

Agendum
Oakland University
Board of Trustees Special Formal Session
July 24, 2009

**ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY
FOR THE PERIOD OF MAY 1 THROUGH JUNE 30, 2009**

A Recommendation

1. **Division and Department:** Academic Affairs/Office of Grants, Contracts and Sponsored Research

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 May 1 through June 30, 2009.

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.

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.

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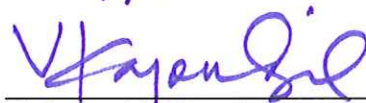
7. **University Reviews/Approvals:** All grants and contracts are reviewed by the Office of Grants, Contracts and Sponsored Research prior to submission to the Board to ensure compliance with federal and state laws and regulations and University policies and procedures, when applicable, and with assistance 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 through June 30, 2009.

9. **Attachments:** A. Grants and Contracts Report.

Submitted to the President
on 7/20, 2009 by



Virinder K. Moudgil
Senior Vice President for
Academic Affairs and Provost

Recommended on 7/20, 2009
to the Board for approval by



Gary D. Russi
President

OAKLAND UNIVERSITY
GRANTS AND CONTRACTS REPORT
MAY 1 - JUNE 30, 2009

Attachment A

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Lorenzo M. Smith Department of Mechanical Engineering	United States Automotive Materials Partnership	Analysis of Plane Strain Forming Limit in High Strength Steel Sheet Metal. <i>The objective of this project is to measure and study, experimentally, the sensitivity of the plane strain forming limit (FLD₀) to the orientation of Advanced High Strength Steel (AHSS) sheet metal materials.</i>	\$ 22,295	\$ 22,295
Lianxiang Yang Department of Mechanical Engineering	United States Automotive Materials Partnership - DOE	Digital Image Correction (DIC) Measurement on Uni-axial Deformation up to Fracture. <i>The goal of this project is to measure strain distribution using DIC for tensile tests, both in the elastic and plastic regions, and especially in the diffuse neck region.</i>	\$ 18,720	\$ 18,720
Daniel Aloï Electrical and Computer Engineering	Michigan Space Grant Consortium	Structural Components as Smart Antenna Elements in Unmanned Aerial Vehicles. <i>The objective of this proposal is to acquire funding to model, build, and validate an UAV with antenna arrays integrated within its structure and to establish a collaborative relationship between two laboratories at Oakland University.</i>	\$ 5,000	\$ 5,000
George Balster Martins Department of Physics	United States Department of Energy	Developing RPA and FLEX packages in Fortran 95. <i>The goal of this project is to develop Fortran 95 implementations of multi-band RPA and FLEX packages.</i>	\$ 20,987	\$ 20,987
Michael Sevilla Department of Chemistry	National Cancer Institute (NIH)	Mechanisms of Radiation Damage to DNA. <i>This project will study free radical mechanisms of radiation damage to DNA.</i>	\$ 209,971	\$ 839,884

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Linda Thompson Adams School of Nursing	St. John Health System	Transforming Nursing Education Program. <i>The objective of the project is to collaborate with St. John Health System to develop and deploy innovative approaches to nursing education.</i>	\$ 1,047,000	\$ 5,373,183
Michael Polis Industrial & Systems Engineering	Michigan Economic Development Corporation	MEDC EDJT Grant for Denso International North America. <i>The objective of this project is to train high technology workers in Michigan, specifically, employees of Denso International North America.</i>	\$ 95,000	\$ 95,000
Mark Olson Teacher Development and Educational Studies	National Science Foundation	Oakland University Noyce Scholars Program. <i>This project will prepare three cohorts of ten highly qualified secondary mathematics and science teachers to teach in high needs schools.</i>	\$ 893,199	\$ 893,199
Lianxiang Yang Department of Mechanical Engineering	Trier University of Applied Sciences	Software Development for Digital Laser Micro-Interferometry to Deformation and Strain Measurement of Microstructures. <i>This third phase of research will include development of a running software with supply of a source code, including documentation of the results and presentation of a user handbook.</i>	\$ 13,056	\$ -

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Ken R. Elder Department of Physics	National Science Foundation	Modeling Non-Equilibrium Microstructure Formation. <i>This project will develop efficient computational methods for modeling non-equilibrium processes and microstructure formation. This work will help scientists optimize material performance as microstructures play a key role in material function.</i>	\$ 242,000	\$ 242,000
Robert Wiggins School of Education and Human Services	State of Michigan - Department of Education	MDE Research Collaborative. <i>The purpose of this project is to provide methodological and technical support to the work of the Michigan Department of Education Research Collaborative.</i>	\$ 23,000	\$ 23,000
Ka C Cheok Department of Engineering and Computer Science	Science Applications International Corporation	2009 Intelligent Ground Vehicle Competition. <i>Oakland University School of Engineering and Computer Science will coordinate and organize the 2009 Intelligent Ground Vehicle Competition (IGVC) to be held June 5-8, 2009 on the campus of OU.</i>	\$ 50,000	\$ 50,000
Xiangqun Zeng Department of Chemistry	National Institutes of Health	Development of Recombinant Antibody Based Piezoimmunosensors. <i>Improved immunsensors are urgently needed in clinical diagnosis and environmental monitoring. The specific aim of this project is to develop scFv based immunsensor for cell surface marker analysis.</i>	\$ 18,248	\$ 18,248

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Barry Winkler Eye Research Institute	National Institutes of Health	Photoreceptor Vulnerability and Glutathione Status. <i>This project will test the hypothesis that a deficiency in glutathione accounts for the selective vulnerability of photoreceptor cells to chemical toxins and environmental stress. The expected outcome will be to provide therapeutic agents to protect against damage to retinas from oxidation and chemical toxins.</i>	\$ 359,920	\$ 709,009
Kenneth Mitton Eye Research Institute	National Institute of Health	Coordination of Gene Expression in Retinal Development. <i>This funding will provide support for two summer students in advance genomics research under the Recovery Act administrative supplement process and to accelerate progress on the parent grant goals to breed and analyze homozygous FIZ1- genetrapp (knock out) mice.</i>	\$ 15,700	\$ 15,700
Frank Giblin Eye Research Institute	National Institutes of Health	Proteins of Normal and Cataractous Lenses. <i>This project will provide support for undergraduate students for Summer 2009 and Summer 2010.</i>	\$ 28,937	\$ 28,937
Bradley Roth Department of Physics	National Institute of Health	Magneto-Acoustic Effects in Imaging. <i>This project will analyze the role of the Lorentz force in biomedical imaging methods.</i>	\$ 15,700	\$ 15,700
Gopala Srinivasan Department of Physics	National Science Foundation	Functionally Graded Ferroics and Magnetoelectric Interactions. <i>With this project we will study electromagnetic properties of composite materials with an outcome of new materials for sensors and RF devices.</i>	\$ 85,000	\$ 340,000

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Lisa Mileto School of Nursing	Health Resources and Services Administration	<i>Nurse Anesthetists Traineeship Program (NAT).</i> This funding will be used as tuition support for graduate anesthesia students.	\$ 14,845	\$ 14,845
Reginald McCloud Pre-College Programs	Detroit Area Pre-College Engineering Program (DAPCEP)	<i>Detroit Area Pre-College Engineering Program.</i> This project will give underrepresented students the interest and preparation needed to succeed in a University-level science or engineering curriculum. All participants will receive information, knowledge and academic skills that can help prepare them for successful entrance into college that can lead to careers in engineering, science and mathematics.	\$ 12,500	\$ 12,500
David Spencer OU, Inc.	Michigan Economic Development Corporation	<i>Sterling Heights Smartzone Development of Incubator.</i> OU, Inc. has been engaged to provide consulting services related to the development of a Macomb County business incubator in Sterling Heights. The business incubator will provide commercialization and business acceleration services to the SmartZone defined area in Macomb County.	\$ 250,000	\$ 250,000
Andrew Goldberg Eye Research Institute	National Institutes of Health	<i>Molecular Scaffolding for Photoreceptor Outer Segment Structure and Renewal.</i> This project will provide support for two undergraduate students for Summer 2009 and Summer 2010.	\$ 21,161	\$ 21,161
Frances Jackson School of Nursing	Health Resources and Services Administration	<i>Advanced Education Nursing Traineeships.</i> This funding will be used as tuition support for graduate nursing students.	\$ 62,312	\$ 62,312

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Dyanne Tracy School of Education and Human Services	Macomb Intermediate School District	<i>Embracing Mathematics, Assessments and Technology in High Schools.</i> This project is a partnership agreement between Oakland University and a high-need school district to support improved student achievement in mathematics and science.	\$ 10,000	\$ 18,686
Shravan Chintala Eye Research Institute	National Institutes of Health	<i>Proteases in IOP-mediated glaucomatous damage.</i> This project will advance understanding of the mechanisms underlying pressure-mediated ganglion cell loss in glaucoma.	\$ 370,000	\$ 370,000
Lorenzo Smith Department of Mechanical Engineering	Battelle Memorial Institute Pacific Northwest Division	<i>Validation of Numerical Modeling Results for Electrohydraulic Forming.</i> The project will support the development of electrohydraulic forming technologies by producing a numerical design tool and using a system for process development.	\$ 79,924	\$ 79,924
Maria Szczesniak-Bryant Department of Chemistry	National Science Foundation	<i>Interactions in Open Shell Clusters.</i> Ab initio calculations will be applied to determine the interactions between open-shell radicals and other species. The characterization of the potential energy surface of the SrO dimer will be studied.	\$ 85,454	\$ -
Bradley Roth Department of Physics	National Institutes of Health	<i>Magneto-Acoustic Effects in Imaging.</i> Detecting and imaging the electrical behavior of nerves and muscles underlies important diagnostic techniques in medicine. This project analyzes new imaging techniques that make use of magnetic forces on electrical currents.	\$ 97,538	\$ -

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Lorenzo Smith Department of Mechanical Engineering	Ford Motor Company	<i>Electrohydraulic Forming of Advanced High Strength Steels.</i> <i>The goal of this project is to develop a design tool based upon numerical modeling for electrohydraulic forming technology .</i>	\$ 120,265	\$ -
Zissimos Mourelatos Department of Mechanical Engineering	The Regents of the University of Michigan	<i>System Time-Variant Reliability-Based Optimization for Life Cycle Cost Reduction.</i> <i>The objective of this project is to develop a reliability-based, time-variant optimization method for series systems in order to reduce lifecycle cost.</i>	\$ 75,000	\$ -
Geraldine Graham Upward Bound	U.S. Department of Education	<i>Oakland University - Upward Bound.</i> <i>The Project Upward Bound College Preparatory Academy proposes to serve 120 low-income and/or potential first-generation college students to produce academic improvement, retention, postsecondary enrollment by immersion in an intensive summer academy and an academic year program.</i>	\$ 597,252	\$ -
Patricia Wren School of Health Sciences	The Regents of the University of Michigan	<i>A Novel, Valid Disease Activity Index for Clinical Research in Ulcerative Colitis.</i> <i>This project will identify the troubling symptoms that increase with advancing disease activity for use by physicians to assess the severity of ulcerative colitis.</i>	\$ 11,226	\$ -

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Jim Leidel Facilities Management	The Kresge Foundation	<i>Designing a Green Building. The funding will be used to support the costs of consultation, analysis and site planning for the Human Health Sciences Building. The building is proposed to be a Platinum level green facility.</i>	\$ 75,000	\$ 75,000
Total			\$ 5,046,210	\$ 9,615,290