

## AMAT 2015 CONFERENCE PROGRAM

**MAY 28, 2015 (THURSDAY):**

**08:30-09:30** Registration [Place: Conference Hall]

**09:15-09:30** Opening Ceremony [Room: A]

**09:30-10:20** Invited Lecture [Room: A]

**Chair: Oktay Duman**

**Speaker: George A. Anastassiou**

*"Fractional Monotone Approximation"*

**10:20-10:40** Coffee-Tea-Cookies Break [Place: Conference Hall]

**10:40-11:40** Session 1-A (3 talks) [Room: A]

**Chair: Tamaz Vashakmadze**

- Gulgassyl Nugmanova

*"Rogue Wave Solutions for the Myrzakulov-I Equation"*

- G. Bekova, Zh. Myrzakulova, Kuralay Yesmakhanova

*"Rogue Waves of the (1+1)-Dimensional Schrödinger-Maxwell-Bloch Equation"*

- Z. I. Ismailov and Pembe Ipek

*"Spectrums of Solvable Pantograph Type Delay Differential Operators for First Order"*

**10:40-11:40** Session 1-B (3 talks) [Room: B]

**Chair: Alexander Goncharov**

- George A. Anastassiou and Iuliana Iatan

*"A New Approach of a Possibility Function Based Neural Network"*

- Hasan Yurt and Ali Guven

*"Trigonometric Approximation of Functions of Several Variables in Lebesgue Spaces"*

- Ilker Vural, Birol Altin and Ismet Yuksel

*"Schurer Generalization of a Family of  $\$q\$$ -Hybrid Summation Integral Type Operators"*

**10:40-11:40** Session 1-C (3 talks) [Room: C]

**Chair: Taraneh Abarin**

- Tahir Khaniyev, Basak Gever and Zulfiye Hanalioglu

*"On the Rate of Weak Convergence of Ergodic Distribution for a Renewal-Reward Process with a Generalized Reflecting Barrier"*

- Murat Gül and Nurgul Okur Bekar

*"A Review on Runs of Markov Chains and Streaks in Football"*

- Nurgul Okur Bekar, Hande Gunay Akdemir and Imdat Iscan

*"Some Extensions of Preinvexity for Stochastic Processes"*

**11:40-11:50** Short Coffee-Tea Break [Place: Conference Hall]

**11:50-12:50 Session 2-A (3 talks) [Room: A]**

**Chair: Mircea Sofonea**

- Michael J. Johnson and Hakim Johnson  
*"A Constructive Framework for Minimal Energy Planar Curves"*
- Melih Ağraz and Vilda Purutçuoğlu  
*"Transformations of Data in Deterministic Modellings of Biological Networks"*
- Naushad Mamode Khan, Yuvraj Sunecher and Vandna Jowaheer  
*"Analyzing Multivariate Count Data Using a GQL Based on Copula Structures"*

**11:50-12:50 Session 2-B (3 talks) [Room: B]**

**Chair: Oktay Duman**

- Ismet Yuksel , Ulku Dinlemez and Birol Altin  
*"Approximation by  $q$ -Baskakov-Durrmeyer Type Operators of Two Variables"*
- George A. Anastassiou and Merve Kester  
*"Uniform Approximation with Rates by Multivariate Generalized Discrete Singular Operators"*
- Jamal Mamedkhanov and Irada Dadashova  
*"Rational Approximation in a Complex Plane"*

**11:50-12:50 Session 2-C (3 talks) [Room: C]**

**Chair: Tahir Khaniyev**

- Jia Li, Ernest Dankwa and Taraneh Abarin  
*"Bias Study of the Naive Estimator in a Longitudinal Linear Mixed-effects Model with Measurement Error and Misclassification in Covariates"*
- M. Qamarul Islam  
*"Statistical Inference in Multivariate Non-normal Regression Models"*
- Hande Günay Akdemir  
*"Fuzzy Bilevel Programming Model with Credibility Measure"*

**12:50-14:10 Lunch Break [Place: Sultan Cafe]**

**14:10-15:00 Invited Lecture [Room: A]**

**Chair: George A. Anastassiou**

**Speaker: Martin Bohner**

*"Inverse Problems for Sturm-Liouville Difference Equations"*

**15:00-15:10 Short Coffee-Tea Break [Place: Conference Hall]**

**15:10-16:00 Invited Lecture [Room: A]**

**Chair: Martin Bohner**

**Speaker: Alexander Goncharov**

*"On the interaction of approximation theory with potential theory: recent examples"*

**16:00-16:30** **Coffee-Tea-Cookies Break [Place: Conference Hall]**

**16:30-17:30** **Session 3-A (3 talks) [Room: A]**

**Chair: Osman Altıntaş**

- Maja Starčević  
*“High-Order Wall Laws for an Incompressible Viscous Flow in a Rough Boundary Domain”*
- Qasem M. Al-Mdallal, Muhammed I. Syam and M. N. Anwar  
*“An Efficient Numerical Algorithm for Solving Fractional Integro-Differential Equations”*
- Muhammed I. Syam  
*“An Efficient Method For Solving Fractional Boundary Value Problems Using Bernstein Polynomials”*

**16:30-17:30** **Session 3-B (3 talks) [Room: B]**

**Chair: Gitta Kutyniok**

- Hulya Kodal Sevindir and Cuneyt Yazici  
*“Image inpainting by Shearlets and Wavelets”*
- K. Melkemi and Mahmoud Brahim  
*“Orthogonal Wavelet Frames In  $L^2_{\lambda}([0,1])$ ”*
- Jalil Rashidinia and Mahmood Jokar  
*“Numerical Solution of Nonlinear Klein-Gordon Equation Using Polynomial Wavelets”*

**16:30-17:30** **Session 3-C (3 talks) [Room: C]**

**Chair: Rabia Aktaş**

- Faiz Faizullah  
*“A Note on  $p$ -Moment Exponential Stability for Stochastic Differential Equations Driven by G-Brownian Motion”*
- Slimane Zaim  
*“Non-Commutative Geometry and Application to Physical System”*
- Tahira Nasreen Buttar and Naila Sajid  
*“Domain Decomposition Approximation Approach for an Elliptic Partial Differential Equation”*

**17:30** **END OF THE LECTURES of 1<sup>ST</sup> DAY**

**AMAT 2015 CONFERENCE PROGRAM**  
**MAY 29, 2015 (FRIDAY):**

**09:00-09:30**    **Registration** [Place: Conference Hall]

**09:30-10:20**    **Invited Lecture** [Room: A]

**Chair: Alexander Goncharov**

**Speaker: Gitta Kutyniok**

*"Parabolic Molecules: Curvelets, Shearlets, and Beyond"*

**10:20-10:40**    **Coffee-Tea-Cookies Break** [Place: Conference Hall]

**10:40-11:40**    **Session 4-A (3 talks)** [Room: A]

**Chair: Varga Kalantarov**

- Kamran Mohseni

*"Derivation and Numerical Simulations Using Observable Euler Equations"*

- Fazia Rahmoune, B. Rabita and D. Aissani

*"Functional Approximation Approach to the Numerical Analysis of the Periodic Review Inventory Model"*

- Alibek Issakhov

*"Numerical Modeling of the Discharged Heat Water Effect on the Aquatic Environment from Thermal Power Plant"*

**10:40-11:40**    **Session 4-B (3 talks)** [Room: B]

**Chair: İsmet Yüksel**

- Emre Taş, Tuğba Yurdakadim and Özlem G. Atlıhan

*"Korovkin Type Approximation Theorems In Weighted Spaces Via Power Series Method"*

- Emre Taş and Tuğba Yurdakadim

*"Approximation to Derivatives of Functions by Linear Operators Acting on Weighted Spaces by Power Series Method"*

- Yeliz Gökçer and Oktay Duman

*"Summation Process by Max-Product Operators"*

**10:40-11:40**    **Session 4-C (3 talks)** [Room: C]

**Chair: M. Qamarul Islam**

- Kanat Shakenov

*"Solution of Equation for Ruin Probability of Company for Some Risk Model by Monte Carlo Methods"*

- Malika Chikhi

*"Random Effects Models for Multinomial Data"*

- Sonia Toubas, M. M. Toubas, A. Titaouine and O. Bennis

*"Probability Density Function Estimation and Blind Source Separation of Linear Mixtures using MLP Neural Networks"*

**11:40-11:50** **Short Coffee-Tea Break [Place: Conference Hall]**

**11:50-12:50** **Session 5-A (3 talks) [Room: A]**

**Chair: George A. Anastassiou**

- Olga Danilkina  
*"On One Boundary-Value Problem with Two Nonlocal Conditions for a Parabolic Equation"*
- Dilek Demirkuş and Mevlut Teymur  
*"Shear Horizontal Waves in a Heterogenous Elastic Layer"*
- Serpil Kocabiyik and Oleg Gubanov  
*"Free Surface Wave Interaction with Transversely Oscillating Cylinder"*

**11:50-12:50** **Session 5-B (3 talks) [Room: B]**

**Chair: Esra Erkuş-Duman**

- Sait Erkovan and İrem Yaman  
*"Hankel Determinants of Spherical Orthogonal Polynomials"*
- Mehmet Ali Özarslan and Cemaliye Kürt  
*"Some Results on the Bivariate Laguerre polynomials..."*
- Fariha Jumaa Amer  
*"Fuzzy Partial Metric Space"*

**11:50-12:50** **Session 5-C (3 talks) [Room: C]**

**Chair: Birol Altın**

- Abdalla Tallafha and S. Al-Hihi  
*"Fixed Point in a Non-Metrizable Space"*
- Jung Rye Lee and Dong Yun Shin  
*"Cubic  $\rho$ -Functional Inequality and Quartic  $\rho$ -Functional Inequality: A Fixed Point Approach"*
- Maryam Esmaili  
*"A New Approach in Determining Lot Size in Supply Chain Using Game Theory"*

**12:50-14:00** **Lunch Break [Place: Sultan Cafe]**

**14:00-14:10** **CONFERENCE PHOTO [in front of the Conference Hall]**

**14:10-15:00** **Invited Lecture [Room: A]**

**Chair: Gitta Kutyniok**

**Speaker: Mircea Sofonea**

*"Variational Analysis of Quasistatic Contact Problems"*

**15:00-15:10** **Short Coffee-Tea Break [Place: Conference Hall]**

- 15:10-16:00**    **Invited Lecture [Room: A]**  
**Chair: Mircea Sofonea**  
**Speaker: Varga Kalantarov**  
 “Finite-Parameters Feedback Control for Stabilizing Dissipative Nonlinear PDE’s”
- 16:00-16:30**    **Coffee-Tea-Cookies Break [Place: Conference Hall]**
- 16:30-17:30**    **Session 6-A (3 talks) [Room: A]**  
**Chair: Michael Johnson**
- Jianzhong Wang  
 “Elementary Matrix Transformation Algorithm for Symmetric Extension of Laurent Polynomial Matrix and its Application in Construction of Symmetric M-band Filter Banks and Multi-Wavelets”
  - Zekeriya Ustaoglu  
 “On the Stability and Uniqueness of the Solution of the Integral Geometry Problems Along Plane Curves”
  - R. Benacer and Boutheina Gasmı  
 “Branch and Bound Method to Resolve the Non Convex Quadratic Problems”
- 16:30-17:30**    **Session 6-B (3 talks) [Room: B]**  
**Chair: Kamran Mohseni**
- Igor Neygebauer  
 “Bounded and Unbounded Fundamental Solutions in MAC Models”
  - Fatih Ozbag and Stephen Schecter  
 “Existence of Combustion Waves in Porous Media”
  - F. S. Bayones and B. M. Alharbi  
 “An Infinite Plate with a Curvilinear Hole Having Pole and Arbitrary Shape in Presence of Heat”
- 16:30-17:30**    **Session 6-C (3 talks) [Room: C]**  
**Chair: Iuliana Iatan**
- Alb Lupaş Alina  
 “Some Differential Subordinations Using Ruscheweyh Derivative and A Multiplier Transformation”
  - Osman Altıntaş  
 “Neighborhoods of Analytic Functions Associated with Fractional Derivative”
  - Tuba Vedi and Mehmet Ali Özarslan  
 “Voronovskaja type Approximation Theorem for  $q$ -Szász-Schurer Operators”
- 17:30**    **END OF THE LECTURES of 2<sup>ND</sup> DAY**
- 19:30-22:30**    **CONFERENCE DINNER [Lale Restaurant]**

**AMAT 2015 CONFERENCE PROGRAM**  
**MAY 30, 2015 (SATURDAY):**

**09:00-09:30** Registration [Place: Conference Hall]

**09:30-10:20** Invited Lecture [Room: A]

**Chair:** Varga Kalantarov

**Speaker:** Choonkil Park

*"Functional Inequalities and Applications"*

**10:20-10:40** Coffee-Tea-Cookies Break [Place: Conference Hall]

**10:40-11:40** Session 7-A (3 talks) [Room: A]

**Chair:** Martin Bohner

- Mehmet Gümüő and Özkan Öcalan  
*"Dynamical Properties in a Non-Linear Difference Equation"*
- Yavuz Yazıcı and Umut Mutlu Özkan  
*"q-Fractional Integral Generalization"*
- Amira Rachah and Dominikus Noll  
*"Analysis and Simulation of a Continuous Crystallization Process"*

**10:40-11:40** Session 7-B (3 talks) [Room: B]

**Chair:** Ercan Altınışık

- Sharefa Asiri and Taous-Meriem Laleg-Kirati  
*"Wave Velocity Estimation in Heterogeneous Media"*
- Busra Kutlu and Dogan Kaya  
*"Soliton Solutions to Integrable Equations and Kawahara Equation"*
- Ahmet Altundag  
*"A Two Dimensional Inverse Scattering Problem for Shape and Conductive Function for a Dielectric Cylinder"*

**10:40-11:40** Session 7-C (3 talks) [Room: C]

**Chair:** Lee Keener

- El Amir Djeflal, Lakhdar Djeflal and Farouk Benoumelaz  
*"New Complexity Analysis of the Path Following Method for Linear Complementarity Problem"*
- Ali Allahverdi, Harun Aydilek and Asiye Aydilek  
*"New Algorithms for Assembly Scheduling Problem to Minimize Total Tardiness with Setup Times"*
- Maiza Mohamed, Radjef Mohammed Said and Sais Lakhdar  
*"Efficient Lower Bounds for Packing Problems in Heterogeneous Bins with Conflicts Constraint"*

**11:40-11:50** Short Coffee-Tea Break [Place: Conference Hall]

**11:50-12:50 Session 8-A (3 talks) [Room: A]**

**Chair: Özkan Öcalan**

- Ercan Altınışık  
*"On a Conjecture on the Smallest Eigenvalues of Some Special Positive Definite Matrices"*
- Şükran Uygun  
*"The Generalized  $(s,t)$  Jacobsthal Matrix Sequences"*
- Said Mohamed Said  
*"On a Non Linear System Modelling the Growth of Cancerous Tumors and the Density of Cancerous Cells in a Bounded Domain"*

**11:50-12:50 Session 8-B (3 talks) [Room: B]**

**Chair: Ali Allahverdi**

- Ouarda Benmanseur  
*"On a Class of Ill-Posed Abstract Problems"*
- Gennaro Infante, Petru Jebelean and Fadila Madjidi  
*"Infinite First Order Differential Systems with Nonlocal Initial Conditions"*
- Mouataz Billah Mesmouli, Abdelouaheb Ardjouni and Ahcene Djoudi  
*"Periodicity Solutions for a System of Nonlinear Integro-Differential Equations"*

**11:50-12:50 Session 8-C (3 talks) [Room: C]**

**Chair: Umut Mutlu Özkan**

- Mohamed Dalah, Amar Megrou and Ammar Derbazi  
*"A Quasistatic Electro-Elastic Antiplane Contact Problem with Slip-Dependent Rate"*
- Aouachria Mekki  
*"Spinning Particle in Interaction with a Time Dependent Magnetic Field: A Path Integral Approach"*
- Usman Mustapha Adewale  
*"On the Response of Vibration Analysis of Beam Subject to Moving Force and Moving Mass"*

**12:50-14:10 Lunch Break [Place: Sultan Cafe]**

**14:10-15:00 Invited Lecture [Room: A]**

**Chair: Choonkil Park**

**Speaker: Tamaz Vashakmadze**

*"To Approximate Solution of Ordinary Differential Equations, II"*

**15:00-15:10 Short Coffee-Tea Break [Place: Conference Hall]**

**15:10-16:10 Session 9-A (3 talks) [Room: A]**

**Chair: Mario Krnić**

- Safa Menkad  
*"On the Injective Norm and Characterization of the Class of Partial Isometries"*



- Aisha Ahmed Amer  
"Second Hankel Determinant for New Subclass Defined by a Linear Operator"
- Yelda Aygar and Murat Olgun  
"Principal Vectors of Matrix-valued Difference Operators"

**15:10-16:10 Session 9-B (3 talks) [Room: B]**

**Chair: Choonkil Park**

- G. Aras-Gazić, V. Čuljak, J. Pečarić and A. Vukelić  
"Generalization of Jensen's Inequality and its Converses by Lidstone's Polynomial and Majorization Theorem"
- Julije Jakšetić, Josip Pečarić and Marjan Praljak  
"A Monotonic Refinement of Levinson's Inequality"
- Josip Pečarić, Mihaela Ribičić Penava and Ana Vukelić  
"Bounds for the Chebyshev Functional and Applications to the Weighted Integral Formulae"

**15:10-16:10 Session 9-C (3 talks) [Room: C]**

**Chair: Tamaz Vashakmadze**

- Fernane Khaireddine  
"A Numerical Method for Solving Linear Fredholm by the Rationalized Haar (RH) Functions"
- Ahcene Merad  
"Variational Iteration Method for Solving the Linear and Nonlinear Parabolic and Hyperbolic Equations with Nonlocal Conditions"
- Naima Aissa and Hocine Tsamda  
"Global Existence, Uniqueness and Asymptotic Behavior of a Nonlinear Parabolic System"

**16:10-16:30 Coffee-Tea-Cookies Break [Place: Conference Hall]**

**16:30-17:30 Session 10-A (3 talks) [Room: A]**

**Chair: Murat Olgun**

- Mohammed Maiza and Mohamed Benyettou  
"Microarray Data Clustering Using Fly Algorithm and the Parisian Approach"
- Berhail Amel  
"Identification of Unknown Data for Elesto-Thermique System"
- Ahmed Dallil and Hichem Chettat  
"Data Association with Evidence Theory"

**16:30-17:30 Session 10-B (2 talks) [Room: B]**

**Chair: Ahcene Merad**

- Jadranka Mičić Hot and Josip Pečarić  
"A Sequence of Mappings Connected with Hadamard's, Jensen's, and Levinson's Inequality"

- Mario Krnić  
*“Improved Variants of Young, Heinz, and Hölder Inequalities for Matrices”*
- Jamila Kalantarova  
*“Blow up of Solutions of Nonlinear Hyperbolic Equations Under Robin Boundary Conditions”*

**16:30-17:30** **Session 10-C (2 talks) [Room: C]**

**Chair: Bayram Çekim**

- Unsal Tekir, Hatice Cay and Gulsen Ulucak  
*“Ideal Theory Of Commutative Semigroups”*
- Unsal Tekir, Kursat Hakan Oral and Suat Koc  
*“Rings of Continuous Functions”*
- Mohammad Jalali Varnamkhasti  
*“Chaos Genetic Algorithm Based on Fuzzy Logic”*

**17:30** **END OF THE LECTURES of 3<sup>RD</sup> DAY**

**MAY 31, 2015 (SUNDAY):**

**09:00-17:30** Excursion (including lunch)

**17:30** **END OF THE CONFERENCE**