

April 21, 2016

The Office of Research and Economic Development is pleased to announce awards received by UNC Charlotte Researchers in the month of March, 2016.

Total amount awarded for the month of March was \$2,966,621

Fiscal Year To Date Total: \$30,041,917

Award Title	Amount	Investigators	PI Dept.	Sponsors
3 Fiber Ferrules and Ferrule Masks	\$6,965	Principal Investigator (PI): Owen, Joseph Co-PI: Davies, Matthew	Mechanical Engineering and Engineering Science	Sponsor: Magic Leap Inc.
A Population-based Secondary Data Analysis of Short Birth Intervals: Adverse Pregnancy Outcomes, Pregnancy Intention, and Postpartum Contraceptive Use	\$100,000	Principal Investigator (PI): Huber, Larissa Co-PI: Dmochowski, Jacek	Public Health Sciences	Sponsor: Health Resources and Services Administration (HRSA)
Agility In Depth: A formal framework for cyber agility composition	\$140,000	Principal Investigator (PI): Al-Shaer, Ehab Co-PI: Duan, Qi	Software and Information Systems	Sponsor: Army Research Office (ARO)
AISL: Collaborative: Innovations in Development: Community-Driven Projects That Adapt Technology for Environmental Learning in Nature Preserves	\$318,433	Principal Investigator (PI): Maher, Mary Co-PI: Grace, Kazjon	Software and Information Systems	Sponsor: National Science Foundation (NSF)
Analyzing and Depicting Social Media through Signal Metrics	\$50,000	Principal Investigator (PI): Ribarsky, Martin	Computer Science	Sponsor: Army Research Office (ARO)
CeFO IUCRC : A Deflectometry System with a Form Measurement You Can Trust	\$34,992	Principal Investigator (PI): Davies, Angela Co-PI: Evans, Christopher	Physics and Optical Science	Sponsor: University of Rochester Prime Sponsor: National Science Foundation (NSF)
Compact, Wide Field-of-View Freeform Imager	\$21,327	Principal Investigator (PI): Davies, Matthew Co-PI: Owen, Joseph	Mechanical Engineering and Engineering Science	Sponsor: University of Rochester Prime Sponsor: All Other Business and Industry

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Confidential	\$12,340	Principal Investigator (PI): Pando, Miguel Co-PI: Park, Youngjin	Civil and Environmental Engineering	Sponsor: Confidential Prime Sponsor: Confidential
Critical Infrastructure Resilience of the Distribution Grid	\$45,000	Principal Investigator (PI): Chowdhury, Badrul Co-PIs: Nasipuri, Asis; Lim, Churlzu; Subramanian, Kalpathi	Electrical and Computer Engineering	Sponsor: Clemson University Prime Sponsor: All Other Business and Industry
EAGER: Systems Approach to Determine Adaptive Mechanisms of Thermal Tolerance in a Model Ectotherm	\$12,000	Principal Investigator (PI): Reitzel, Adam Co-PI: Sokolova, Inna	Biological Sciences	Sponsor: National Science Foundation (NSF)
ECO HAB: Integrating Cell and Toxin Cycles of <i>Karlodinium veneficum</i> with Key Environmental Regulators: In Situ Studies of Predictive Determinants for Bloom Toxicity	\$88,926	Principal Investigator (PI): Parrow, Matthew	Biological Sciences	Sponsor: National Oceanic and Atmospheric Administration (NOAA) National Ocean Service (NOS) National Centers for Coastal Ocean Science (NCCOS) Center for Sponsored Coastal Ocean Research (CSOR)
Effect of Weathering on the Performance of Fire Retardant Coatings	\$50,000	Principal Investigator (PI): Zhou, Aixi	Engineering Technology and Construction Management	Sponsor: Insurance Institute for Business and Home Safety (IBHS)
Energy Performance Assessment Process for a Near Real-Time Dashboard	\$59,067	Principal Investigator (PI): Cox, Robert	Electrical and Computer Engineering	Sponsor: Geosyntec Consultants, Inc. Prime Sponsor: Department of Defense (DOD)
Freeform Replication on a Toroidal Substrate	\$28,352	Principal Investigator (PI): Davies, Matthew Co-PIs: Owen, Joseph; Suleski, Thomas	Mechanical Engineering and Engineering Science	Sponsor: University of Rochester Prime Sponsor: All Other Business and Industry

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Fundamentals of material removal in silicon carbide for freeform optics	\$43,108	Principal Investigator (PI): Davies, Matthew Co-PIs: Evans, Christopher; Owen, Joseph	Mechanical Engineering and Engineering Science	Sponsor: University of Rochester Prime Sponsor: All Other Business and Industry
Globally convergent inverse algorithms via Carleman Weight Functions: theory, numerical studies and experimental verifications	\$190,298	Principal Investigator (PI): Klibanov, Michael Co-PIs: Liu, Hui; Nguyen, Loc	Mathematics and Statistics	Sponsor: Department of Defense (DOD) Department of the Army (DA) Army Research Laboratory (ARL)
Materials Characterization Laboratory Services - Master Agreement with MTD Polymer Consulting	\$425	Principal Investigator (PI): Weaver, Katherine	Mechanical Engineering and Engineering Science	Sponsor: MTD Polymer Consulting
Mechanism by which H2S-producing bacteria influence development of colorectal cancer.	\$30,200	Principal Investigator (PI): Fodor, Anthony Co-PI: Gharaibeh, Ra'ad	Bioinformatics Research Center	Sponsor: University of Florida Prime Sponsor: National Institutes of Health (NIH)
Mecklenburg Housing Reports Project 2016	\$35,000	Principal Investigator (PI): Clark, Ashley Co-PIs: Hawn Nelson, Amy; Gavarkavich, Diane	Urban Institute	Sponsor: Mecklenburg County Community Support Services
Microbiome of Lytechinus variegatus larvae: developing candidate probiotic treatments in aquaculture	\$4,968	Principal Investigator (PI): Reitzel, Adam Co-PIs: Janies, Daniel; Carrier, Tyler	Biological Sciences	Sponsor: North Carolina State University (NCSU) North Carolina Sea Grant Prime Sponsor: Department of Commerce (DOC) National Oceanic and Atmospheric Administration (NOAA)
Micro-Needle Array Brass Molding Tool Development	\$12,367	Principal Investigator (PI): Owen, Joseph Co-PI: Davies, Matthew	Mechanical Engineering and Engineering Science	Sponsor: Georgia Technical Institute Prime Sponsor: Department of Health and Human Services (DHHS)

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MSF Errors: Effects and Specifications for Freeform Optics	\$49,272	Principal Investigator (PI): Suleski, Thomas	Physics and Optical Science	Sponsor: University of Rochester Prime Sponsor: National Science Foundation (NSF)
NCEMC Short Term Probabilistic Load Forecasting for Dominion supply area	\$70,374	Principal Investigator (PI): Hong, Tao	Systems Engineering and Engineering Management	Sponsor: North Carolina Electric Membership Corporation (NCEMC)
NCQuest: Developing Elementary School Teachers' Mathematics Understanding and Instructional Practices	\$281,163	Principal Investigator (PI): Pugalee, David Polly, Andrew; Stephan, Michelle; Cifarelli, Victor	Center for STEM Education	Sponsor: University of North Carolina General Administration (UNC GA) Prime Sponsor: US Department of Education (DOED)
Numerical Methods for Studying Optical Absorption of Random Media and Quantum Dots for Solar Cell Designs	\$126,948	Principal Investigator (PI): Cai, Wei	Mathematics and Statistics	Sponsor: Department of Defense (DOD) Department of the Army (DA) Army Research Office (ARO)
Research on Tire Camber Control for Over-the-Road Trucks	\$20,984	Principal Investigator (PI): Tkacik, Peter	Mechanical Engineering and Engineering Science	Sponsor: Michelin Americas Research Corporation (MARC)
Research on Aerodynamic Devices for Over-the-Road Trucks	\$138,062	Principal Investigator (PI): Tkacik, Peter	Mechanical Engineering and Engineering Science	Sponsor: Michelin Americas Research Corporation (MARC)
SBIR: Evaluation of Prototype for Vitrified Tissue Rewarming	\$22,706	Principal Investigator (PI): Elliott, Gloria Co-PI: Wang, Shangping	Mechanical Engineering and Engineering Science	Sponsor: TDA Research, Inc. Prime Sponsor: Department of Defense (DOD)
SEED Advanced Institute to Scale-Up the NWP College-Ready Writers Program	\$20,000	Principal Investigator (PI): Coffey, Heather	Middle, Secondary and K-12 Education	Sponsor: National Writing Project (NWP) Prime Sponsor: US Department of Education (DOED)

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Sorption, Leaching, and Hydrous Ferric Oxide and Hydrous Manganese Oxide Determination for Groundwater Assessment Work Plan at W.S. Lee, Belton, SC	\$15,034	Principal Investigator (PI): Langley, William Co-PI: Oza, Shubhashini	Civil and Environmental Engineering	Sponsor: Synterra Ltd.
Study and optimization of atmospheric propagation of partially coherent vortex beams	\$76,546	Principal Investigator (PI): Gbur, Gregory	Physics and Optical Science	Sponsor: Department of Defense (DOD) Department of the Air Force (DAF) Air Force Office of Scientific Research (AFOSR)
Team approach to Sustainability through Education and Research	\$2,500	Principal Investigator (PI): Poler, Jordan	Chemistry	Sponsor: US-Russia University Partnership Program
The Housing First Charlotte-Mecklenburg Evaluation Project	\$200,000	Principal Investigator (PI): Thomas, Marye Co-PIs: Clark, Ashley; Troyer, Jennifer; Carman, Joanne; Schulkind, Lisa	School of Social Work	Sponsor: Charlotte Mecklenburg County
The Housing First Charlotte-Mecklenburg Evaluation Project	\$30,000	Principal Investigator (PI): Thomas, Marye Co-PI: Carman, Joanne	School of Social Work	Sponsor: Urban Ministry Center
TWC:Medium:Collaborative: oSafari - Online Social Network Fraud and Attack Research and Identification	\$343,434	Principal Investigator (PI): Lu, Aidong	Computer Science	Sponsor: National Science Foundation (NSF)
Understanding the effects of MSF errors	\$12,065	Principal Investigator (PI): Suleski, Thomas	Physics and Optical Science	Sponsor: University of Rochester Prime Sponsor: All Other Business and Industry
Visual Analytics on the spread of Pathogens	\$273,765	Principal Investigator (PI): Janies, Daniel	Bioinformatics and Genomics	Sponsor: Ohio State University College of Medicine Prime Sponsor: Department of Defense (DOD) Defense Threat Reduction Agency (DTRA)