

3:10 **Muditha Perera**, University of South Florida, Tampa, FL
Bayesian Piecewise Exponential Model for Breast Cancer Time-to-Event Data
3:40 **Bhikhari Tharu**, University of South Florida, Tampa, FL
Age-Period-Cohort Model by Histogram Smoothing Approach
4:10 **Doo Young Kim**, University of South Florida, Tampa, FL
A Time Series Forecasting Model of the Carbon Dioxide Concentrations in the Atmosphere.
4:40 **Justine Omai Nyanchoga**, Moi University , Kenya
Introducing The Real-Time Normal Frequency Function For Big Data Analysis

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Theory and Applications of Fuzzy Systems - II **Room # 240**
Chair: Kimiaki Shinkai and Kalaimani Sivasamy

3:10 **Chuang Peng**, Morehouse College, Atlanta, GA
A Study on the Ring Structure of Fuzzy Numbers
3:40 **Miguel Ramirez**, University of Oriente, Venezuela
Identification and Control by Means of Invertible Singleton Fuzzy Models
4:10 **Baby Bhattacharya**, National Institute of Technology Agartala, India
Some Structures on Gamma-Open Sets in Fuzzy Bitopological Spaces
4:40 **Rabi N. Bhaumik**, Tripura University, India
Intuitionistic Fuzzy Rough Relations – Its Properties and Applications
5:10 **Vilas Kharat**, SP Pune University, India
Classification and Analysis of Patients' Diagnosis : A Case Study in Gynecology

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Break **5:40 - 5:50**

Friday, May 29, 2015 5:50 – 6:40

Chair: C. Y. Chain Bank of America Auditorium

5:50 – 6:40 **Benny Hon,** City University, Hong Kong
Reproducing Kernel Hilbert Space Method for solving Inverse and Ill-posed Problems

Chair: Lingju Kong Room: # CF

5:50 – 6:40 **Biagio Ricceri,** University of Catania, Italy
Minimax theory and multiplicity of solutions for nonlinear problems

On Your Own 6:40 PM +

Saturday May 30, 2015 8:30 – 9:40

Chair: Wei Wan Bank of America Auditorium

8:30 – 9:20 **N. G. Medhin**, North Carolina State University, Raleigh, NC
Impulsive Control Problem Governed by Fractional Partial Differential Equation and Application

Break 9:20 – 9:40

Saturday May 30, 2015 9:40 - 12:30

Difference Equations and Applications I **Room # 148**

Chair: N. Vijayalakshmi and Sanjeev Kumar

9:40 **Bondar Kirankumar Laxmanrao**, NES Science College, India
Some Results on Phi-Laplacian Difference Boundary Value Problems

10:10 **D. B. Dhaigude**, Dr. Babasaheb Ambedkar Marathwada University, India
Method of Upper Lower Solutions Method of Upper Lower Solutions for System of Finite Difference Time Degenerate Parabolic Equations

10:40 **Vladimir Vasilyev**, Lipetsk State Technical University, Russia
On Some Classes of Multidimensional Difference Equations

Dynamical Systems and Applications-IV & Integral Equations and Applications **Room # BE**

Chair: Ahmed Elhassanein and Lin Li

9:40 **Chaohui Zhang**, Morehouse College, Atlanta, GA
Intersection Numbers and Path Distance Between Simple Closed Curves on Riemann Surfaces

10:10 **A. Swaminathan**, Anna University, India
Secure Routing Methods for Efficient Data Transmission for Wireless Sensor Networks: A Survey

10:40 **S. A. Belbas**, University of Alabama, Tuscaloosa, AL
Volterra integral equations of the fifth kind with applications

11:10 **Sanjeev Kumar**, Dr. B.R. Ambedkar University Institute of Basic Science, India
Pressure Difference and Pumping Action of the Peristaltic Flow of a Multi-layered Fluid: An application of Arterial Blood Flow

11:40 **Aftab Ahmed**, Georgia Institute of Technology, Atlanta, GA
State Observation in Systems with Explicit or Implicit State-Dependent Delay

12:10 **Aftab Ahmed**, Georgia Institute of Technology, Atlanta, GA
Stability and Passivity Analysis of Systems with State-Dependent Delays

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Workshop on Analysis and Numerical Methods of Nonlinear **Room # 154**

Dynamic Systems with Applications-IV

Chair: Aghalaya S. Vatsala

9.40 **Zachary Denton** , North Carolina A&T State University, Greensboro, NC
Generalized Monotone Method for Multi-Order 2-Systems of Riemann-Liouville Fractional Differential Equations.

10.10 **Udaykumar D. Vyas**, Winston-Salem State University, Winston-Salem, NC
Generalized Quasilinear Techniques for Nonlinear First Order Periodic Boundary Value Problems.

10.40 **Sudhakar G. Pandit,** Winston-Salem State University, Winston-Salem, NC
An Initial-Boundary Value Problem Approach to Nonlinear Hyperbolic Periodic Boundary Value Problems

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Workshop on Dynamic Systems and Applications in Physics –III **Room: # CF**
Chair: Alfred Msezane

9:40 **Tharanga Nanayakkara**, CTSPS, Clark Atlanta University, Atlanta, Georgia.
Structural and Electronic Properties of Quasi-Planer Boron Nanotubes
10:10 **X. Q. Wang**, Clark Atlanta University, Atlanta, Georgia
Molecular Dynamics Studies of Mutations in p53
10:40 **U. K. C. Wijewardena**, Clark Atlanta University, Atlanta, Georgia
Iterative Solutions to PT-Symmetric Potentials
11:10 **Neha Sharma**, University of Delhi, India
Optimizing the Power Required in Hyperthermia Treatment Using Magnetic Nanoparticles
11:40 **Obabiyi O. Sunday,** University of Ibadan, Nigeria
The Effect of Physco-Social Life on a State in Population Dynamics

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Workshop on Functional and Longitudinal Data Analysis-I **Room # 150**
Chairs: Bhikhari Tharu and Ram C. Kafle

9:40 **Xin Qi**, Georgia State University, Atlanta, GA
Sparse Principal Component Analysis for High-Dimensional Functional Data
10:10 **Juan Felix Avila-Herrera**, Universidad Nacional de Costa Rica, Costa Rica
A New Approach to Select Significant Patterns in Logical Analysis of Data
10:40 **Ram C. Kafle**, Sam Houston State University, Huntsville, TX
Functional Regression on Estimating the Rate of Change of Temporal Trends
11:10 **Ruiyan Luo** , Georgia State University, Atlanta, GA
Functional Regression with Functional Response by Signal Compression

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Workshop on Stochastic and Deterministic Control, Fuzzy Programming and Control, and Applications–II **Room # 152**
Chair: Negash G. Medhin

9:40 **Zephyrinus C. Okonkwo**, Albany State University Albany, Georgia
Control Problems Arising From Terrorism And Counter Terrorism
10:10 **Sajid Saleem**, Claflin University, Orangeburg, SC
Study Competition and Cooperation in Engineering Project Risk Control and Management
10:40 **Wei Wan**, Claflin University, Orangeburg, SC
Study of Competition and Cooperation in Engineering Project Risk Control and Management
11:10 **Kandethody Ramachandran**, University of South Florida, Tampa, FL
Stochastic Game Models in Cyber Security-A Survey
11:40 **Teshome Balkew**, North Carolina State University, Raleigh, NC
Stability and Control Analysis of an HIV-model
R. Kalyanaraman, Annamalai University, India
A Single Server Retrial Queueing System With Two Types of Arrivals and Finite Number of Recurrent Repeated Customers

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LUNCH **12:30** Chivers Lane Dining Hall

Stone Mountain Trip

Pickup near Chivers/Lane Dining Hall

Trip I: Departs at 2:00 PM (Expected to come back about 6:00PM)

Trip II: Departs at 4:00 PM (Expected to come back about 8:00PM)