

NJIT

New Jersey Institute
of Technology

Ninth International Undergraduate Summer Research Symposium

Thursday, July 28, 2016





9th International Undergraduate Summer Research Symposium

Thursday, July 28, 2016

Agenda

- Poster Session 1 – 9:30-11:30 a.m.**
- Welcome Remarks and Lunch – 11:30 a.m.-12:30 p.m.**
- Poster Session 2 – 12:30-2:30 p.m.**
- Closing Remarks – 2:30 p.m.**

Symposium Coordinator: Ms. Angela Retino
McNair Program Coordinator: Ms. Zara Williams

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PROVOST UNDERGRADUATE SUMMER RESEARCH

Paul Abatemarco (*Chemical Engineering*)⁽¹⁾

Research: *Development of a Microfluidic Cell Culture System for the Study of Stem Cell Motility*

Faculty Adviser: Roman Vonorov, Department of Chemical, Biological and Pharmaceutical Engineering

Nadia Al-Ebbinni (*Chemical Engineering*)⁽²⁾

Research: *Detailed Chemical Reaction Mechanism Simulations of Methane Partial Oxidation*

Faculty Adviser: Robert Barat, Department of Chemical, Biological and Pharmaceutical Engineering

Ayesha Ali (*Biomedical Engineering*)⁽¹⁾

Research: *The Fabrication of a Novel Carbon Fiber Microelectrode for Interfacing with the Brain*

Faculty Adviser: Sahin Mesut, Department of Biomedical Engineering

Sugosh Anur (*Biomedical Engineering*)⁽²⁾

Research: *Activation of Cardiac Fibroblasts Using Biaxial Stretching Replicating Heart Attack In Vivo*

Faculty Adviser: Eun Jung Lee, Department of Biomedical Engineering

Nahian Basith (*Computer Engineering*)⁽¹⁾

Research: *Computer Vision*

Faculty Adviser: Mohammed Feknous, Department of Electrical and Computer Engineering

James Basuino (*Computer Engineering*)⁽²⁾

Research: *Modular Electronic Control Surface for Percussive Instruments*

Faculty Adviser: Durga Misra, Department of Electrical and Computer Engineering

Walter Berreta (*Computer Engineering*)⁽²⁾

Research: *A Reconfigurable Open-Architecture Servo System for Research on Advanced Robotic Manipulation*

Faculty Adviser: Cong Wang, Department of Electrical and Computer Engineering

Andrea Cano (*Civil Engineering*)⁽¹⁾

Research: *Microbial Fuel Cell (MFC) Lighting System for Mobile Systems*

Faculty Adviser: Wen Zhang, Department of Civil and Environmental Engineering

Wilmin Ceballos (*Electrical Engineering*)⁽¹⁾

Research: *Computer Vision*

Faculty Adviser: Mohammed Feknous, Department of Electrical and Computer Engineering

Albert George Fraser V (*Physics*)⁽²⁾

Research: *Protein Aggregation*

Faculty Adviser: Cristiano Dias, Department of Physics

Michael Fredericks (*Chemical Engineering*)⁽¹⁾

Research: *Mesenchymal Stem Cell Migration and Growth in Microfluidic Devices*

Faculty Adviser: Roman Vonorov, Department of Chemical, Biological and Pharmaceutical Engineering

Einreb Funda (*Computer Engineering*)⁽²⁾

Research: *Implementation of Electroencephalography to Generate Digital Instructions*

Faculty Adviser: Mohammed Feknous, Department of Electrical and Computer Engineering

Hannah Gattuso (*Biomedical Engineering*)⁽²⁾

Research: *Differences in Neural Processing of Small and Large Moving Sensory images*

Faculty Adviser: Eric Fortune, Department of Biological Sciences

Robert Gioia (*Information Technology*)⁽¹⁾

Research: *Proposal to Develop Novel Video Game for Oculus Rift Platform to Therapy Children with Traumatic Brain Injury and Vision Disorders*

Faculty Adviser: Tara Alvarez, Department of Biomedical Engineering

Beverly Glasgow (*Civil Engineering*)⁽²⁾

Research: *Biotransformation of 1,4-Dioxane and Co-occurring Contaminants by an Enriched Propanotrophic Consortium*

Faculty Adviser: Mengyan Li, Department of Chemistry and Environmental Science

Ravindu Gunawardana (*Computer Engineering*)⁽²⁾

Research: *Hand-written Digit Recognition on an Embedded GPU*

Faculty Adviser: Bipin Rajendran, Department of Electrical and Computer Engineering

Victoria Harbour (*Chemical Engineering*)⁽²⁾

Research: *Characterizing the Blood-Brain-Barrier with the Micro-Total Neurological System*

Faculty Advisers: Sagnik Basuray, Department of Chemical, Biological and Pharmaceutical Engineering, and James Haorah, Department of Biomedical Engineering

Zohour Hassan (*Biomedical Engineering*)⁽²⁾

Research: *Excitatory and Inhibitory Nerve Study to Generate a Therapy for Traumatic Brain Injury*

Faculty Adviser: Bryan J. Pfister, Department of Biomedical Engineering

Liem Ho (*Biology*)⁽²⁾

Research: *Equality Network: Connecting Patients with LGBTQ Friendly Healthcare Providers*

Faculty Adviser: Michael Lee, Department of Information Systems

Key: (1) denotes Session 1 presenter (2) denotes Session 2 presenter

Andrew House (*Biomedical Engineering*)⁽²⁾

Research: *μfilms-Micro Total Analytical System for Studying Polymeric Film-Based Drug Delivery System*

Faculty Adviser: Sagnik Basuray, Department of Biomedical Engineering

Assma Itani (*Federated Department of Biological Sciences*)⁽²⁾

Research: *Role of Specific Inhibitory Motoneurons in C. elegans Locomotion Examined Via Microfluids, Tracking and Optogenetics*

Faculty Adviser: Gal Haspel, Federated Department of Biological Sciences

Ashish John (*Electrical Engineering*)⁽²⁾

Research: *III-Nitride Nanowire Solar Cells Grown by Molecular Beam Epitaxy*

Faculty Adviser: Hieu P. T. Nguyen, Department of Electrical and Computer Engineering

Richard Johnson (*Mechanical Engineering*)⁽²⁾

Research: *Design of a Testing Methodology to Measure the Polymer/Ceramic Interface*

Faculty Adviser: Siva Nadimpalli, Department of Mechanical and Industrial Engineering

Ian Jordan (*Electrical Engineering*)⁽²⁾

Research: *Chaotic Circuits and a Method for Semi-Chaotic Encryption*

Faculty Adviser: Denis Blackmore, Department of Electrical and Computer Engineering

Jimmy Lu (*Computer Science*)⁽¹⁾

Research: *Algorithms for Contingencies and Other Features in Highly Flexible Educational Workflow Systems*

Faculty Adviser: Michael Bieber, Department of Information Systems

Kabir Mitra (*Chemical Engineering*)⁽²⁾

Research: *Utilization of Waste Heat to Generate Pure Water by Carbon Nanotube*

Faculty Adviser: Somenath Mitra, Department of Chemistry and Environmental Science

Mehnaz Moon (*Chemical Engineering*)⁽²⁾

Research: *Microwave-Assisted Antifouling Membrane Filtration Technology*

Faculty Adviser: Wen Zhang, Department of Civil and Environmental Engineering

Jorge Murgueytio (*Mechanical Engineering*)⁽²⁾

Research: *Analysis of Stress and Strain in a Depressurized Tank with Wall Embedded Channels*

Faculty Adviser: Zhiming Ji, Department of Mechanical and Industrial Engineering

John Palmieri (*Biomedical Engineering*)⁽²⁾

Research: *Microtubule Research*

Faculty Adviser: Camelia Prodan, Department of Physics

Shyamal Patel (*Biology*)⁽²⁾

Research: *Reconstitution of Two-Component Circadian Oscillator from “ProKaiC Like seKaiC” to Determine Specific Function of KaiA on KaiC A-Loop and Provide Greater Insight into Circadian Clock Mechanism*

Faculty Adviser: Yong-Ick Kim, Department of Chemistry and Environmental Science

Rohit Premkumar (*Biological Science*)⁽²⁾

Research: *Co-modulation of Neural Circuit Activity by Different Neuropeptides*

Faculty Adviser: Dirk Bucher, Federated Department of Biological Sciences

Omar Qari (*Biological Science*)⁽²⁾

Research: *Mapping the Neural Connectivity of Midwater Amphipod Phronima*

Faculty Adviser: Daphne Soares, Federated Department of Biological Sciences

Umar Rao (*Computer Engineering*)⁽²⁾

Research: *Implementation of Electroencephalography to Generate Digital Instructions*

Faculty Adviser: Mohammed Feknous, Department of Electrical and Computer Engineering

Gopal Ravindhran (*Biology*)⁽¹⁾

Research: *The Role of Trimethylamine N-oxide in Preventing Protein Misfolding during Alzheimer’s Disease*

Faculty Adviser: Cristiano L. Dias, Department of Physics

Ryan Rayman (*Biology*)⁽¹⁾

Research: *Transfection for the Expression of Fluorescent Proteins in Mesenchymal Stem Cells for High-Resolution*

Faculty Adviser: Roman Voronov, Department of Chemical, Biological and Pharmaceutical Engineering

Matthew Reda (*Mechanical Engineering*)⁽¹⁾

Research: *Autonomous Snow Removal*

Faculty Adviser: Lu Lu, Department of Mechanical and Industrial Engineering

Jennifer Rochette (*Biomedical Engineering*)⁽²⁾

Research: *AudIQ: Auditory Cue Training to Improve Auditory Awareness*

Faculty Adviser: Antje Ihlefeld, Department of Biomedical Engineering

Alan Romano (*Computer Science*)⁽¹⁾

Research: *Designing Instructor Mentoring and Oversight for Engaging Students in Participatory Learning System*

Faculty Adviser: Michael Bieber, Department of Information Systems

Kristen Scotti (*Chemical Engineering*)⁽²⁾

Research: *Engineering Ligand Targeted Polymer Nanopa*

Faculty Adviser: Xiaoyang Xu, Department of Chemical, Biological and Pharmaceutical Engineering

Aesha Shah (*Biochemistry*)⁽²⁾

Research: *Circadian Clock Oscillation Mechanism in Cyanobacteria*

Faculty Adviser: Yong-Ick Kim, Department of Chemistry and Environmental Science

Tasneem Shaltout (*Biochemistry*)⁽²⁾

Research: *Tiny Particles, Massive Impacts: The Relationship between the Morphological and Optical Properties*

Faculty Adviser: Alexei Khalizov, Department of Chemistry and Environmental Science

Mansi Sheth (*Biomedical Engineering*)⁽²⁾

Research: *Needleless Electrospinning*

Faculty Adviser: Treena Arinze, Department of Biomedical Engineering

Michael Tadros (*Federated History*)⁽²⁾

Research: *Investigating the Lack of Voter Participation among the Demographic of 18-24 Year Olds*

Faculty Adviser: Elizabeth Petrick, Federated Department of History

Prasanna Tati (*Biology*)⁽¹⁾

Research: *Low Cost Easily Replicated Water Filter Made from Local Materials for Developing Countries*

Faculty Adviser: Jay Meegoda, Department of Civil and Environmental Engineering

Ulysee Thompson (*Information Technology*)⁽²⁾

Research: *Prototyping a Temporospatial Simulation Framework: Case of an Ottoman Insane Asylum*

Faculty Advisers: Augustus Wendell and Burcak Ozludil, College of Architecture and Design

Maira Valencia (*Biochemistry*)⁽¹⁾

Research: *New Probes for Deep Vascular Imaging by Two-Photon Fluorescence Microscopy*

Faculty Adviser: Kevin Belfield, Department of Chemistry and Environmental Science

Nevin Varghese (*Electrical Engineering*)⁽²⁾

Research: *III-Nitride Nanowire Solar Cells Grown by Molecular Beam Epitaxy*

Faculty Adviser: Hieu P. T. Nguyen, Department of Electrical and Computer Engineering



RONALD E. MCNAIR ACHIEVEMENT PROGRAM

Omar Abovelkhair (*Chemical Engineering*)⁽¹⁾

Research: *Biodegradable Antibiotic-Encapsulated Hydrogel for Wound Healing Applications*

Faculty Adviser: Xiaoyang Xu, Department of Chemical, Biological and Pharmaceutical Engineering

Krzysztof Andres (*Computer Engineering*)⁽¹⁾

Research: *Group Support for Educational Website Like Moodle*

Faculty Adviser: Michael Bieber, Department of Information Systems

Kevin Enriquez (*Mechanical Engineering*)⁽¹⁾

Research: *Design Well TM – Database for Animations of Mechanism Simulation*

Faculty Adviser: Balraj Mani, Department of Mechanical and Industrial Engineering

Marco Fernandez (*Civil Engineering*)⁽¹⁾

Research: *Impact of Recycled Concrete Aggregates (RCA) on Reinforcing Bar Bond Strength*

Faculty Advisers: Matthew P. Adams and Matthew J. Bandelt, Department of Civil and Environmental Engineering

John Gonzales (*Chemical Engineering*)⁽¹⁾

Research: *Washing of Boron for Reduction of Mass Loss in TG Analysis*

Faculty Adviser: Edward Dreyzin, Department of Chemical, Biological and Pharmaceutical Engineering

Mengxin He (*Chemical Engineering*)⁽¹⁾

Research: *Shear Enhancement of Separation of Monoclonal Antibodies*

Faculty Adviser: Sagnik Basuray, Department of Chemical, Biological and Pharmaceutical Engineering

Jimmy Lu (*Computer Science*)⁽¹⁾

Research: *Algorithms for Contingencies and Other Features in Highly Flexible Educational Workflow System*

Faculty Adviser: Michael Bieber, Department of Information Systems

Ivan Mitevski (*Electrical Engineering*)⁽¹⁾

Research: *Reliability of High-K Dielectrics in Nanoscale CMOS Devices*

Faculty Adviser: Durga Misra, Department of Electrical and Computer Engineering

Sara Mustafa (*Chemical Engineering*)⁽¹⁾

Research: *Cell Transportation: A Versatile Marker to Visualize Cells*

Faculty Adviser: Roman Voronov, Department of Chemical, Biological and Pharmaceutical Engineering

Alan Romano (*Computer Science*)⁽¹⁾

Research: *Designing Instructor Mentoring and Oversight for Engineering Students in a Participatory Learning System*

Faculty Adviser: Michael Bieber, Department of Information Systems

Indiana Suriel (*Chemical Engineering*)⁽¹⁾

Research: *Improved Dissolution Performance of Drug Nanocomposites with Various Dispersants*

Faculty Adviser: Ecevit A. Bilgili, Department of Chemical, Biological and Pharmaceutical Engineering

HERITAGE INSTITUTE OF TECHNOLOGY – NJIT SUMMER RESEARCH

Samprit Basu (*Mechanical Engineering*)⁽¹⁾

Research: *Mechanical Behavior of 3D-Printed Components*

Faculty Adviser: Siva P. V. Nadimpalli, Department of Mechanical and Industrial Engineering

Ayushi Churiwala (*Computer Science Engineering*)⁽¹⁾

Research: *Ultimate Course Search Engine*

Faculty Adviser: Vincent Oria, Department of Computer Science

Arkoprovo Dey (*Computer Science Engineering*)⁽¹⁾

Research: *Simulation of Spiking Neural Networks*

Faculty Adviser: Bipin Rajendran, Department of Electrical and Computer Engineering

Abhijit Pal (*Electronics and Communications Engineering*)⁽¹⁾

Research: *Underwater Communication*

Faculty Adviser: Ali Abdi, Department of Electrical and Computer Engineering

Akanksha Mukherjee (*Computer Science Engineering*)⁽¹⁾

Research: *Avatar (Android Programming and Apps in the Cloud) Using Moitree Middleware*

Faculty Adviser: Cristian Borcea, Department of Computer Science

Arka Raha (*Mechanical Engineering*)⁽¹⁾

Research: *Computational Fluid Dynamics of Particles Adsorbed on Liquid Surfaces*

Faculty Adviser: Pushpendra Singh, Department of Mechanical and Industrial Engineering

Susnata Mandal (*Computer Science Engineering*)⁽¹⁾

Research: *Avatar (Android Programming and Apps in the Cloud) using Moitree Middleware*

Faculty Adviser: Cristian Borcea, Department of Computer Science

Manisha Mondal (*Electronics and Computer Engineering*)⁽¹⁾

Research: *Reliability of GaN Nanowire LED Devices*

Faculty Adviser: Durga Misra, Department of Electrical and Computer Engineering

Shaunak Sarkar (*Applied Electronics and Instrumentation Engineering*)⁽¹⁾

Research: *Accuracy of Robotic Cuts in Soft Tissue-Equivalent Compliant Materials*

Faculty Adviser: Sanchoy Das, Department of Mechanical and Industrial Engineering

Arijit Sengupta (*Electronics and Communications Engineering*)⁽¹⁾

Research: *Reliability of High-k Gate Dielectrics on Si/Ge Substrates for Nanoscale CMOS Devices*

Faculty Adviser: Durga Misra, Department of Electrical and Computer Engineering

Aman Singhania (*Computer Science Engineering*)⁽¹⁾

Research: *Digital Image Processing*

Faculty Adviser: Yun Q. Shi, Department of Electrical and Computer Engineering

U.S. ARMY ARDEC PICATINNY ARSENAL

Henry Drago (*Industrial Design*)⁽¹⁾

Research: *Constructing the Overall Brand of the Physics Additive Manufacturing Lab*

Faculty Adviser: John Federici, Department of Physics

Jenna Meisner (*Biochemistry*)⁽²⁾

Research: *Analyzing Shape Memory Effect through the Assessment of Smart Materials*

Faculty Adviser: John Federici, Department of Physics

Lou Rizzo (*Physics*)⁽¹⁾

Research: *Assessment of Optical Components Incorporated into 3D-Printed Structures*

Faculty Adviser: John Federici, Department of Physics

N.J. SPACE GRANT CONSORTIUM SUMMER RESEARCH

Alex Clark (*Engineering Physics – Ramapo College*)⁽²⁾

Research: *Integration and Optimization of Electronic Circuits and Devices into 3D-Printed Structures*

Faculty Adviser: John Federici, Department of Physics

Lindsey Gray (*Engineering Physics – Ramapo College*)⁽¹⁾

Research: *Observing Solar Flares at Radio Wavelengths*

Faculty Adviser: Bin Chen, Department of Physics

Patrick Rehan (*Engineering Physics – Ramapo College*)⁽²⁾

Research: *Protein Folding Using the GROMACS Molecular Dynamics Software*

Faculty Adviser: Cristiano Dias, Department of Physics

NSF REU - OPTICS AND PHOTONICS: TECHNOLOGIES, SYSTEMS, AND DEVICES

Olaoluwa Akinnuoye (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Fabrication and Characterization of III-nitride Nanowire Light-emitting Diodes (LED)*

Faculty Adviser: Hieu P. T. Nguyen, Department of Electrical and Computer Engineering

Fares Al-Salim (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Experimental Evaluation of Underwater Visible Light Communication Backscattering*

Faculty Advisers: Abdallah Khreishah and Nirwan Ansari, Department of Electrical and Computer Engineering

Kely Amegbor (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Investigation of Light Scattering in Plasmonic Structures of GaAs Pillars and Its Properties Due to Environment Changes*

Faculty Adviser: Haim Grebel, Department of Electrical and Computer Engineering

Shawn Billy (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Double JPEG Compression Detection through Convolution Neural Networks*

Faculty Adviser: Yun-Qing Shi, Department of Electrical and Computer Engineering

Austin Daniel (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Lead Sulfide Quantum Dot Solar Cells: The New and Easy Alternative*

Faculty Adviser: Dong-kyun Ko, Department of Electrical and Computer Engineering

Amira Feknous (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Low Cost Applications of Visible Light Communication Systems for Intelligent In-Store Consumer Messaging*

Faculty Adviser: Sui-Hoi Edwin Hou, Department of Electrical and Computer Engineering

Ashley Fitzsimmons (*Biomedical Engineering*)⁽¹⁾

Research: *Testing Visual Sustained Attention Capacity in Adults Using Functional Near-infrared Spectroscopy*

Faculty Adviser: Xiaobo Li, Department of Biomedical Engineering

Isabella Hou (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Optical Coherence Tomography for Non-invasive Examination and Conservation of Cultural Heritage Objects*

Faculty Adviser: Xuan Liu, Department of Electrical and Computer Engineering

Sharon Obiefuna (*Electrical and Computer Engineering*)⁽¹⁾

Research: *GaN LEDs: Reliability and Sustainability*

Faculty Adviser: Durga Misra, Department of Electrical and Computer Engineering

Joel Stauffer (*Electrical and Computer Engineering*)⁽¹⁾

Research: *Estimating General Population Knowledge of Optics and Photonics Using User Interaction Analytics*

Faculty Advisers: John Carpinelli and Abdallah Khreishah, Department of Electrical and Computer Engineering

BRAZIL SCIENTIFIC MOBILITY PROGRAM

Artur Balthazar, Eduardo Pereira, Leonardo Fontoura⁽¹⁾

Research: *Magnetism Applications in Power Transfer and Generation*

Faculty Adviser: N.M. Ravindra, Department of Physics

Vitor Rusyere Sousa Barros⁽¹⁾

Research: *Use of Red Clay to Remove Heavy Metals from Contaminated Water*

Faculty Adviser: Jay N. Meegoda, Department of Civil and Environmental Engineering

Eduardo B. Carlin, Guilherme T. N. do Amaral,

Tatiana de F. Centuriao⁽²⁾

Research: *Improvement in a Simple and Sustainable Apparatus to Measure Fines Content in Soil*

Faculty Advisers: Mohamed Mahgoub, Department of Engineering Technology, and Laramie Potts, Department of Civil and Environmental Engineering

Ana Clara Carvalho⁽²⁾

Research: *Colloidal Silver to Remove Pathogens*

Faculty Advisers: Wen Zhang and Jay Meegoda, Department of Civil and Environmental Engineering

Cleber Oliveira Damasceno, Saint Clair Barbosa Bernardes, Silvino Gustavo⁽²⁾

Research: *Making High-throughput Microfluidic Experimentation Possible through the Use of Computer Vision*

Faculty Adviser: Roman Voronov, Department of Chemical, Biological and Pharmaceutical Engineering

Alisson Giaretta⁽²⁾

Research: *An Innovative Method to Determine the Suitability of Soils for Clay Pot Filters*

Faculty Adviser: Jay N. Meegoda, Department of Civil and Environmental Engineering

Cristiano Fernandes, Douglas Freitas, Nicolas Pauli⁽¹⁾

Research: *Concrete Bridge Digital Method Analysis through Laser Scanning*

Faculty Adviser: Mohamed Mahgoub, Department of Engineering Technology

Ryan Seiyu Yamaguchi Kimura (*Electrical and Computer Engineering*)⁽²⁾

Research: *Simulation and Optical Characterization of High Performance Nanowire Light-emitting Diodes*

Faculty Adviser: Hieu P. T. Nguyen, Department of Electrical and Computer Engineering

Karine Alves de Freitas Leite, Tulio Seike Nascimento⁽¹⁾

Research: *Lattice Light-Sheet Microscopy*

Faculty Adviser: Roman Voronov, Department of Chemical, Biological and Pharmaceutical Engineering

Alef A. Lima, Igor Y. P. Nishimura,
Caique Ogata C. da Rocha ⁽²⁾

Research: *Smart Structural and Sustainability Analysis for Rehabilitation of Steel Structures*

Faculty Advisers: Mohamed Mahgoub, Department of Engineering Technology, and Laramie Potts, Department of Civil and Environmental Engineering

Felipe Augusto Schiquette (*Computer Science*)

Atisha Shyam Poojary (*Information Systems*)

Indraneel Kulkarni (*Computer Science*)

Roseli de Jesus (*Game Design*)

Cássio Maciel Leal (*Information Systems*) ⁽²⁾

Research: *Designing a Social Support App for STEM Women*

Faculty Adviser: D. Yvette Wohn, Department of Information Systems

Priscila A Eburneo Tanioka ⁽²⁾

Research: *Inexpensive Water Filter Remove Heavy Metals for Using Bio-Char*

Faculty Adviser: Jay N. Meegoda, Department of Civil and Environmental Engineering

Guilherme Parana ⁽²⁾

Research: *Automated Microfluidics*

Faculty Adviser: Roman Voronov, Department of Chemical, Biological and Pharmaceutical Engineering

LEAN STARTUP ACCELERATOR PROGRAM

Kabir Mitra (*Chemical Engineering*) ⁽²⁾

Research: *CNIM Scale Up*

Faculty Adviser: Somenath Mitra, Department of Chemistry and Environmental Science

NSF UNDERGRADUATE RESEARCH PROGRAM – EXTREEMS-QED

Diego Rios (*Physics*) ⁽²⁾

Research: *Eulerian vs. Lagrangian Data Assimilation*

Faculty Adviser: Richard Moore, Department of Mathematical Sciences

Tadanaga Takahashi ⁽²⁾

Research: *Eulerian vs. Lagrangian Data Assimilation*

Faculty Advisor: Richard Moore, Department of Mathematical Sciences

Alina Mohit-Tabatabai ⁽²⁾

Research: *Eulerian vs. Lagrangian Data Assimilation*

Faculty Adviser: Richard Moore, Department of Mathematical Sciences

Jimmie Adriazola (*Math*) ⁽²⁾

Research: *Diffusion Limited Aggregation and Saffman-Taylor Instability in Non-Newtonian Hele-Shaw Flow*

Faculty Advisers: Linda Cummings and Lou Kondic, Department of Mathematical Sciences

INTERNATIONAL COUNCIL FOR SMALL BUSINESS ACADEMY

John Fahim (*Business*) ⁽²⁾

Research: *BRIQ Meals*

Faculty Adviser: Cesar Bandera, Martin Tuchman School of Management

Miriam Helmy (*MBA, Marketing*) ⁽²⁾

Research: *BRIQ Meals, and Characterization and Promotion of the Digital Entrepreneur*

Faculty Adviser: Cesar Bandera, Martin Tuchman School of Management

Trentino Pezzano (*Business*) ⁽²⁾

Research: *BRIQ Meals*

Faculty Adviser: Cesar Bandera, Martin Tuchman School of Management

Matthew Reda (*Mechanical Engineering*) ⁽²⁾

Research: *BRIQ Meals*

Faculty Adviser: Lu Lu, Department of Mechanical and Industrial Engineering

Rola Shehata (*Biology*) ⁽²⁾

Research: *Characterization and Promotion of the Digital Entrepreneur*

Faculty Adviser: Cesar Bandera, Martin Tuchman School of Management

BIOMEDICAL ENGINEERING

Anthony Chirayath (*BME*) ⁽²⁾

Research: *The Characterization of Angiogenic MultiDomain Peptides with the Introduction of Cardiomyocytes*

Faculty Adviser: Vivek Kumar, Department of Biomedical Engineering

