

Awards Received July 1, 2018 - June 30, 2019

**COLLEGE OF ENGINEERING**  
**Dr. Eugene Olevsky, Dean**  
**Office of the Dean**

**Ms. Theresa Garcia**

**Total: \$250,964**

U.S. Department of Defense Office of Naval Research: *“Advancing Navy STEM Workforce through Education and Research (ANSWER),”* \$250,964

**Dr. Eugene Olevsky**

**Total: \$368,688**

University of California Office of the President: *“Math, Engineering, Science Achievement (MESA) Oracle Summer Program,”* \$8,688; *“Math, Engineering, Science Achievement (MESA) MESA Schools Program (MSP),”* \$360,000

**Aerospace**

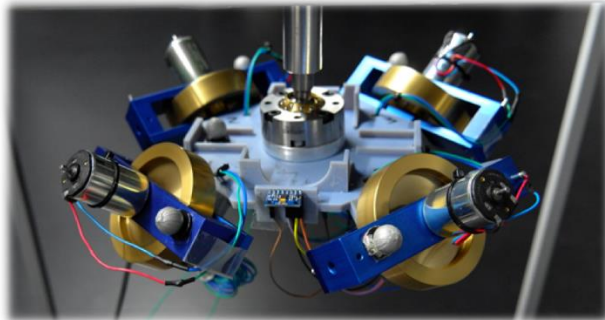
**Dr. Ahmad Bani Younes**

**Total: \$88,000**

American Astronautical Society: *“John V. Breakwell Student Travel Award,”* \$1,000

NASA Jet Propulsion Laboratory: *“Parallel Propagation Techniques that Leverage Modern Computing for Improved Spacecraft Navigation,”* \$22,000

Texas A&M Engineering Experiment Station: *“Efficient and Parallel Implementation of Modified Chebyshev Picard Iteration Integrating Perturbed Orbital Motion,”* \$65,000



Risk reduction hardware-in-the-loop experiments for spacecraft Guidance, Navigation, and Control (GNC) functions using a small-scale 3DOF of experimental attitude platform  
PI and photo: Ahmad Bani Younes

**Dr. Gustaaf Jacobs**

**Total: \$127,451**

National Science Foundation: *“NAHOMCon: North American High Order Methods Conference,”* \$25,000

University of Southern California: *“Control of Lagrangian Coherent Structures at Stagnation and Separation Location on Airfoils,”* \$102,451

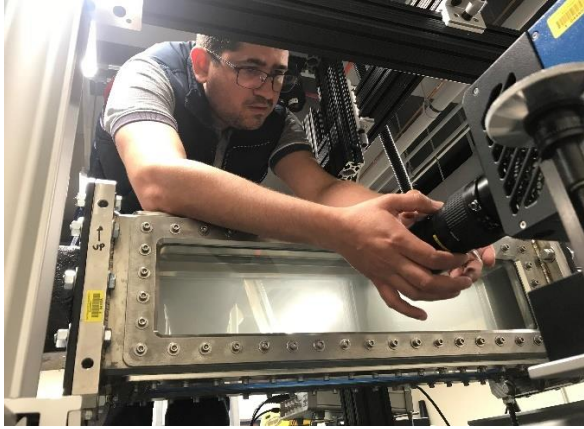
**Dr. Xiaofeng Liu**

**Total: \$26,331**

U.S. Department of Defense Office of Naval Research: *“Direct Measurement of All Components of Pressure-related Terms in Reynolds Stress Transport Equation Budget for a Cavity Shear Layer Flow,”* \$21,800

National Science Foundation: *“An International Travel Proposal to Attend the 13th International Symposium on Particle Image Velocimetry (ISPIV),”* \$4,531

2018-2019 SDSU Awards Listing



Jose Moreto, a graduate student in the SDSU/UCSD joint doctoral program, adjusts the lens aperture setting for the high-speed camera used for the test section freestream turbulence characterization survey in the newly built SDSU water tunnel lab. PI and photo: Xiaofeng Liu

**Dr. Ping Lu**

**Total: \$308,009**

Barron Associates, Inc.: *"Assured Autonomous Spacecraft Guidance and Control,"* \$134,937

National Aeronautics and Space Administration: *"Advanced Aeroassist and Powered Guidance Technology for Human Planetary Missions,"* \$40,000; *"Advanced Entry and Powered Descent Guidance for Human Mars Missions,"* \$133,072

**Dr. Satchi Venkataraman**

**Total: \$214,964**

Materials Sciences Corporation: *"Progressive Failure Analysis of Metal/Carbon Fiber Reinforced Plastic Composite Bolted Joints,"* \$49,964

National Aeronautics and Space Administration: *"NASA Fellowship,"* \$165,000

**Civil & Environmental Engineering**

**Dr. Thais Alves**

**Total: \$78,397**

Construction Industry Institute: *"Challenges and Opportunities to Promote Collaborative Scheduling in Construction Projects,"* \$78,397

**Dr. Robert Dowell**

**Total: \$145,308**

General Dynamics NASSCO: *"Swage Bulkhead Details Study,"* \$145,308

**Dr. Temesgen Garoma**

**Total: \$10,000**

Metropolitan Water District of Southern California: *"A New Approach for Seawater Desalination:"* \$10,000

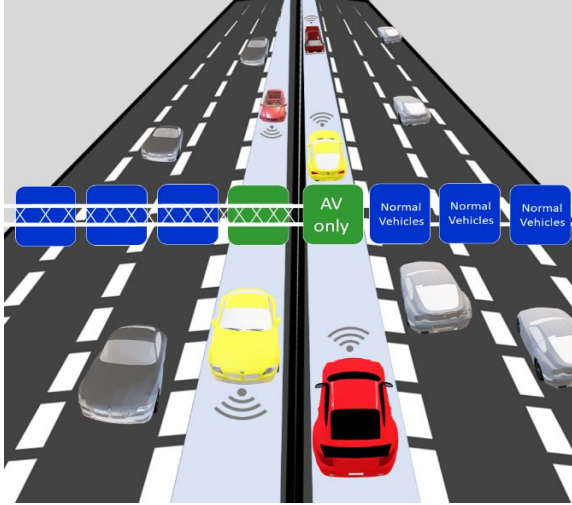
**Dr. Sahar Ghanipoor-Machiani and Dr. Arash Jahangiri**

**Total: \$308,401**

San Jose State University Foundation: *"Impact of Right-of-way Adaptation to Automated Vehicles on Driver Behavior; A Narrow AV-exclusive Lane on an Existing Smart Freeway,"* \$74,999

Virginia Polytechnic Institute and State University: *"Safety through Disruption (Safe-D) University Transportation Center (UTC),"* \$233,402

2018-2019 SDSU Awards Listing



Safe-D Center project on I-15 Automated Vehicle-Exclusive Lane  
PIs: Sahar Ghanipoor-Machiani, Arash Jahangiri  
Photo: Sahar Ghanipoor-Machiani

**Dr. Alicia Kinoshita**

**Total: \$265,263**

National Science Foundation: "Coupling Post-fire Vegetation and Volumetric Sediment Regimes in Urban Mediterranean Systems," \$226,083

Southern California Coastal Water Research Project: "Watershed Modeling of the San Diego River and Tijuana River Watersheds," \$39,180

**Dr. Natalie Mladenov**

**Total: \$212,115**

San Diego River Conservancy: "Increasing Preparedness in the San Diego River Watershed for Potential Contamination Events," \$187,115

Water Research Foundation: "WERF: Enhanced Evaluation of the Removal of Contaminants of Emerging Concern in Decentralized Water Reuse Systems by Non-Targeted Analysis" \$25,000

**Dr. Matthew Verbyla**

**Total: \$304,996**

National Science Foundation: "IRES: U.S. -Brazil Engineering and Social Science Collaboration: Expanding Perspectives on Water, Power, and Sustainability," \$300,000

Trussell Technologies: "Human-associated HF183 Bacteroides 16S rRNA Genetic Marker at North City Water Reclamation Plant and the Pure Water Facility," \$4,996



Professor Matt Verbyla (right) with Brazilian collaborators who presented at the Global Water Sustainability Symposium at SDSU  
PI: Matthew Verbyla

Awards Received July 1, 2018 - June 30, 2019

**Mr. Thomas Zink**

**Total: \$428,719**

U.S. Department of Defense Army Corps of Engineers: “*Dune Enhancement to Support the California Least Tern and Western Snowy Plover at the Silver Strand Training Complex, Naval Base Coronado, California,*” \$60,000;  
“*San Clemente Island Botanical Program Implementation, NALF San Clemente Island, Naval Base Coronado, California,*” \$368,719



Checking restoration project process

Photo: Laura Hernandez

PI: Tom Zink

### **Electrical & Computer Engineering**

**Dr. Baris Aksanli**

**Total: \$77,000**

CSU Fullerton Auxiliary Services Corporation: “*GE Digital CSU Innovation Design Challenge,*” \$2,000

National Science Foundation: “*Distributed Bayesian Learning and Safe Control for Autonomous Wildfire Detection,*” \$75,000

**Dr. Madhu Gupta**

**Total: \$127,880**

Minority Serving Institutions STEM R&D Consortium: “*RF Receiver Sensitivity Degradation Under High-Power Microwave Exposure,*” \$127,880

**Dr. Ke Huang**

**Total: \$102,583**

California State University Office of the Chancellor: “*An Eco-driving System for Connected Automated Vehicles Based on Multi-Objective Trajectory Optimization,*” \$74,877

Innphase Inc. “*Optimization of Semiconductor Manufacturing Process Based on Data Mining,*” \$27,706

**Dr. Sunil Kumar**

**Total: \$450,000**

U.S. Department of Defense Air Force Research Laboratory: “*Quality-of-Autonomy (QoA)-Oriented and Quality-of-Service (QoS) Aware Transport and Routing Protocols for Contested Airborne Swarm Networks,*” \$450,000

**Dr. Chunting Mi**

**Total: \$404,052**

U.S. Department of Energy Argonne National Laboratory: “*High Power Wireless Charging System,*” \$70,000  
Hyundai America Technical Center, Inc. (HATCI): “*A Proposal of Foreign Object Detection (FOD) in Wireless Power Transfer Systems,*” \$217,052

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Snova Intelligent Technology LTD: *"Development of State of Charge and State of Health Algorithms for 48V Hybrid Battery Packs,"* \$110,000

University of Michigan: *"Planning Grant: Engineering Research Center for Comprehensive Energy Storage Solutions in Electrified Transportation (CESSET),"* \$7,000

**Dr. Yusuf Ozturk** **Total: \$50,000**  
National Science Foundation: *"I-Corps: Ambient Sleep Architecture Monitor,"* \$50,000

**Dr. Satish Sharma** **Total: \$179,916**  
U.S. Department of Defense Space and Naval Warfare Systems Command: *"Design and Development of Ku-band Phased Array Antenna Network Using Heat Sink Radiator and Reflector Element for Beam Steering Applications,"* \$179,916

**Dr. Lal Tummala** **Total: \$369,979**  
Department of California Highway Patrol: *"Testing Services for Police Traffic Radar and Laser Speed Measuring Devices,"* \$369,979

### **Mechanical Engineering**

**Dr. Asfaw Beyene** **Total: \$257,224**  
U.S. Department of Energy: *"Industrial Assessment Centers, SDSU,"* \$257,224

**Dr. Subrata Bhattacharjee** **Total: \$100,000**  
National Aeronautics and Space Administration: *"Residence Time Driven Flame Spread Over Solid Fuels,"* \$100,000

**Dr. Joaquin Camacho** **Total: \$79,999**  
National Science Foundation: *"Early-concept Grants for Exploratory Research (EAGER): Flame-Assisted Chemical Vapor Deposition for Energy Storage Electrode Fabrication,"* \$79,999

**Dr. Randall German** **Total: \$150,000**  
National Aeronautics and Space Administration: *"Multi-Scale Modeling and Experimentation on Liquid Phase Sintering in Gravity and Microgravity Environments,"* \$150,000

**Dr. Samuel Kassegne** **Total: \$311,371**  
University of Washington: *"National Science Foundation Engineering Research Center for Neurotechnology (CNT),"* \$311,371

**Dr. Parag Katira** **Total: \$440,036**  
U.S. Department of Defense U.S. Army: *"Biomathematics: Predicting Tissue Dynamics Based on Stochastic Variations in Cell Stiffness and Spatial Clustering Within the Tissue Environment,"* \$24,464

National Science Foundation: *"Collaborative Research: Heterogeneous Cancer Cell Mechanics Differentially Drives Mechanosensing and Migration,"* \$191,607; *"Collaborative Research: Understanding the Interplay Between Mechanical and Stress Hormone Signaling,"* \$223,965

**Dr. Karen May-Newman** **Total: \$27,000**  
Abbott Vascular: *"Effect of a Programmed "Pulse" on Flow in the Native Cardiovascular System During LVAD Support with the HeartMate III LVAD, Studied in a Mock Circulatory Loop,"* \$27,000

**Dr. Fletcher Miller** **Total: \$13,518**  
San Diego State University: *"ARPA-E Focus Project Post-Doc,"* \$13,518



Awards Received July 1, 2018 - June 30, 2019

**Dr. Kee Moon**

Kagoshima University: "International Academic Cooperation Program," \$7,500

**Total: \$72,600**

Sejong University South Korea: "Winter Program at SDSU," \$65,100

**Dr. Khaled Morsi**

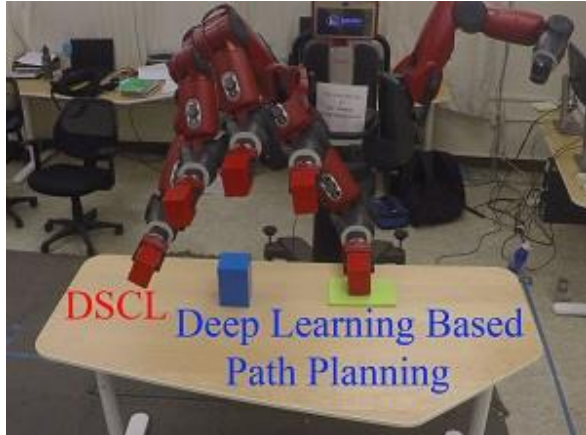
Universal Technical Resource Services Inc. "Spark Plasma Extrusion of Titanium Wire," \$26,208

**Total: \$26,208**

**Dr. Peiman Naseradinmousavi**

National Science Foundation: "Collaborative Research: Decentralized Adaptive and Extremum Seeking Control of High-Degree of Freedom Manipulators with Image Processing," \$230,377

**Total: \$230,377**



Experimental deep learning to a) detect 3D positions of objects through HSV-based scanning, b) determine orientation (angle) of an object, and c) generate obstacle avoidance trajectory

PI and photo: Peiman Naseradinmousavi

**Dr. Eugene Olevsky**

Minority Serving Institutions STEM R&D Consortium: "Stable Manufacturing of Advanced Powder Components by Ultra-Rapid Pressure- and Field-Assisted Sintering," \$109,971

**Total: \$449,971**

U.S. Department of Energy: "Field-Assisted Sintering: Thermal and Non-Thermal Factors of Controlled Non-Equilibrium," \$150,000

University of California Office of the President: "2018-2019 MESA Engineering Program (MEP)," \$10,000; "Math, Engineering, Science Achievement (MESA) MESA Schools Program (MSP)," \$180,000

**Dr. Wenwu Xu**

National Science Foundation: "ECCENTRIC: A Mechanism of Flash Sintering of Ionic Ceramics," \$218,380

**Total: \$218,380**

**Dr. George Youssef**

NASA Jet Propulsion Laboratory: "Integrated Multifunctional 3D-Printed Space Structures," \$18,499

**Total: \$613,382**

U.S. Department of Defense: "In-situ Characterization of the Dynamic Behavior of Impact Mitigating Polymers," \$594,883