

**Faculty Seed Grant Awards
July 1, 2019 – June 30, 2020**

NCE

Principal Investigator: Angelo Tafuni
Department: SAET
Project Title: Simulation of Flow and Escape in the Atmosphere of Solar System Bodies

Principal Investigator: Antje Ihlefeld and Joerg Kliewer
Department: BME and ECE
Project Title: Leveraging Electro-Encephalography for Evaluating Auditory Brain Health

Principal Investigator: Ashish Borgaonkar
Department: SAET and Office of Digital Learning
Project Title: Embedding Voice Technology into Introductory Engineering Curriculum

Principal Investigator: Bruno Goncalves da Silva
Department: CEE
Project Title: Feasibility of implementing an Enhanced Geothermal System at the NJIT campus

Principal Investigator: Cong Wang
Department: ECE
Project Title: Crowdsourced Learning for Robot Physical Intelligence

Principal Investigator: Eun Jung Lee and Samuel Lieber
Department: BME and SAET
Project Title: High-throughput Cardiac Tissue Organoids for Cardiac Repair

Principal Investigator: Gennady Gor
Department: CME
Project Title: Solvation of Polypropylene Battery Separators: Expanded Ensemble Molecular Dynamics Simulations

Principal Investigator: Maciej Skotak
Department: BME
Project Title: Investigation of metabolomics profiling as a potential blood biomarker in the diagnosis of mild Traumatic Brain Injury

Principal Investigator: Namas Chandra and Venkatesan Perumal
Department/Center: CIBM3
Project Title: Development of Nanoparticle Based Apocynin to Treat

Principal Investigator: Xianlian Zhou, Sergei Adamovich and Ghaith Androwis

Department: BME and Kessler Foundation

Project Title: Design and Evaluation of Balance Controllers for a Lower Leg Exoskeleton for Rehabilitation

CSLA

Principal Investigator: Jorge Golowasch and Casey Diekman

Department: BioIS and MS

Project Title: Neuromodulation of Crustacean Circadian Clock Oscillator

Principal Investigator: Keun Ahn and Camelia Prodan

Department: PHY

Project Title: Theoretical and Experimental Studies on Edge Bands in Topological Mechanical Systems and Metamaterials

Principal Investigator: Lou Kondic and Linda Cummings

Department: MS

Project Title: Flow and Instabilities of Thin Films on Flexible Substrates

Principal Investigator: Louis Wells

Department: HUM

Project Title: Center for Applied Improvisation Workshops: Illustrating the need for the Center for Applied Improvisation and Theater

Principal Investigator: Louis Hamilton, Xinyue Ye, Margarita Vinnikov, Burcak Ozludil Altin

Department: HIST, Informatics and ADHC

Project Title: Virtual and Diffusion Analysis of the Edicole Sacre (Street Shrines) of Rome

Principal Investigator: Pier Champagne and Hao Chen

Department: CES

Project Title: Measurement of 10B/11B Kinetic Isotope Effects by Orbitrap Mass Spectrometry for the Elucidation of Organoboron Reaction Mechanisms

Principal Investigator: Rosanna Dent

Department: HIST

Project Title: Constructing a Xavante-Scientific Digital Archive

YWCC

Principal Investigator: Marvin Nakayama

Department: CS

Project Title: Randomized Quasi-Monte Carlo for Efficient Estimation of Risk

Principal Investigator: Margarita Vinnikov and Sergei Adamovich

Department: CS and BME

Project Title: Improving Serious Games for Stroke Rehabilitation with Gaze-Tracking

Principal Investigator: Amy Hoover, Marc T. Sequeira and Donald Kehoe

Department: Informatics

Project Title: Deep Computational Creativity: Combining Deep Learning Techniques for Centaur Sound Design

Principal Investigator: Usman Roshan

Department: CS

Project Title: A fully 3D convolutional neural network for automatic lesion identification in brain MRI images

Principal Investigator: Zhi Wei

Department: CS

Project Title: Model-based Deep Learning Approaches for Analysis of Genomic Data

Principal Investigator: Guiling Wang and Jo Young Lee

Department: CS and CEE

Project Title: Traffic Light Control using Multi-Agent Deep Reinforcement Learning based on Heterogeneous Data

Principal Investigator: Yvette Wohn and Hyejin Hannah Kum-Biocca

Department: Informatics and CoAD

Project Title: Transforming Enclosed Spaces with Augmented Reality

MTSM

Principal Investigator: Dantong Wu and Xinyue Ye

Department: MTSM and INF

Project Title: Interactive Q/A Framework and Knowledge Discovery Across Dynamic and Heterogeneous Databases

Principal Investigator: Yi Chen

Department: MTSM

Project Title: Using AI-Powered Technologies to Improve Patient Intervention and Engagement

Principal Investigator: Zhipeng Yan and Xinyuan Tao

Department: MTSM

Project Title: What ADRs can tell us risk management around the world: from the perspective of international information environment

Principal Investigator: Yao Shen and Zhipeng Yan

Department: CS and MTSM

Project Title: A data driven approach to systematically model transporter-mediated cancer drug resistance

Principal Investigator: Pius Egbelu and Jim Shi

Department: NTSM

Project Title: Travel Behavior Study for Resilient Transportation Network