

Agendum  
Oakland University  
Board of Trustees Formal Session  
August 13, 2018

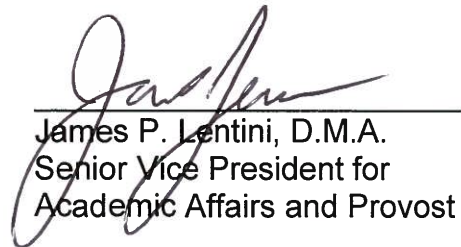
**ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY**  
**FOR THE PERIOD OF MAY 1 - JUNE 30, 2018**  
**A Recommendation**

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 May 1 through June 30, 2018.
  
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 expense incurred in support of research projects.
  
5. **Educational Implications:** Grants and contracts enhance the training and education of students.

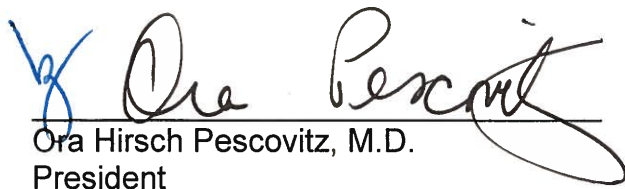
Acceptance of Grants and Contracts to  
Oakland University for the Period of  
May 1 – June 30, 2018  
Oakland University  
Board of Trustees Formal Session  
August 13, 2018  
Page 2

6. **Personnel Implications:** Grants and contracts 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.
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 May 1 – June 30, 2018.
9. **Attachments:** A. Grants and Contracts Report.

Submitted to the President  
on 8/6, 2018 by

  
James P. Lentini, D.M.A.  
Senior Vice President for  
Academic Affairs and Provost

Recommended on 8/6, 2018  
to the Board for approval by

  
Ora Hirsch Pescovitz, M.D.  
President

## Grants and Contracts Report for period of May 1 - June 30, 2018

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
<b>Scott Tiegs</b> Department of Biological Sciences	Trout Unlimited	<b>The Great Lakes New Zealand Mud Snail Collaborative.</b> This Collaborative is a regional approach for New Zealand mud snail management and is made up of state, federal, academic, and non-profit institutions. The Collaborative seeks to improve knowledge on the potential impacts of mud snails, minimize spread, better inform management activities, and raise public awareness.	\$ 90,544	\$ 90,544
<b>Andrew Goldberg</b> Eye Research Institute	National Institutes of Health	<b>Investigation of the Molecular Basis of Rod and Cone Photoreceptor Structure.</b> This research will improve understanding of healthy rod and cone cell structure and the changes that occur during progressive retinal disease, and may suggest strategies for preserving sight.	\$ 375,000	\$ 1,139,157
<b>Sayed Nassar</b> Department of Mechanical Engineering	National Center for Manufacturing Sciences	<b>Enhanced Environmental Performance for Safety Glass - Phase III.</b> The objective of this project is to investigate the effect of TA panel putting material on the interlayer film adhesion to glass and polycarbonate laminates in military ground vehicles.	\$ 303,373	\$ 303,373

## Grants and Contracts Report for period of May 1 - June 30, 2018

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
<b>Krzysztof Kobus</b> Department of Mechanical Engineering	Michigan Space Grant Consortium/ University of Michigan	<b>Earth System Science STEM Camps, Outreach and Teacher Training.</b> A continuing comprehensive, hands-on, student centered, activity-based outreach and education program will deliver substantive earth system sciences training to underrepresented and underserved students K-12, and STEM teachers.	\$ 20,000	\$ 20,000
<b>Daniel Llamocca</b> Department of Electrical and Computer Engineering	Michigan Space Grant Consortium/ University of Michigan	<b>Run-Time Reconfigurable Architecture for a Spacewire Router.</b> This project will investigate the implementation of an open-source SpaceWire Router on an embedded platform that supports run-time alteration of hardware components, while the rest of the system is still opening.	\$ 5,000	\$ 5,000
<b>Evan Trivedi/ Jake Farnsworth</b> Department of Chemistry	Michigan Space Grant Consortium/ University of Michigan	<b>Rare-Earth Complexes as Upconverting and Downconverting Antennae in Solar Cells, Undergraduate Fellowship.</b> The goal of this research is the synthesis of a platform of lanthanides complexes with potential as converting antennae.	\$ 2,500	\$ 2,500

## Grants and Contracts Report for period of May 1 - June 30, 2018

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
<b>Wei Zhang</b> Department of Physics	Michigan Space Grant Consortium/ University of Michigan	<b>Explore Organic-Inorganic Hybrid Perovskites for Spin-Based Thermoelectric Devices.</b> The goal of this research is to investigate spin-based thermoelectric devices, which convert heat into electricity, and use spin thermoelectric effects that offer many advantages for harvesting various omnipresent waste heat sources.	\$ 5,000	\$ 5,000
<b>Colin Wu/ Kaitlin Lowran</b> Department of Chemistry	Michigan Space Grant Consortium/ University of Michigan	<b>Evaluations of Microgravity on DNA Repair, Undergraduate Fellowship.</b> This research will assess how the conditions of space affect DNA repair mechanisms in human cells.	\$ 2,500	\$ 2,500
<b>Colin Wu</b> Department of Chemistry	Michigan Space Grant Consortium/ University of Michigan	<b>Evaluations of Microgravity on DNA Repair.</b> This research will assess how the conditions of space affect DNA repair mechanisms in human cells.	\$ 5,000	\$ 5,000
<b>Laila Guessous</b> Department of Mechanical Engineering	Michigan Space Grant Consortium/ University of Michigan	<b>Oakland University MSGC Pathway to External Grants.</b> This funding will be used to support MSGC-funded faculty and students in their efforts to obtain external research grants or disseminate their MSGC-funded research results at conferences.	\$ 1,500	\$ 1,500

## Grants and Contracts Report for period of May 1 - June 30, 2018

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
David Garfinkle Department of Physics	National Science Foundation	<b>Studies of Singularities, Black Holes, and Gravitational Radiation.</b> This project will study aspects of gravitational collapse, and in particular will concentrate on the approach to the singularity, gravitational wave memory, and critical behavior at the threshold of black hole formation.	\$ 49,241	\$ 153,397
Andrew Goldberg Eye Research Institute	National Institutes of Health	<b>Investigation of the Molecular Basis of Rod and Cone Photoreceptor Structure.</b> This research will improve understanding of healthy rod and cone cell structure and the changes that occur during progressive retinal disease, and may suggest strategies for preserving sight.	\$ 63,677	\$ 1,202,834
Yang Xia Department of Physics	National Institutes of Health	<b>ACL-Deficiency Modifies Topographical Degradation in Posttraumatic Osteoarthritis.</b> The long-term goal of this research is to apply the imaging-based biomarkers to detect the early degradation of cartilage and subchondral bone during the progression of osteoarthritis, so that clinical outcomes can be improved.	\$ 443,531	\$ 2,229,522

## Grants and Contracts Report for period of May 1 - June 30, 2018

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Robert VanTil Department of Industrial and Systems Engineering	National Science Foundation	<b>Project Lifecycle Management Scholarship Program.</b> The NSF Scholarships in Science, Technology, Engineering and Mathematics (S-STEM) Program makes grants to higher education institutions to support academically talented financially needy students, enabling them to enter the workforce following completion of their degree.	\$ 518,725	\$ 598,980
Gary Barber Department of Mechanical Engineering	Fiat Chrysler Automobiles, LLC	<b>Mechanical Properties of 52100 Steel.</b> Mechanical Properties of 52100 steel samples will be measured. This will include sample preparation, tension tests, impact tests and wear tests.	\$ 40,000	\$ 40,000
Sara Blumer-Schuette Department of Biological Sciences	Ironic Chemicals, LLC	<b>Engineering Alternative Oxidation Activity in A. ferrooxidans for Enhanced Biohydrometallurgy Capabilities.</b> The goal of this project is to design and create novel strains of A. ferrooxidans cells that secrete hydrogen peroxide during sulfur oxidation.	\$ 59,647	\$ 59,647
Vijitashwa Pandey Department of Mechanical Engineering	University of Michigan/Tardec	<b>A Decision-Based Mobility Model for Semi and Fully Autonomous Vehicles.</b> This research will develop a method to define mobility for ground vehicles exhibiting partial to full autonomy.	\$ 79,550	\$ 79,550

## Grants and Contracts Report for period of May 1 - June 30, 2018

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Bradley Roth Department of Physics	Henry Ford Health System	<b>Graduate Student Support for Medical Physics Research at Henry Ford Hospital.</b> The objective of this funding is to support Biomedical Sciences. This support allows many of our best and brightest graduate students to work in the world-class laboratory of Distinguished Professor Michael Chopp and his colleagues, many of whom are adjunct faculty in our Department of Physics.	\$ 37,950	\$ 37,950
Barbara Oakley Department of Industrial and Systems Engineering	Educas AS	<b>Improving Online and Face-to-Face Learning Techniques in Norway.</b> Dr. Oakley will be in Norway working with Olav Schewe to conduct plenary lectures and workshops about learning at educational and business institutions in Norway, and to advise Norwegian institutions about both general learning and methods to improve the conduct of online learning.	\$ 23,744	\$ 23,744
<b>Total</b>			<b>\$ 2,126,482</b>	<b>\$ 6,000,198</b>