

PUBLICLY-FUNDED GRANTS IN 2019

Feel free to contact the PI directly if you have any questions on the projects below.

October-December

- “Modeling and Simulations of Electrostatically Levitated Multiphase Liquid Drops”, **Jonghyun Lee** and **Baskar Ganapathysubramanian**; Funding Agency: NASA; New Funding amount: \$550,000.

July-September

- “Innovative Multiphase Models for Enhanced Blast Effects”, Rodney **Fox**; Funding Agency: DOD SBIR; New Funding amount: \$25,000.
- "Collaborative Research: QRM: Microstructure Manifold Analysis Using Hierarcical Set of Morphological, Topological, and Process Descriptors", Baskar **Ganapathysubramanian**; Funding Agency: NSF; New Funding Amount: \$231,026.
- “Predictor of Aircraft Structural Loads Due to Buffet”, Ming-Chen **Hsu**; Funding Agency: NAVAIR SBIR; New Funding Amount: \$43,610.
- "Collaborative Research: A Fundamental Study on Supercooled Large Droplets: Impacting, Splashing, Surface Water Dynamics, and Ice Accretion", Hui **Hu**; Funding Agency: NSF; New Funding Amount: \$281,156.
- "Wind Turbines in Cold Winter: Icing Physics and Novel Strategies for Wind Turbine Icing Mitigation", Hui **Hu**; Funding Agency: Iowa Energy Center, the State of Iowa; New Funding Amount: \$303,587.
- “On Command Pyrotechnic Light Emission Control through Electromagnetic Irradiation", Travis **Sippel**, James **Michael**, Shankar **Subramaniam**; Funding Agency: Naval Surf. Warfare Car, Crane; New Funding Amount \$149,925.

April-June

- “Precision Cardiac CT: Development of a Computational Platform for Optimizing Imaging” Adarsh **Krishnamurthy**; Funding Agency – Duke University (NIH-National Heart Lung & Blood Institute); New Funding Amount \$49,579
- “Non-Contact Creep Characterization of High Temperature Materials for Nuclear Thermal Propulsion” PIs – Jonghyun **Lee**, Pranav **Shrotriya**; Funding Agency - National Aeronautics & Space Administration; New funding amount - \$38,872.
- “Collaborative Research: Bridging the Gap between Particle-Scale Thermal Transport and Device-Scale Predictions” PI – Shankar **Subramaniam**; Funding Agency - National Science Foundation; New Funding Amount - \$196,705.

January-March

- “Three Dimensional Printed Scaffolds for Understanding Effect of Cavitation on Blood Brain Barrier” PI – Nicole **Hashemi**; Funding Agency – Office of Naval Research; New funding amount - \$100,000.

- “X-ray Imaging of Multiphase Flows of Interest to ONR” PI – Theodore **Heindel**; Funding Agency – Office of Naval Research; New funding amount - \$50,000.
- “Biomechanical Indicators of Bicuspid Aortic Valve Dysfunction” PIs – Michael S. Sacks (UT Austin), Ming-Chen **Hsu** (ISU), Robert Gorman (UPenn); co-PIs – Alison Pouch (UPenn), Walter Witschey (UPenn), Giovanni Ferrari (Columbia); Funding Agency – NIH (R01HL142504); New funding amount - \$2,940,862 (\$400,000 to Hsu).
- “CAREER: Multifidelity Modeling and Search using Adaptive Field Prediction” PI – Leifur **Leifsson**; Funding Agency – National Science Foundation ; New funding amount – \$500,000;
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1846862&HistoricalAwards=false.
- “CAREER: Robustifying Machine Learning for Cyber-Physical Systems” PI – Soumik **Sarkar**; Funding Agency – National Science Foundation; New Funding Amount - \$97,460;
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1845969&HistoricalAwards=false.
- “Microwave Enhancement of Composite Solid Propellant Flames” PI – Travis **Sippel**; Funding Agency – Air Force Office of Scientific Research; New funding amount - \$120,665