

**Agendum
Oakland University
Board of Trustees Formal Session
October 18, 2024**

**ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY
FOR THE PERIOD OF JULY 1 – AUGUST 31, 2024**
A Recommendation

1. **Division and Department:** Academic Affairs/Research Office
2. **Introduction:** Oakland University contributes to our national agenda as a contributor to the nation's scientific and technological progress, both through the generation of new knowledge and ideas and the education and training of its students. Grants and contracts awarded to Oakland University play a critical role in the advancement of new research findings, and current research trends gives emphasis to inter-disciplinary, technology-driven, and product-oriented team efforts.

The Board of Trustees (Board) has authorized the President, or his or her designee, to receive and acknowledge grants and contracts to the University, but such grants and contracts must be reported to the Board not less often than quarterly for acceptance on behalf of the University.

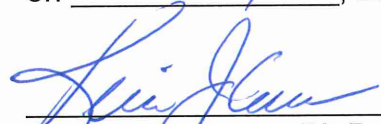
At this time, we request that the Board accept the grants and contracts reported on the attached Grants and Contracts Report, Attachment A, for the period of July 1 – August 31, 2024.

3. **Previous Board Action:** The Board accepts grants and contracts to Oakland University on a regular basis at its Formal Sessions.
4. **Budget Implications:** Grants and contracts contribute to the University through the recovery of direct and indirect expenses incurred in support of research projects.
5. **Educational Implications:** Grants and contracts enhance the training and education of students.
6. **Personnel Implications:** Grants and contract awards may provide salary support for faculty, post-doctoral fellows, undergraduate and graduate students, technicians, lab managers, and other personnel, as required by the funded research project or program.

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7. **University Reviews/Approvals:** All grants and contracts are reviewed by the Research Office prior to submission to the Board to ensure compliance with federal and state laws and regulations and University policies and procedures, when applicable, and with assistance from the Office of Legal Affairs when requested.
8. **Recommendation:** RESOLVED, that the Board of Trustees accept grants and contracts to Oakland University identified in the attached Grants and Contracts Report, Attachment A, for the period of July 1 – August 31, 2024.
9. **Attachments:** A. Grants and Contracts Report.

Submitted to the President
on 10-14, 2024 by



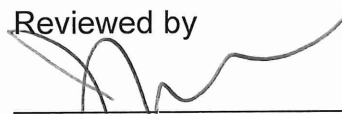
Kevin J. Corcoran, Ph.D.
Interim Executive Vice President
for Academic Affairs and Provost

Recommended on 10/14, 2024
to the Board for approval by



Ora Hirsch Pescovitz, M.D.
President

Reviewed by



Joshua D. Merchant, Ph.D.
Chief of Staff and
Secretary to the Board of Trustees

Grants and Contracts Report for Period: July 1 - August 31, 2024

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Ziming Yang Department of Chemistry	National Science Foundation	CAREER: Mechanistic Understanding of Organic Carbon and Nitrogen Transformations in Hydrothermal Systems. The purpose of this research is to understand the inputs and outputs of subsurface organic inventory, uncovering food and energy sources in deep ocean ecosystems, and predicting future C and N emissions from the oceanic lithosphere	\$10,287	\$592,632
Gopalan Srinivasan Department of Physics	National Science Foundation	NSF-MeitY: Strain Engineering of Magnetism in Ferrimagnetic Spinel Ferrites and Garnets by Combinatorial Substrate Epitaxy for Dual H- and E-Tunable High Frequency Devices. Ferrites and garnets, with their low losses, are promising materials for use in microwave and millimeter wave devices ranging from mobile phones to satellite communications. This study aims to answer how to adapt ferrites and garnets to be more suitable for these applications.	\$390,001	\$390,001
Nicole Boelk Department of Financial Aid	MCAN Michigan College Access Network	FAFSA Frenzy Grant Agreement. The Office of Financial Aid and Scholarships will use this funding to send FAFSA Completion post cards to all students admitted to OU who have not yet completed the FAFSA.	\$10,000	\$10,000
Ngong Beyeh Department of Chemistry	National Science Foundation	CAREER: Assemblies of Block Copolymers and Macrocycles with Halogen Bonds. This project will merge two sub-areas in macrocyclic and polymer science to enrich hybrid materials with properties otherwise difficult to realize in sensory materials.	\$148,280	\$700,000
Huirong Fu Department of Computer Science and Engineering	National Science Foundation	CyberCorps Scholarship for Service: Cyber Defense of Intelligent Systems. This is a bridge program for non-computer science undergraduate students providing a pathway to obtain important skills needed in cybersecurity before formally enrolling in the master's degree program at Oakland University.	\$165,000	\$3,198,315

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Caress Dean Department of Public and Environmental Wellness	Department of Health and Human Services	Community Project Funding/Congressionally Directed Spending - Non-Construction. This project will create an innovative dual degree program integrating the disciplines of Social Work (MSW) and Public Health (MPH). The integration of these programs will prepare students to effectively manage and alleviate the social determinants contributing to health disparities.	\$350,000	\$350,000
Ankun Yang Department of Mechanical Engineering	National Science Foundation	LEAPS-MPS: Probing Solid Electrolyte Interphase of Sodium Metal Anodes Using Plasmonic Effects to Improve Battery Performance. The research objective of this project is to elucidate the Na solid electrolyte interphase (SEI) composition and evolution using in-situ and non-invasive Raman spectroscopy enhanced by Na metal nanostructures, bridging the interdisciplinary research fields of electrochemistry and nanophotonics.	\$250,000	\$250,000
Huirong Fu Department of Computer Science and Engineering	National Security Agency	2024 Grant Program -Oakland University. The Oakland GenCyber Coalition, comprising Oakland University, University of Nevada Las Vegas, North Carolina A&T State University, Purdue University Northwest, University of Missouri-Kansas City, and Bismarck State College, proposes an extensive plan to enhance cybersecurity education in middle and high schools.	\$789,304	\$789,304
Sergey Golovashchenko Department of Mechanical Engineering	Pacific Northwest National Laboratory / Department of Energy	Local Property Improvement for Wrought Aluminum and Cast Magnesium. Oakland University will measure and report fracture strains of as-received 6xxx sheets in their T4 and T6 tempers. The fractured samples will be sent to PNNL for further microstructure characterization. PNNL will also perform thermomechanical processing on the sheets to evaluate the effects of microstructural changes on the edge stretchability.	\$40,293	\$40,293

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A. Vance Washington Department of Biological Sciences	National Institutes of Health	TLT-1 Intracellular Function. This study will increase the mechanistic understanding of TLT-1 function and give insights into how we can use TLT-1 as a therapeutic target. Furthermore, at the completion of these studies we will have enhanced the capabilities and scope of our laboratory and at Oakland University.	\$434,658	\$434,658
Jun Chen Department of Electrical and Computer Engineering	Wayne State University	Optimal Scheduling of Edge Devices and Decentralized Data Preprocessing. Training large AI model can require significant computing powers. In this project, we consider the use of edge devices from CAV for the purpose of data preprocessing before being sent to the large AI. This project will conduct experiment and survey to model the problem as a multi-objective optimization problem, and an algorithm will be developed for real-time solution. Contracted services between Oakland University and Wayne State University.	\$23,750	\$23,750
Ilias Cholis Department of Physics	National Science Foundation	Searching for Dark Matter Signals in Cosmic-Ray and Gamma-Ray Observations. The goal of this research is to develop new probes to search for signals of primordial black hole (PBH) dark matter at gravitational-wave observations.	\$54,270	\$150,000
Sergey Golovashchenko Department of Mechanical Engineering	National Science Foundation	IUCRC Phase I Oakland University: Center for Industrial Metal Forming. The mission of the Center for Industrial Metal Forming (CIMF) is to perform cutting-edge, pre-competitive fundamental research in metal forming science and engineering in collaboration with industrial Members. CIMF, which is comprised of Ohio State University, Oakland University, and University of New Hampshire, will bring unique expertise and facilities to the consortium and will collaborate closely with its industrial members to conduct research and prepare engineers and professionals for the metal forming industry through academic programs, industrial training, and workshops.	\$195,000	\$487,500

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Mary Lewis Department of Psychology	Alliance of Coalitions for Health Communities	Social Norms Intervention Assessment. This study will continue to assess the effectiveness of a social norms intervention to reduce drinking, drug use, and vaping in the college populations. An additional goal is to apply campaign social norm messages to awareness of mental health resources, student organizations, and the provision of peer socio-emotional support through social norm campaigns.	\$9,635	\$52,176
Yang Xia Department of Physics	Henry Ford Health System	MRI Signatures of Response to High-Dose Radiotherapy in Rat Models of Cerebral Tumor. This funding will support Oakland University graduate student, Prabhu Acharya, to perform Medical Physics Research at Henry Ford Hospital.	\$40,097	\$141,193
Nelia Afonso School of Medicine	Merck Corporation	Promoting Vaccine Confidence in Medical and Dental Students: Development and Evaluation of an Educational Intervention. The overarching goal for this project is to develop an educational program to improve vaccine education, promote vaccine confidence, and improve vaccine counseling skills for dental and medical students.	\$5,000	\$290,592
Martha Escobar Department of Psychology	National Science Foundation	Advancing STEM Workforce Readiness of Interdisciplinary Scholars for Excellence Using a Mentored Community Approach to Promote Belonging and Professional Identity. RISE-STEM will provide low-income, academically-talented, undergraduate and graduate students in Electrical and Computer Engineering, Mathematics, Computer Science and Software Engineering, and Physical Sciences, with experiences that will prepare them for post-baccalaureate studies and the STEM workforce. Students will work in teams (within and across institutions) to develop the prototype of a technological product, receive mentoring, participate in industry-based activities, and explore further education or careers in academia. All students will receive need-based scholarships, renewable for up to 5 years.	\$1,087,979	\$1,087,979

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Scott Tiegs Department of Biological Sciences	National Science Foundation	NSF Graduate Research Fellowship Program (GRFP). This funding will support fellowships for outstanding graduate students who are pursuing full-time, research-based masters and doctoral degrees in science, technology, engineering or math or STEM education.	\$53,000	\$148,000
Nicole Boelk Department of Financial Aid	Michigan Department of Labor and Economic Opportunity	Barrier Removal - Direct to Students Grant - 2024. This project will enhance our Student Emergency funding which provides direct-to-student financial assistance, purchasing food for the food pantry to assist with basic needs, provide financial assistance for co-pays for the Counseling Center and the Health Center, provide housing assistance in the residence halls for students with no alternatives. Our final push will be to offer financial tuition assistance to graduating seniors who lack the funding to actually complete their degrees.	\$297,583	\$297,583
Nicole Boelk Department of Financial Aid	Michigan College Access Network	Certified FAFSA Specialist Grant. The Office of Financial Aid and Scholarships will use this funding to send FAFSA Completion post cards to all students admitted to OU who have not yet completed the FAFSA.	\$1,000	\$1,000
Tomoko Wakabayashi Department of Human Development and Child Studies	Spencer Foundation	Co-Creating a Culturally Sustaining Infant-Toddler Childcare and Resource Hub in a Public High School through Critical Participatory Action Research. This project will create an infant-toddler childcare and resource hub, the Baby PEACE, in a public high school in Pontiac, Michigan. We will also leverage the OU-Pontiac Initiative's Early Childhood Education's (OUIECE) network of community partners. Of vital importance is to co-design Baby PEACE as the partnership's student teacher practicum site, and as a value-added resource for the community.	\$399,806	\$399,806

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Brian Dean Department of Electrical and Computer Engineering	National Science Foundation	REU Site: Applied Research Experience in Electrical and Computer Engineering (ApREECE). The primary goal of the ApREECE REU site is to engage 10-undergraduate students per year, primarily females and/or minorities, in an intensive 10-week research program with the goal of encouraging their continued participation in STEM related fields.	\$442,853	\$442,853
Zhe Wang Department of Chemistry	LabSys, LLC / National Institutes of Health	Wearable Continuous Drug Monitoring Device for Personal Medications in Opioid Use Disorders (CDM-MOUD). The primary objective of this proposal is to develop a low-cost wearable sensing device capable of not only detecting fentanyl use but also profiling its presence alongside key metabolites, including buprenorphine and methadone, in the patient's system.	\$82,675	\$82,675
Amy Bane-Bercelli Department of Academic Affairs	National Institutes of Health	Replacement of Two Autoclaves for Oakland University's Biomedical Research Support Facility. This proposal seeks funding to replace two obsolete autoclaves in Oakland University's Biomedical Research Support Facility.	\$283,505	\$283,505
Thomas Bianchette Department of Chemistry	National Science Foundation	Mexico West Coast Sampling Project. This project is to conduct collaborative fieldwork at sites along the western coast of Mexico. Working with our collaborators at ECOSUR in Chetumal and ITESO in Guadalajara, we will analyze the collected specimens for evidence of hurricane and other flooding deposits over the last 500-2000 years: information that can then be used by local government officials and agencies to improve disaster planning in the region.	\$398,313	\$398,313
Ankun Yang Department of Mechanical Engineering	National Institute of Standards and Technology	Next-Gen Electrification Testing and Standards Facility: from Materials to Vehicles. This project will develop multi-level measurement, testing, and performance standards for next generation electrification solutions.	\$3,000,000	\$3,000,000

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Total Awards			<u>\$8,962,289</u>	<u>\$14,042,128</u>