26th Annual
UROC PROGRAMS & SPONSORS
26TH ANNUAL UROC PARTICIPANTS & SPONSORS

The Undergraduate Research Opportunities Consortium (UROC) is managed by the University of Arizona Graduate College and is comprised of 10 undergraduate research programs. Five of the programs are managed and/or supported by the Graduate College and five are affiliated programs sponsored by the National Science Foundation Research Experience for Undergraduates (NSF REU) Program and the U.S. Department of Energy. The objective of the consortium is to increase the number of underrepresented students who apply to graduate school. UROC Scholars engage in faculty-supervised research and participate in a comprehensive graduate school preparation program that includes Graduate Record Examination (GRE) test preparation, graduate admission and funding workshops, presentation skills seminars and a professional research conference experience. A special thank you to Graduate College leadership, faculty mentors, staff, graduate assistants, and supporters!

Frans Tax, PhD, Faculty Director
Graduate College – Office of Diversity & Inclusion

Donna Treloar, MA, Director
Undergraduate Research Opportunities Consortium
Graduate College – Office of Diversity & Inclusion

2021 UROC PROGRAMS, STAFF, AND SPONSORS

UROC GRADUATE COLLEGE PROGRAMS

MAXIMIZING ACCESS TO RESEARCH CAREERS (MARC)
PI: Marc Tischler, PhD
Assistant Director: Cindy Neal, MEd
Sponsor: NIGMS/TWD Division GM 08718 and University of Arizona Graduate College

MINIMIZING HEALTH DISPARITIES SUMMER RESEARCH PROGRAM (MHD)
Program Coordinator: Holly Lopez
Sponsors: University of Arizona Graduate College, Western Alliance to Expand Student Opportunities (WAESO), Building Undergraduate Infrastructure Leading to Diversity: Southwest Consortium of Health-Oriented Education Leaders and Research Scholars (BUILDing SCHOLARS)-University of Texas, El Paso
Ronald E. McNair Achievement Program (McNair)
PI/Program Director: Andrew Huerta, PhD
Program Coordinator: Holly Lopez
Administrative Assistant: Victoria Juvera
Graduate Teaching Assistants: Jacqueline Larriva, ABD and Berte Reyes, ABD
Sponsors: U.S. Department of Education, Federal TRIO Program, Ronald E. McNair Postbaccalaureate Achievement Program (Award: #P217A170284), University of Arizona, University of Arizona Graduate College

SUMMER RESEARCH INSTITUTE (SRI)
Program Director: Donna Treloar, MA
Teaching Supervisor: Andrew Huerta, PhD
Graduate Teaching Assistants: JoAnna Sanchez-Avila, ABD and Margaret Medina, ABD
Sponsors: University of Arizona Graduate College and Western Alliance to Expand Student Opportunities (WAESO)

UROC-PREP
Program Director: Andrew Huerta, PhD
Administrative Assistant: Victoria Juvera
Graduate Teaching Assistants: Adele Leon, ABD
Sponsors: University of Arizona Graduate College, Western Alliance to Expand Student Opportunities (WAESO)

UROC AFFILIATE PROGRAMS

BIOSPHERE 2 RESEARCH EXPERIENCES FOR UNDERGRADUATES SITE: EARTH SYSTEMS RESEARCH FOR ENVIRONMENTAL SOLUTIONS (B2 REU)
PI: Katerina Dontsova, PhD
Co-PI: Kevin Bonine, PhD
Sponsors: National Science Foundation Research Experiences for Undergraduates (NSF REU) Program and University of Arizona Graduate College

COGNITIVE AND AUTONOMOUS TEST VEHICLE (CAT VEHICLE) PROGRAM/ELECTRICAL AND COMPUTER ENGINEERING RESEARCH EXPERIENCES FOR UNDERGRADUATES (ECE REU)
PI: Jonathan Sprinkle, PhD and Gregory Ditzler, PhD
Coordinator: Nancy Emptage
Graduate Assistant Mentors: Safwan Elmadani, Arminda Estrada, and David Schwartz
Sponsors: National Science Foundation REU and University of Arizona Graduate College
CQN INTEGRATED OPTICS FOR UNDERGRADUATE NATIVE AMERICANS (IOU-NA)
PI: Allison Huff, DHEd
Co-PI: Robert Norwood, PhD
Program Manager: Russell Balliet, PhD
Sponsors: National Science Foundation (NSF) Engineering Research Center for Quantum Networks (ERC CQN, Grant number #EEC-1941583 and NSF REU #EEC-1659510) and University of Arizona Graduate College

COGNITIVE AND HIGH FREQUENCY LONG RANGE COMMUNICATIONS (HF Program)
PI: Michael Marefat, PhD
Co-PI: Tamal Bose, PhD and Loukas Lazos, PhD
Coordinator: Nancy Emptage
Graduate Assistant Mentors: Jingcheng Li, Noel Teku, and Ziqi Xu
Sponsors: National Science Foundation (NSF) and University of Arizona Graduate College

PARTNERSHIP AND PROACTIVE CYBERSECURITY TRAINING (PACT)
PI: Salim Hariri, PhD
Co-PI: Tamal Bose, PhD and Gregory Ditzler, PhD
Coordinator: Nancy Emptage
Graduate Assistant Mentors: Alex Berian, Srishti Gupta, and Shalaka Satam
Sponsors: U.S. Department of Energy (DoE) and University of Arizona Graduate College

GUEST PROGRAMS SUPPORTED BY UROC

BLAISER: Border Latino and American Indian Summer Exposure to Research
Program Director: Allison Huff, DHEd
Coordinators: Viridiana Johnson, MD and Edgardo Guzman, Student Assistant
Sponsors: Office of the Senior Vice President for Health Sciences, Arizona Area Health Education Centers (AZ-AHEC) and Arizona Health Opportunities Pathways to Excellence (AZ-HOPE)

FOCUSING RESEARCH IN THE BORDER AREA-FRONTERA Summer Internship
PI: Francisco Moreno, MD
Director: Alejandra Zapien-Hidalgo, MD, MPH
Administrative Assistant: Ycied Talavera Guillen, BS
Sponsor: AZ-HOPE Grant, Arizona Area Health Education Centers (AzAHEC)
USDA-NIFA “ADVANCING POSTSECONDARY ATTAINMENT & RESEARCH IN STEAM FOR TRIBAL STUDENTS”, AKA Bridge to STEAM
PI: Karen Francis Begay
Coordinator: Cara Shopa and Teresa Sosa
Instructor: Dr. Karletta Chief, Department of Environmental Science
Sponsor: Research Innovation & Impact and the Graduate College

WILDCAT RESEARCH EXCHANGE (WRE)
Director: Noel Hennessey, PhD
Sponsor: College of Engineering, Craig M. Berge, Dean’s Office and University of Arizona Graduate College
2021 KEYNOTE SPEAKER

Ivy Banks, J.D., M.Ed.

Associate Vice Provost, Diversity & Inclusion

Mrs. Banks joined the University of Arizona from Northern Arizona University where she served as Assistant Vice President, Student Affairs – Engagement & Inclusive Excellence. In this capacity, she led initiatives to unify academic and student affairs engagements through targeted messaging, using predictive analytics systems and aligning efforts to enhance support around first year, first-gen students of color. She implemented the Inclusion & Diversity Scholars program which expanded freshmen diversity mentoring from 30 students to 650 diverse students in one year. Mrs. Banks has also implemented campus-wide Inclusion Zone, TRANSparency Zone and DREAM Zone training, served as a leader in designing the first Diversity Strategic Plan as well as overhauled the Safe Zone training curriculum. She oversaw the Office of Indigenous Student Success, Multicultural & LGBTQIA+ Student Services, First-Gen Programs, Leadership-Engagement-and Peer Mentoring, TRIO programs and divisional initiatives such as the STAR program for early start for first generation students and the Indige-Bridge program which provides an early start for Native and Indigenous Students. Due to her expertise, Mrs. Banks also advised department chairs and deans on how to attract and retain diverse candidates through trainings and one on one consultations.

During her time at the University of Akron School of Law, Mrs. Banks led recruitment efforts and redesigned the recruitment strategy to expand recruitment to include diversity alumni in key cities and update admissions marketing materials to align with the growing millennial student population. She developed the Pathways program which resulted in a contractual relationship between Akron Law and Central State University, the only Historically Black College/University (HBCU) in Ohio. In conjunction with the Akron Bar Association Diversity Committee, Mrs. Banks increased diversity participation and membership with the bar association and led the Law and Leadership Institute Program at Akron Law. As a Senior Lecturer, Mrs. Banks designed and delivered courses on Contracts Law Lab, Criminal Law Lab and bar preparation courses and served as co-chair of the Faculty Diversity and Inclusion Task Force and implemented diversity programming and recruitment.
Mrs. Banks has been awarded the Anthony “Tony” Ross Award for service to Black and African-American students, the Martin Luther King Jr. Legacy Award and the LGBTQIA Commission’s Ally of the Year Award, at Northern Arizona University. From the University of Akron, she received Leadership Excellence Award, Akron Law BLSA Alumni Banquet and Alumni of the Year, Akron Law Black Law Students Association. Mrs. Banks was awarded the Dean’s Commendation for Outstanding Student Engagement in the Classroom from Bryant & Stratton College.

A proud First-Generation student herself, Mrs. Banks earned a Juris Doctor from University of Akron, School of Law, a Master’s of Education degree in Educational Leadership-Community College/Higher Education from Northern Arizona University, is working on a Masters of Education in Learning Design and Technologies from Arizona State University and completed a bachelor’s degree in Political Science from Cleveland State University. She is an active member of Zeta Phi Beta Sorority, Inc. which is one of the four historically African-American sororities. She has also acquired trainings and certificates from Cornell University in Faculty Institute for Diversity along with Association of Title IX Administrators (ATIXA), Section 504 and Decision Maker Certifications.