

2011

2011 Annual Report

Office of Research Development
Eastern Michigan University

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EASTERN MICHIGAN UNIVERSITY

OFFICE OF RESEARCH DEVELOPMENT

research

LEADS THE WAY

2011
ANNUAL REPORT

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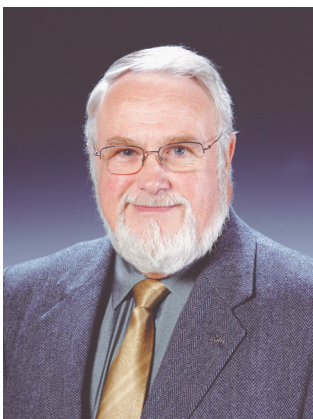
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FROM THE ASSOCIATE PROVOST & ASSOCIATE VICE PRESIDENT FOR RESEARCH

It is with considerable enthusiasm that I introduce this year's annual report summarizing the scholarly and creative efforts of Eastern Michigan University's faculty and students. As you view the award statistics for this year, you may notice that the totals are lower than in previous years. Most of the difference in these totals can be accounted for by the elimination of federal earmarks and of stimulus funding. In spite of these factors, which had significant impact upon our activity, EMU can point with pride to the solid foundation of scholarly and creative efforts represented in this report. The accomplishments and contributions achieved by EMU faculty and students are, indeed, praiseworthy! The research enterprise of EMU includes scholarly endeavors, ranging across artistic expression, scholarship of teaching and learning, community engagement, and traditional research. I am confident that, as you review this report, you will be able to appreciate the contribution this enterprise has made to the professional and intellectual growth of our faculty and students.

As has been noted before, external funding is a vitally important element of the scholarly process at EMU. With shrinking budgets on the local, state, and federal levels it becomes more difficult to provide financial support for scholarship efforts. Still, we cannot afford to neglect these efforts. As this report demonstrates, our faculty and students continue to be engaged in the community, in increasing the body of knowledge in their disciplines, and in creative and artistic expression. Their hard work and commitment to these activities enrich the teaching mission of EMU. The classroom experience is greatly enhanced by these experiences.

It has been a pleasure working with the staff in the Office of Research Development. They have worked long hours with very limited resources. Yet, as you can see from this document, they accomplished much! I also give considerable appreciation for the hard work and continued dedication of EMU faculty and students. EMU is also greatly indebted to the private and public organizations that provide financial support to many of Eastern Michigan University's research efforts. These partnerships are vital to the health of Eastern and our overall learning environment.



Thank you for your interest in this report and in Eastern Michigan University.

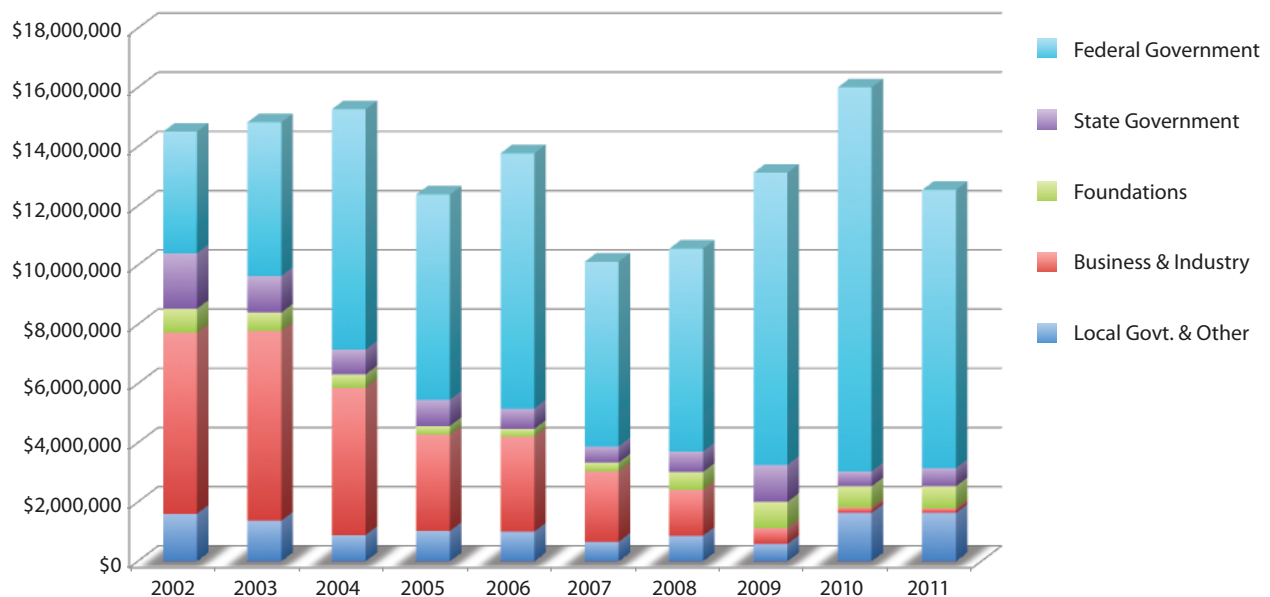
Best wishes,

A handwritten signature in black ink that reads "Byron Bond". The signature is written in a cursive, flowing style.

Byron Bond

AWARD STATISTICS

History of Awards by Sponsor Type



HISTORY OF AWARDS BY SPONSOR TYPE

	2002	2003	2004	2005	2006
Federal Government	\$4,105,047	\$5,192,072	\$8,119,343	\$6,930,197	\$8,621,846
State Government	\$1,875,261	\$1,236,508	\$832,260	\$886,165	\$686,705
Foundations	\$808,832	\$618,495	\$449,007	\$289,736	\$258,244
Business & Industry	\$6,114,590	\$6,409,395	\$4,973,896	\$3,253,878	\$3,210,424
Local Govt. & Other	\$1,600,449	\$1,365,989	\$884,351	\$1,020,720	\$995,898
Total	\$14,504,179	\$14,822,459	\$15,258,857	\$12,380,696	\$13,773,117

HISTORY OF AWARDS BY SPONSOR TYPE CONTINUED

	2007	2008	2009	2010	2011
Federal Government	\$6,240,433	\$6,855,053	\$9,872,119	\$12,975,163	\$9,395,668
State Government	\$545,386	\$682,184	\$1,248,213	\$494,689	611,791
Foundations	\$292,550	\$603,510	\$878,551	\$717,406	741,801
Business & Industry	\$2,381,796	\$1,552,091	\$541,259	\$182,413	158,919
Local Govt. & Other	\$654,540	\$857,424	\$557,437	\$1,631,391	1,628,397
Total	\$10,114,705	\$10,550,262	\$13,117,579	\$16,001,062	\$12,536,576

Success Rate by Sponsor Type

FISCAL YEAR 2011

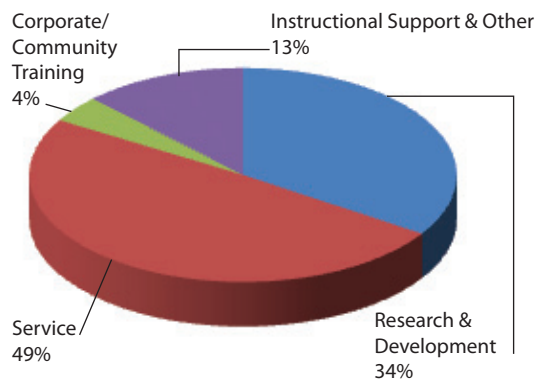
	Federal Government	State Government	Foundations	Business & Industry	Local Govt. & Other	Total
Submissions	102	11	23	18	30	184
Awards	58	9	11	10	16	104
Success Rate	57%	82%	48%	56%	53%	57%
Value	\$9,395,668	\$611,791	\$741,801	\$158,919	\$1,628,397	\$12,536,576

FISCAL YEAR 2010

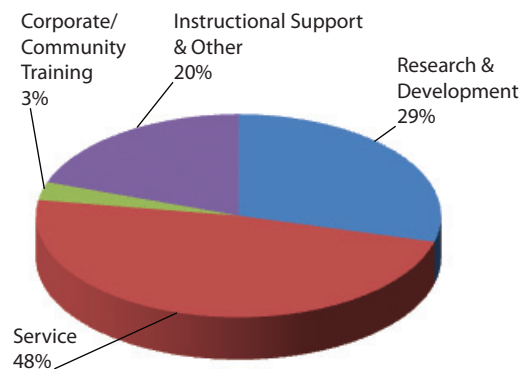
	Federal Government	State Government	Foundations	Business & Industry	Local Govt. & Other	Total
Submissions	133	12	18	11	23	197
Awards	68	9	7	7	20	111
Success Rate	51%	75%	39%	64%	87%	56%
Value	\$12,975,163	\$494,689	\$717,406	\$182,413	\$1,631,391	\$16,001,062

Awards by Activity Type

TYPE: FY2011



TYPE: FY2010

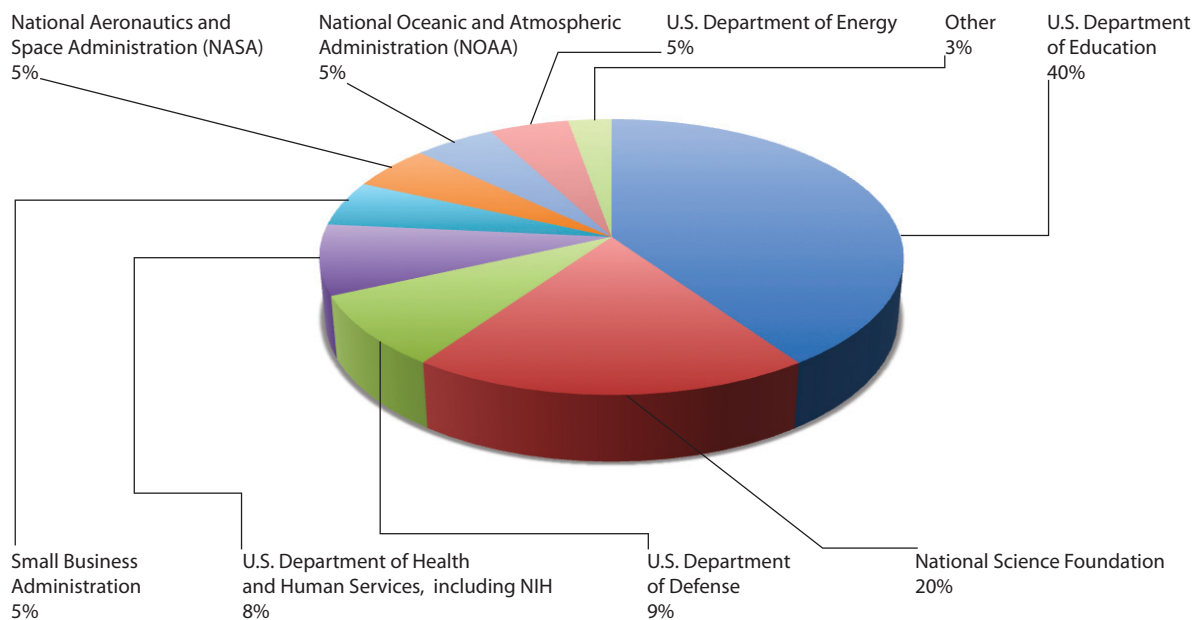


AWARDS BY ACTIVITY TYPE

	FY2011	FY2010
Research & Development	\$4,291,984	\$4,663,747
Service	\$6,183,716	\$7,732,350
Corporate/Community Training	\$503,146	\$461,838
Instructional Support & Other	\$1,557,730	\$3,143,127
Total	\$12,536,576	\$16,001,062

AWARD STATISTICS

Federal Sponsorship by Agency FY2011



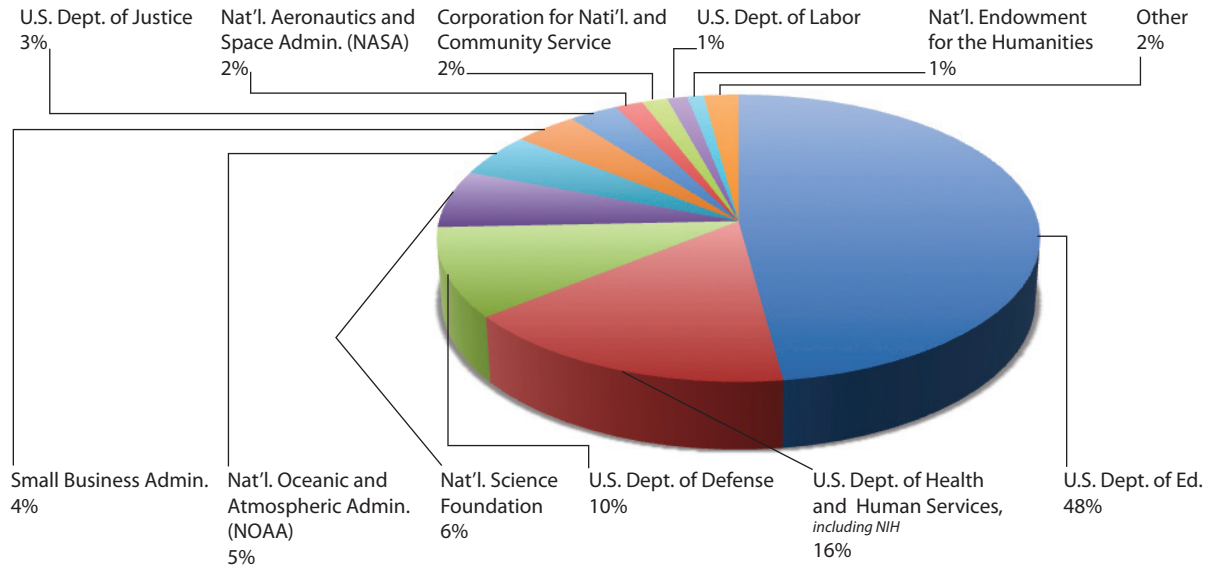
FEDERAL AWARDS BY AGENCY FY2011

Agency	Amount
U.S. Department of Education	\$3,791,385
National Science Foundation	1,819,470
U.S. Department of Defense	801,500
U.S. Department of Health and Human Services, including NIH	774,599
Small Business Administration	500,000
National Oceanic and Atmospheric Administration (NOAA)	487,500
U.S. Department of Energy	486,000
National Aeronautics and Space Administration (NASA)	477,733
Other*	257,481
Total	\$9,395,668

*OTHER AWARD AGENCIES FY2011

Agency	Amount
Environmental Protection Agency	\$130,000
U.S. Department of Labor	55,155
U.S. Department of Homeland Security	27,340
U.S. Geological Survey	20,000
United States Library of Congress	19,486
Corporation for National and Community Service	5,500
Total	\$257,481

Federal Sponsorship by Agency FY2010



FEDERAL AWARDS BY AGENCY FY2010

Agency	Amount
U.S. Department of Education	\$6,214,275
U.S. Department of Health and Human Services, including NIH	2,119,485
U.S. Department of Defense	1,311,241
National Science Foundation	840,545
National Oceanic and Atmospheric Administration (NOAA)	633,350
Small Business Administration	500,000
U.S. Department of Justice	382,000
Corporation for National and Community Service	220,779
National Aeronautics and Space Administration (NASA)	195,712
National Endowment for the Humanities	160,793
U.S. Department of Labor	127,417
Other*	269,566
Total	\$12,975,163

*OTHER AWARD AGENCIES FY2010

Agency	Amount
U.S. Forest Service	\$79,400
Environmental Protection Agency	67,680
U.S. Department of State	52,489
U.S. Census Bureau	40,000
U.S. Department of Homeland Security	29,997
Total	\$269,566

PROPOSAL & AWARD SUMMARY BY UNIT

	FISCAL YEAR 2011				FISCAL YEAR 2010			
	Proposals		Awards		Proposals		Awards	
	#	VALUE	#	VALUE	#	VALUE	#	VALUE
African-American Studies	1	\$169,936	0	\$0	0	\$0	0	\$0
Art	1	\$119,410	1	\$1,000	2	\$77,317	0	\$0
Biology	13	\$5,740,383	6	\$686,521	20	\$19,732,501	7	\$1,219,551
Chemistry	8	\$1,329,710	3	\$177,779	8	\$4,269,859	2	\$256,864
Communication, Media & Theatre Arts	9	\$217,305	5	\$119,167	6	\$163,031	5	\$207,293
Computer Science	3	\$544,907	1	\$32,181	3	\$111,849	1	\$78,482
Economics	0	\$0	0	\$0	0	\$0	0	\$0
English Lang. & Literature	6	\$494,983	3	\$267,000	2	\$49,407	3	\$80,768
Geography & Geology	10	\$5,949,174	5	\$1,552,267	10	\$18,538,541	4	\$745,286
History & Philosophy	3	\$992,147	2	\$577,763	9	\$4,077,347	4	\$599,992
Institute for Geospatial Research & Education	10	\$8,475,128	7	\$1,077,915	20	\$22,546,844	14	\$1,035,454
Institute for Language Information & Technology	5	\$1,079,902	2	\$252,013	3	\$457,604	3	\$523,282
Mathematics	1	\$13,517	1	\$13,517	2	\$795,954	0	\$0
Music & Dance	0	\$0			3	\$38,878	1	\$3,500
Office of the Dean, Arts & Sciences	0	\$0	1	\$486,000	1	\$486,000	0	\$0
Physics & Astronomy	16	\$7,172,855	11	\$1,074,567	10	\$776,986	7	\$143,689
Political Science	3	\$202,930	1	\$500	2	\$219,805	1	\$1,000,000
Psychology	13	\$3,960,062	2	\$135,563	10	\$2,906,129	6	\$265,688
Sociology, Anthropology & Criminology	6	\$1,290,684	3	\$835,652	8	\$698,618	4	\$627,000
Gerontology Program	2	\$74,103	1	\$63,103	1	\$63,103	1	\$63,103
Women's and Gender Studies Program	0	\$0	1	\$5,500	1	\$15,000	0	\$0
World Languages	10	\$3,085,040	7	\$551,171	8	\$2,112,274	6	\$354,883
College of Arts & Sciences	120	\$40,912,176	63	\$7,909,179	113	\$45,977,018	66	\$5,858,735
Accounting	1	\$18,201	2	\$28,201	0	\$0	0	\$0
Finance/Computer Information Systems	0	\$0	0	\$0	1	\$700,000	0	\$0
Management	0	\$0	0	\$0	1	\$700,000	0	\$0
Marketing	0	\$0	0	\$0	1	\$700,000	0	\$0
Office of the Dean, Business	1	\$500,000	1	\$500,000	1	\$500,000	1	\$500,000
College of Business	2	\$518,201	3	\$528,201	2	\$1,200,000	1	\$500,000
Leadership & Counseling	1	\$572,263	1	\$572,263	2	\$624,752	2	\$624,752
Office of the Dean, Education	0	\$0	0	\$0	1	\$572,263	1	\$285,000
Special Education	2	\$1,254,908	0	\$0	1	\$37,722	2	\$309,500
Teacher Education	9	\$4,582,220	7	\$2,017,438	14	\$6,837,417	6	\$1,527,347
College of Education	12	\$6,409,391	8	\$2,589,701	16	\$6,927,628	10	\$2,174,336
School of Health Promotion & Human Performance	1	\$81,532	1	\$81,532	0	\$0	1	\$70,682
School of Health Sciences	5	\$463,026	1	\$24,988	6	\$1,523,692	4	\$1,635,413
School of Nursing	4	\$262,037	2	\$199,086	5	\$217,371	3	\$122,638
Office of the Dean, HHS	8	\$2,861,316	4	\$1,183,730	1	\$9,481,373	1	\$118,661
School of Social Work	5	\$1,665,240	0	\$0	12	\$2,996,306	4	\$1,256,201
College of Health & Human Services	23	\$5,333,151	8	\$1,489,336	25	\$14,791,038	12	\$3,084,934
School of Engineering Technology	17	\$6,829,070	4	\$105,200	7	\$1,486,133	4	\$242,385
Coatings Research Institute	4	\$820,661	2	\$75,800	3	\$1,234,058	1	\$31,110
Center for Product Research and Development	1	\$1,020	1	\$1,020	0	\$0	0	\$0
School of Technology Studies	21	\$5,768,549	8	\$581,000	21	\$4,937,162	4	\$946,005
Center for Regional & National Security	3	\$474,500	3	\$115,879	6	\$551,507	1	\$86,828
Textiles Res. & Training Institute	1	\$38,600	1	\$38,600	2	\$368,833	1	\$740,000
Office of the Dean, Technology	0	\$0	0	\$0	0	\$0	0	\$0
College of Technology	47	\$13,932,400	19	\$917,499	28	\$6,423,295	8	\$1,188,390

	FISCAL YEAR 2011				FISCAL YEAR 2010			
	Proposals		Awards		Proposals		Awards	
	#	VALUE	#	VALUE	#	VALUE	#	VALUE
Center for Organizational Risk Reduction	0	\$0	1	\$40,000	1	\$40,208	1	\$40,000
Center for Quality	0	\$0	0	\$0	0	\$0	0	\$0
Continuing Education	0	\$0	0	\$0	0	\$0	0	\$0
Workforce Education	0	\$0	0	\$0	0	\$0	0	\$0
Inst. for the Study of Children, Families & Comm.	24	\$5,240,138	10	\$2,243,099	27	\$8,824,827	15	\$4,035,339
Upward Bound	4	\$409,582	2	\$395,264	1	\$398,292	2	\$404,243
Extended Programs	28	\$5,649,720	13	\$2,678,363	29	\$9,263,327	18	\$4,479,582
American Humanics Program	0	\$0	0	\$0	0	\$0	0	\$0
Bruce T. Halle Library	1	\$24,746	0	\$0	1	\$276,620	0	\$0
Charter Schools	0	\$0	0	\$0	0	\$0	0	\$0
Graduate School	0	\$0	0	\$0	0	\$0	0	\$0
Honors College	1	\$220,000	1	\$220,000	1	\$220,000	1	\$220,000
Office of Academic Service Learning	8	\$242,143	4	\$79,167	6	\$821,156	5	\$207,293
Office of Research Development	2	\$64,200	2	\$64,200	0	\$0	0	\$0
Provost's Office	0	\$0	1	\$500,000	1	\$500,000	0	\$0
Retention Services	0	\$0	0	\$0	1	\$114,753	1	\$114,753
The Holman Learning Center	1	\$900,000	2	\$231,880	1	\$150,000	2	\$231,880
Undergraduate Studies & Curriculum	0	\$0	0	\$0	0	\$0	0	\$0
Office of the Provost	13	\$1,451,089	10	\$1,095,247	11	\$2,082,529	9	\$773,926
Business & Finance	0	\$0	0	0	1	\$2,246,500	1	\$2,246,500
Physical Plant	0	\$0	0	\$0	0	\$0	1	\$82,000
Public Safety	0	\$0	0	\$0	1	\$184,300	3	\$602,514
Environmental Health & Safety	0	\$0	0	\$0	0	\$0	1	\$490,517
Office of the President	0	\$0	0	\$0	1	\$184,300	1	\$1,175,031
Career Services	0	\$0	0	\$0	0	\$0	0	\$0
Campus Life	0	\$0	0	\$0	0	\$0	0	\$0
Ombudsman	0	\$0	0	\$0	0	\$0	0	\$0
Diversity and Community Involvement	0	\$0	0	\$0	2	\$162,675	3	\$165,640
VISION			0	\$0	0	\$0	1	\$2,965
Office of International Students	0	\$0	0	\$0	0	\$0	0	\$0
Financial Aid	0	\$0	0	\$0	0	\$0	0	\$0
University Health Services	0	\$0	0	\$0	2	\$10,434,986	1	\$490,517
Children's Institute	0	\$0	1	\$170,000	1	\$170,000	1	\$170,000
Counseling & Psychological Services	0	\$0	0	\$0	0	\$0	0	\$0
Student Affairs & Enrollment Management	0	\$0	1	\$170,000	5	\$10,767,661	6	\$829,122
University Marketing	0	\$0	0		1	\$75,000	0	\$0
WEMU Radio	1	\$188,448	1	\$188,488	2	\$185,774	2	\$185,774
University Marketing and Communications	1	\$188,448	1	\$185,774	3	\$260,774	2	\$185,774

	FISCAL YEAR 2011		FISCAL YEAR 2010	
Total Submitted	184	\$38,758,682	197	\$75,362,569
Total Awarded	104	\$12,536,576	111	\$16,001,062

This list reflects dual credit for collaborative projects between units. Therefore, subtotals will not match the grand totals above, which are the actual net submissions and awards for FY2011 and FY2010.

TECHNOLOGY TRANSFER SUMMARY FOR FY 2011



Technology Transfer, also known as Technology Commercialization, is the transfer of University-developed innovations into the marketplace for the benefit of the community, general public, and University. This is accomplished through relationships and agreements with private industry that may option or license University-owned technologies. Innovation and its dissemination is the first and foremost goal. Any revenue that is generated through options, royalties, or licensing fees is first used to support the technology-transfer process. The revenues that exceed the cost of protecting and licensing the technology are shared between the University and its inventors. The following is a summary of technology-transfer activity at Eastern Michigan University during FY 2011.

Invention Disclosures	5
Patent Applications Filed (provisional and utility combined)	5
Issued U. S. Patents	1

FY 2011 Invention Disclosures

EMU0707.02 Chromate-Free Organic-Inorganic Hybrid Pretreatment for Corrosion Resistance of Aluminum Alloys

*Vijay Mannari,
Coatings Research Institute*

EMU1001.01 Aqueous Polyurethane/Polyurethane-Urea Dispersions (PUD) with High Bio-Based Content

*Vijay Mannari,
Coatings Research Institute*

**EMU1004.00 Manually Powered Air
Mattress Inflator with Gear Box**

*Dwayne Joppeck,
School of Engineering Technology
Jonathan Leonard,
School of Engineering Technology
Owen Grey,
School of Engineering Technology
Matthew Kerchaert,
School of Engineering Technology
Christopher Kaminski,
School of Engineering Technology
Christopher Bolt,
School of Engineering
Technology*

**EMU1005.00 Ionic Liquid-Based Triblock
Copolymers**

*John Texter,
Coatings Research Institute*

**EMU1101.00 Air Power and
Water Power Systems**

*Benedict Ilozar,
School of Engineering
Technology*

**FY 2011 U.S.
Provisional Patent
Applications Filed**

**Chromate-Free Organic-Inorganic Hybrid
Pretreatment**

*Vijay Mannari,
Coatings Research Institute*

**Aqueous Polyurethane/Polyurethane-Urea
Dispersions (PUD) with High Bio-Based
Content**

*Vijay Mannari,
Coatings Research Institute*

Ionic Liquid-Based Triblock Copolymers

*John Texter,
Coatings Research Institute*

**Creating Antimicrobial Fabric Using
Sol-gel/N-Halamine Chemistry**

*Subhas Ghosh,
Textiles Research and Training Institute
Vijay Mannari,
Coatings Research Institute*

**FY 2011 U.S.
Utility Patent
Applications Filed**

**Nanoparticle Dispersions with Ionic Liquid-
Based Stabilizers**

*John Texter,
Coatings Research Institute*

**FY 2011 Issued U.S.
Utility Patent**

**Nanoporous and Microporous Solvogels
and Nanolatexes by Microemulsion
Polymerization**

*John Texter, Coatings Research Institute
Feng Yan, Suzhou University*

EXTERNALLY SPONSORED AWARDS

Office of the Provost

Jack Kay, and Nelson Maylone, Teacher Education
EMU-Woodrow Wilson Fellowship
Woodrow Wilson Foundation
\$500,000

ACADEMIC SERVICE-LEARNING

Jessica Alexander, Communication, Media and Theatre Arts
The B. Side Workforce Investment Act
Washtenaw County Children's Services Department
\$55,155

Digital Inclusion
Washtenaw County Workforce Development Board
\$16,210

ACCESS PLUS: EMU College Positive Communities Grant
Michigan Campus Compact
\$2,302

Jessica Alexander, Communication, Media and Theatre Arts; and Kimberly Grover, Women's Studies; Russell Olwell, History and Philosophy; and James Perren, World Languages
Pay It Forward: Strengthening Communities through Student-Led Philanthropy
Michigan Campus Compact
\$5,500

THE HOLMAN SUCCESS CENTER

Janice Jones and Mark Jackson
Michigan Department of Career Development KCP State GEAR-UP Program
Michigan Department of Labor and Economic Growth-Career
\$81,880

Mary Zdrojkowski and Mark Jackson
Getting on the Right Track—Trackers Program (Michigan 4-S Program)
Michigan Department of Labor and Economic Growth
\$150,000

HONORS COLLEGE

Rebecca Sipe, and Heather Neff, English Language and Literature
McNair Postbaccalaureate Achievement Program
U.S. Department of Education
\$220,000

OFFICE OF RESEARCH DEVELOPMENT

Philip Rufe, School of Engineering Technology, and Vijay Mannari, School of Engineering Technology
Commercialization of Chromate-Free Metal Pretreatment
University of Michigan
\$25,600

Philip Rufe, School of Engineering Technology, and Subhas Ghosh, Textiles Research and Training Institute and School of Technology Studies
Creating Antimicrobial Fabric Using Sol-Gel/N-Halamine Chemistry
University of Michigan
\$38,600

College of Arts and Sciences

OFFICE OF THE DEAN

Wade Tornquist, and Weidian Shen, Physics and Astronomy

Building a Surface Science Laboratory in the Mark Jefferson Complex to Serve the Automobile Industry in Southeastern Michigan
U.S. Department of Energy
\$486,000

ART

Amy Sacksteder

Walt Disney Imagineers-Imaginations Competitions Award
Walt Disney World Parks and Resorts
\$1,000

BIOLOGY

Daniel Clemans and Steven Francoeur

Analyses of Bacteria Concentrations and Composition in Sediments and Living Tissue within the St. Joseph River
U.S. Geological Survey
\$20,000

Steven Francoeur, Kristin Judd, and Gary Hannan; William Welsh, Geography and Geology; and Yichun Xie, Institute for Geospatial Research and Education

Hyperspectral Remote Sensing and Science-Based Management of Invasive Species in the Detroit River International Wildlife Refuge
National Oceanic and Atmospheric Administration (NOAA)
\$487,500

Allen Kurta

Acoustic Monitoring of Bat Activity at a Proposed Wind Farm near Carsonville, Sanilac County, Michigan
Carsonville Wind, LLC, Ortonville, MI
\$1,893

A Netting and Acoustic Survey for Bats at the Proposed Flower Creek Wind Resource Area, in Muskegon and Oceana Counties, Michigan
Western EcoSystems Technology, Inc.
\$16,394

Bat Surveys in Underground Mines and Caves in Northern Michigan
Michigan Department of Natural Resources
\$122,822

A Netting Survey for Bats along the Pigeon River, Huron County, Michigan
Fishbeck, Thompson, Carr & Huber, Inc.
\$37,912

CHEMISTRY

Cory Emal

Novel Targets in Thrombosis and Atherosclerosis
University of Michigan
\$112,779

Maria Milletti

A Computational Exploration of the Stereoselective Synthesis of Substituted Pyrrolidines
American Chemical Society
\$65,000

EXTERNALLY SPONSORED AWARDS

COMMUNICATION, MEDIA AND THEATRE ARTS

Jessica Alexander, Academic Service Learning

*The B. Side Workforce
Investment Act*

Washtenaw County Children's
Services Department

\$55,155

Digital Inclusion

Washtenaw County Workforce
Development Board

\$16,210

ACCESS PLUS: EMU College

Positive Communities Grant

Michigan Campus Compact

\$2,302

Jessica Alexander, Academic Service Learning; and Kimberly Grover, Women's Studies; Russell Olwell, History and Philosophy; and James Perren, World Languages

*Pay It Forward: Strengthening
Communities through
Student-Led Philanthropy*

Michigan Campus Compact

\$5,500

Wendy Kivi

*EMU Takes Electrical Safety
Instruction to Local Safety
Educational Programs*

DTE Energy Foundation

\$40,000

COMPUTER SCIENCE

Benjamin Keller

*The University of Michigan
George M. O'Brien Renal Core
Center*

University of Michigan

\$32,181

ENGLISH LANGUAGE AND LITERATURE

Cathy Fleischer

Ideas for a Book Series for NCTE

National Council of Teachers of
English

\$12,000

Heather Neff, and Rebecca Sipe, Honors College

*McNair Postbaccalaureate
Achievement Program*

U.S. Department of Education

\$220,000

William Tucker and William Baker

*Eastern Michigan University
Writing Project*

National Writing Project

\$35,000

GEOGRAPHY AND GEOLOGY

Theodore Ligibel

*Graduate Internship for the
Michigan Department of
Transportation*

Michigan Department of
Transportation

\$14,100

*Graduate Assistant Interns for
the Ypsilanti Historical Society*

Ypsilanti Historical Society

\$56,760

Sandra Rutherford

*The Great Lakes Climate Change
Science and Education Systemic
Network*

National Science Foundation

\$993,907

William Welsh; Steven Francoeur, Kristin Judd, and Gary Hannan, Biology; and Yichun Xie, Institute for Geospatial Research and Education

Hyperspectral Remote Sensing and Science-Based Management of Invasive Species in the Detroit River International Wildlife Refuge

National Oceanic and Atmospheric Administration (NOAA)

\$487,500

GERONTOLOGY

Shelly Weaverdyck and Elizabeth Schuster

EMU Alzheimer's Education and Research Program

Michigan Department of Community Health

\$63,103

HISTORY AND PHILOSOPHY

Russell Olwell; and Wendy Burke, Teacher Education; Diane Parfitt, Leadership and Counseling; and David Clifford, Institute for the Study of Children, Families and Communities

Connecting Students to the Community: EMU GEAR-UP Partnership to Promote College Readiness and Success

U.S. Dept. of Education

\$572,263

Russell Olwell; and Jessica Alexander, Academic Service-Learning and Communication, Media and Theatre Arts; Kimberly Grover, Women's Studies; and James Perren, World Languages

Pay It Forward: Strengthening Communities through Student-Led Philanthropy

Michigan Campus Compact

\$5,500

INSTITUTE FOR GEOSPATIAL RESEARCH AND EDUCATION

Yichun Xie

Investigating Climate Change and Remote Sensing

Wayne County Regional Educational Services Agency (NASA)

\$274,585

Grassland Ecosystems and Societal Adaptations under Changing Grazing Intensity and Climate on the Mongolian Plateau

University of Michigan

\$174,830

Server Hosting and RAPIDS Maintenance/Upgrade (CAROL, Amendment 2)

Great Lakes Commission

\$50,000

RAPIDS Work Plan 2010-3, RAPIDS 3.0 Software Coding, Testing, and Implementation

Great Lakes Commission

\$80,000

EXTERNALLY SPONSORED AWARDS

Digital Map Creation for Davisburg Cemetery, Charter Township of Springfield, Oakland County, Michigan
Charter Township of Springfield, Davisburg, Michigan
\$2,000

GIS Mapping Project for Archdiocese of Detroit
Archdiocese of Detroit
\$9,000

Yichun Xie; and Steven Francoeur, Kristin Judd Gary Hannan, Biology; and William Welsh, Geography and Geology
Hyperspectral Remote Sensing and Science-Based Management of Invasive Species in the Detroit River International Wildlife Refuge
National Oceanic and Atmospheric Administration (NOAA)
\$487,500

INSTITUTE FOR LANGUAGE INFORMATION AND TECHNOLOGY

Helen Aristar-Dry and Anthony Aristar
DHB: Collaborative Research: LL Map, Language and Location: A Map Annotation Project
National Science Foundation
\$34,789

NSF:Interop:LEGO
National Science Foundation
\$217,224

MATHEMATICS

Xiaoxu Han
ARRA: Visiting Research Associate Professor
Wake Forest University
\$13,517

PHYSICS AND ASTRONOMY

James Carroll, Ernest Behringer, Mary (Beth) Kubitskey, and Patrick Koehn
The Physics Scholars Program (PSP) at Eastern Michigan University
National Science Foundation
\$516,300

Mary (Beth) Kubitskey
The Impact of Online Professional Development
University of Michigan
\$24,511

The Impact of MSP Professional Development on the Quality of Instruction in Middle School Math and Science Classrooms
American Institutes for Research
\$14,538

David Pawlowski
Coupled MGCM-MTGCM Mars Thermosphere Simulations and Resulting Data Products in Support of the MAVEN Mission
University of Michigan (NASA)
\$21,218

James Sheerin
Here Comes the Sun
Michigan Space Grant
Consortium
\$5,000

*Michigan Space Grant
Operating Support*
Michigan Space Grant
Consortium
\$2,100

Weidian Shen
*Small Contracts Testing
Account: Masco*
Masco Corporation
\$2,400

*Small Contracts Testing
Account: GM Testing Project*
General Motors Corporation
\$2,500

**Weidian Shen, and
Wade Tornquist, Office of the
Dean of Arts and Sciences**
*Building a Surface Science
Laboratory in the Mark Jefferson
Complex to Serve the
Automobile Industry in
Southeastern Michigan*
U.S. Department of Energy
\$486,000

POLITICAL SCIENCE

**Joseph Ohren, and David
Clifford, Institute for the
Study of Children, Families
and Communities**
*Planning Retreat for Ypsilanti
Housing Commission*
Ypsilanti Housing Commission
\$500

PSYCHOLOGY

**Vannie Hodges, and David
Clifford, Institute for the
Study of Children, Families
and Communities**
*Michigan Level of Functioning
Project*
Michigan Department of
Community Health
\$105,471

Heather Janisse
*Adherence to IDDM in Urban
Youth*
Wayne State University
\$30,092

SOCIOLOGY, ANTHROPOLOGY AND CRIMINOLOGY

Kristine Ajrouch
*Linking Research to Policy in the
Middle East: Family Ties
and Aging*
Doha International Institute for
Family Studies and
Development
\$35,652

Mansoor Moaddel
*Cross-National Analysis of
Islamic Fundamentalism,
Task/Phase III*
Office of Naval Research
\$800,000

WOMEN'S STUDIES

**Kimberly Grover; and Jessica
Alexander, Academic
Service-Learning and
Communication, Media and
Theatre Arts; Russell Olwell,
History and Philosophy; and
James Perren, World
Languages**
*Pay It Forward: Strengthening
Communities through
Student-Led Philanthropy*
Michigan Campus Compact
\$5,500

EXTERNALLY SPONSORED AWARDS

WORLD LANGUAGES

Hitomi Oketani

Charter School Planning and Implementation Grant

Michigan Japanese Bilingual Education Foundation

\$15,000

Charter School Implementation Consultation

Japanese American School of Southeast Michigan

\$210,000

James Perren; and Jessica Alexander, Academic Service-Learning and Communication, Media and Theatre Arts; Kimberly Grover, Women's Studies; and Russell Olwell, History and Philosophy

Pay It Forward: Strengthening Communities through Student-Led Philanthropy

Michigan Campus Compact

\$5,500

Alexander Popko

Training Content-Area Teachers to Teach English

U.S. Department of Education

\$277,402

Motoko Tabuse

Japanese Language Promotional Materials Development Project

Japan Business Society of Detroit Foundation

\$2,000

Koji Tanno

The Dinner Show

Japan Business Society of Detroit Foundation

\$1,500

Rosemary Weston and Hitomi Oketani

Charter School Implementation Consultation Support

Michigan Japanese Bilingual Education Foundation

\$39,769

College of Business

OFFICE OF THE DEAN

Richard King

Small Business and Technology Development Center, Region 9 Host

Grand Valley State University

\$500,000

ACCOUNTING AND FINANCE

Lijyun (Angela) Hwang

International Financial Reporting Stands Ready Grant

PricewaterhouseCoopers Charitable Foundation, Inc.

\$10,000

David Wozniak

Collaborative Research: Neuroimaging and Hormonal Analyses of Gender and Interindividual Differences in Competitive Choices

National Science Foundation

\$18,201

College of Education

LEADERSHIP AND COUNSELING

Diane Parfitt; and Wendy Burke, Teacher Education; Russell Olwell, History and Philosophy; and David Clifford, Institute for the Study of Children, Families and Communities

Connecting Students to the Community: EMU GEAR-UP Partnership to Promote College Readiness and Success
U.S. Dept. of Education
\$572,263

TEACHER EDUCATION

Brigid Beaubien

The Arsenal for Democracy: Teaching World War II with Primary Documents from the Library of Congress
Illinois State University (Library of Congress)
\$19,486

Wendy Burke, and Lynn Malinoff and David Clifford, Institute for the Study of Children, Families and Communities

21st Century Community Learning Centers—Bright Futures at Middle and High Schools, Year 2 (Cohort F)
Michigan Department of Education
\$749,694

Wendy Burke; and Diane Parfitt, Leadership and Counseling; Russell Olwell, History and Philosophy; and David Clifford, Institute for the Study of Children, Families and Communities

Connecting Students to the Community: EMU GEAR-UP Partnership to Promote College Readiness and Success
U.S. Dept. of Education
\$572,263

Deborah Harmon and Nancy Copeland

Underground Railroad and Cultural Program: The Cooperative Underground Railroad Education Project
Charles H. Wright Museum of African American History
\$144,506

Rebecca Martusewicz, and David Clifford, Institute for the Study of Children, Families and Communities

Southeast Michigan Stewardship Coalition
Sisters, Servants of the Immaculate Heart of Mary
\$1,500

Rebecca Martusewicz and Ethan Lowenstein, and Russell Olwell, Institute for the Study of Children, Families and Communities

Southeast Michigan Stewardship Coalition
Great Lakes Fishery Trust
\$29,989

Nelson Maylone, and Jack Kay, Provost's Office

EMU-Woodrow Wilson Fellowship
Woodrow Wilson Foundation
\$500,000

EXTERNALLY SPONSORED AWARDS

College of Health and Human Services

OFFICE OF THE DEAN

Joan Abbey

Evaluation of the Jackson Recovery Court
Midsouth Substance Abuse Coordination Agency
\$15,000

University Collaboration to Support System-Wide Implementation of Best-Promising and Evidence-Based Practices in Community Mental Health

Detroit/Wayne County Community Mental Health Agency
\$920,000

Development Activities for Connection
Guidance Center—Virtual Center for Excellence
\$60,000

Barbara Scheffer

UM-NIH Michigan Bridges to Doctorate
University of Michigan
\$188,730

SCHOOL OF HEALTH PROMOTION AND HUMAN PERFORMANCE

Kathleen Conley

UM:NIH-Stroke Health and Risk Education
University of Michigan
\$81,532

SCHOOL OF HEALTH SCIENCES

Judith Brooks, and David Clifford, Institute for the Study of Children, Families and Communities

Pilot Study to Evaluate the Rates of Eating-Disordered Behavior in Autism
Knight Foundation
\$24,988

SCHOOL OF NURSING

Tsu-Yin Wu

An Individually Tailored Mammography Screening Intervention for Chinese Americans
National Institutes of Health
\$132,194

Promoting Breast Health and Cancer Screening for Asian-American Women
Susan G. Komen Breast Cancer Foundation—Lansing
\$66,892

College of Technology

SCHOOL OF ENGINEERING TECHNOLOGY

Jamil Baghdachi

Protective Coatings for Mirrors
Guardian Glass
\$40,800

John Dugger III, and Paul Kuwik, School of Technology Studies

Project Lead the Way: Professional Development in Michigan

James A. Welch Foundation
\$21,000

Erik Lokensgard

Injection Mold Run
Individual Inventor
\$1,020

Vijay Mannari

Life Cycle Assessment for Volatile Organic Compounds in Paints and Coatings Consultation
The National Center for Manufacturing Sciences
\$35,000

Philip Rufe, Office of Research Development, and Vijay Mannari

Commercialization of Chromate-Free Metal Pretreatment
University of Michigan
\$25,600

Philip Rufe, Office of Research Development, and Subhas Ghosh, School of Technology Studies and Textiles Research and Training Institute

Creating Antimicrobial Fabric Using Sol-Gel/N-Halamine Chemistry
University of Michigan
\$38,600

Jianhua Wang, Behrooz Lahidji, and Walter Tucker

Issues of Quality in China-U.S. Automotive Supply Chain: The Case of Vehicle Interior Parts
Daimay North America, Inc.
\$20,000

SCHOOL OF TECHNOLOGY STUDIES

JillAnne Bauer

EMU School of Police Staff and Command-EMU Campus
Michigan Department of State Police
\$87,039

Subhas Ghosh, Textiles Research and Training Institute, and Philip Rufe, School of Engineering Technology and Office of Research Development

Creating Antimicrobial Fabric Using Sol-Gel/N-Halamine Chemistry
University of Michigan
\$38,600

Maurice Henderson

Michigan Business Professionals of America
Michigan Department of Education
\$150,000

Paul Kuwik, and John Dugger III, School of Engineering Technology

Project Lead the Way: Professional Development in Michigan
James A. Welch Foundation
\$21,000

Gerald Lawver

DoD Information Assurance Scholarship Program for 2010-2011 Academic Year
Department of Defense
\$1,500

EXTERNALLY SPONSORED AWARDS

Gerald Lawver

Texas Citizens' Corp. Training Program—Community Emergency Response Team (CERT)

Texas Association of Regional Councils
\$27,340

David Wait

Michigan Skills USA

Michigan Department of Education
\$150,000

Michigan DECA

Michigan Department of Education
\$150,000

Michigan Family, Career, and Community Leaders of America

Michigan Department of Labor and Economic Growth-Career
\$110,000

Extended Programs

CENTER FOR ORGANIZATIONAL RISK REDUCTION

Barbara Hopkins and Arlene Cook

Lead and Asbestos Awareness Training

Michigan Department of Labor and Economic Growth
\$40,000

INSTITUTE FOR THE STUDY OF CHILDREN, FAMILIES AND COMMUNITIES

David Clifford and Judith Brooks, School of Health Sciences

Pilot Study to Evaluate the Rates of Eating-Disordered Behavior in Autism

Knight Foundation
\$24,988

David Clifford, and Vannie Hodges, Psychology

Michigan Level of Functioning Project

Michigan Department of Community Health
\$105,471

David Clifford, and Rebecca Martusewicz, Teacher Education

Southeast Michigan Stewardship Coalition Sisters, Servants of the Immaculate Mary
\$1,500

David Clifford, and Joseph Ohren, Political Science

Planning Retreat for Ypsilanti Housing Commission
Ypsilanti Housing Commission
\$500

David Clifford; and Russell Olwell, History and Philosophy; Wendy Burke, Teacher Education; and Diane Parfitt, Leadership and Counseling

Connecting Students to the Community: EMU GEAR-UP Partnership to Promote College Readiness and Success
U.S. Dept. of Education
\$572,263

Lynn Malinoff and David Clifford

Youth-Driven Space Project, Ann Arbor Teen Center (Neutral Zone)
Ann Arbor Teen Center (Neutral Zone)
\$4,000

Lynn Malinoff and David Clifford

21st Century Community Learning Centers—Brighter Futures Year 4 (Cohort D)
Michigan Department of Education
\$749,694

Lynn Malinoff and David Clifford, and Wendy Burke, Teacher Education

21st Century Community Learning Centers—Bright Futures at Middle and High Schools, Year 2 (Cohort F)
Michigan Department of Education
\$749,694

Lynn Malinoff and Russell Olwell

Outdoor Experiential Education Leadership Program in the Wayne-Westland School District
United Way for Southeastern Michigan
\$5,000

Russell Olwell, and Rebecca Martusewicz and Ethan Lowenstein, Teacher Education

Southeast Michigan Stewardship Coalition: GLSI, 2011 Time-Cost Extension
Great Lakes Fishery Trust
\$29,989

UPWARD BOUND

Sandra Gonzales

Upward Bound Childhood Nutrition Program
Michigan Department of Education
\$9,318

Upward Bound

U.S. Department of Education
\$385,946

Student Affairs and Enrollment Management

CHILDREN’S INSTITUTE

Christine Aris

Great Start Readiness Program
Michigan Department of Education
\$170,000

University Marketing and Communications

WEMU RADIO

Art Timko

WEMU Community Service Grant
Corporation for Public Broadcasting
\$188,448

INTERNALLY SPONSORED AWARDS

Ronald W. Collins Distinguished Faculty Awards

Stephen Blair
Mathematics, Teaching I

Amy Flanagan Johnson
Chemistry, Teaching I

Daniel Brickner
Accounting and Finance,
Teaching II

Christopher Robbins
Teacher Education, Research I

Ruth Ann Armitage
Chemistry, Research II

Lee Stille
Communication, Media and
Theatre Arts, Creative Activity

Fifth Annual Michigan Distinguished Professor of the Year Award

Robert Winning
Biology

Sabbatical Leave Awards

Gisela Ahlbrandt
Mathematics
*"Support Material for
Quantitative Reasoning in
Mathematics"*

Gregg Barak
Sociology, Anthropology,
and Criminology
"Theft of a Nation"

Cheryl M. Cassidy
English Language and
Literature
*"Children and Empire (History of
Feminism)"*

Devika Dibya Choudhuri
Leadership and Counseling
*"Developing a Cross-National
Collaboration to Provide
Counselor Training, Supervision,
and Service with Bhutan"*

Thomas Cullen
World Languages
*"Peace Corps Masters
International Project"*

Margaret Davis
Art
*"Suspended Naturalism:
Paintings and Drawings"*

Jamin Eisenbach
Biology
*"Lepidopteran Wing-Scale
Sockets: An Investigation into
their Evolutionary and
Structural Variation in
Butterflies and Moths"*

Cory Emal
Chemistry
*"Design and Development of
Novel Depsides as Inhibitors of
Plasminogen Activator Inhibi-
tor-1 (PAI-1)"*

Xiaoxu Han
Mathematics
*"High-Performance Tumor De-
tection and Seamless Biomarker
Discovery for Heterogeneous
Gene Expression Profiles: Algo-
rithm Design, Software Develop-
ment, and Book Writing"*

Valerie Howells

Health Sciences

"Exploration and Analysis of a Participatory Process Used in the Design of Natural Spaces Surrounding a Partial Hospitalization Setting"

Judith Kullberg

Political Science

"The Development of Russian Civil Society: A Case Study of the Samara Region"

Allen Kurta

Biology

"Something Wicked This Way Comes: White-Nose Syndrome, Hibernating Bats, and the End of the World as I Know It"

Jiang Lu

Engineering Technology

"A Study of Sustainable Design in Traditional Cultures"

Joanna McNamara

Music and Dance

"Dancing into Media Literacy"

Julia Myers

Art

"African-American Artists in Detroit, 1940-1985: From the Pen and Palette Club to Gallery 7 and the National Council of Artists"

Denise E. Pilato

Technology Studies

"Diffusion or Illusion: Women Inventors at the 1893 World Columbian Exposition"

Whitney Prince

Music and Dance

"Double Concerto for Clarinet, Bassoon, and Chamber Orchestra"

Christine Tracy

English Language and Literature

"EMU News Incubator Project"

James VandenBosch

Biology

"RNA-Mediated Modulation of toxT Expression in Vibrio cholerae"

Glenn K. Walker

Biology

"Changes in Brain Volume and Structure Associated with Specific Levels of Thiamine in Lake Trout (Salvelinus Namaycush) Development"

Marilyn Wedenoja

Social Work

"Research on the Outcome Trends of a Family-Education Program for Families in Washtenaw County Coping with the Serious Mental Illness of a Relative"

William Welsh

Geography and Geology

"Development of a Research Program on the Integration of Remote Sensing and Geographical Information Science for the Study of Domestic and International Socio-Ecological Systems"

Eboni M. Zamani-Gallaher

Leadership and Counseling

"Displaced Workers and 21st Century Skills: Examining the Role of Community Colleges in Mitigating the Effects of Globalization and Joblessness in the Motor City"

Faculty Research Fellowships

Ruth Ann Armitage

Chemistry

"Novel Methods for Characterizing Materials of Cultural-Heritage Significance with Direct Acquisition in Real-Time Mass Spectrometry"

Jeffrey L. Bernstein

Political Science

"Teaching and Learning in Political Science"

Jin Bo

Psychology

"Visuomotor Adaptation in Children with Developmental Coordination Disorder"

Sanjib Chowdhury

Management

"Facilitating Knowledge Sharing in Student Team Projects: Critical Roles of Surface-Level Diversity, Reciprocal Knowledge, and Ability"

INTERNALLY SPONSORED AWARDS

Cory D. Emal

Chemistry

"Synthesis and Development of Sulfonamide-based Inhibitors of Plasminogen Activator Inhibitor Type-1 (PAI-1)"

Megan Endres

Management

"Facilitating Knowledge Sharing in Student Team Projects: Critical Roles of Surface-Level Diversity, Reciprocal Knowledge, and Ability"

Sarah Ginsberg

Special Education

"Evidence-Based Education: Scholarship of Teaching and Learning in Speech-Language Pathology and Audiology Text Completion"

Andrea Gossett Zakrajsek

Health Sciences

"Coming Home: Collaborative Project Supporting Transitions of Older Adults from Hospice to Home"

Jeff Guthrie

Chemistry

"Selection of DNA Probes for Small Molecules Using Capillary Electrophoresis"

Alissa C. Huth-Bocks

Psychology

"A Developmental Examination of Individual and Contextual Influences on the Mother-Infant Relationship across the Transition to Motherhood"

Heather Janisse

Psychology

"Family Needs and Barriers to Healthy Dietary Intake and Physical Activity in an Urban Head Start Program"

Kristin Judd

Biology

"Does Invasion of Wetlands by the Common Reed, Phragmites Australis, Alter Carbon Fluxes and Aquatic Bacterial Dynamics?"

Aaron H. Liepman

Biology

"Functional Analysis of CSL Proteins: A Critical Step Toward Engineering Plant Biomass for Biofuel Production and Other Applications"

Harriet Lindsay

Chemistry

"Sustainability in Organic Chemistry: Development of an Environmentally Friendly Chemical Reaction and its Application to the Construction of Useful Molecules"

Rebecca Martusewicz

Teacher Education

"Developing Citizen-Stewards for Southeastern Michigan: EcoJustice, Sustainability, and Community-Based Education"

Garik Pedersen

Music and Dance

"A Recording Project: David Wendel Guion's Mother Goose Suite for Piano, with J.W. Elliott's Nursery Songs"

Steven J. Ramold

History and Philosophy

"'Your patriotism seems uncertain': Soldier/Civilian Relations in the North during the Civil War"

Harash Sachdev

Marketing

"The Sociopolitical Phenomenon when Dealing with U.S. Importers: Thai Exporters' Experience"

Amy Sacksteder

Art

"Afterlife: An Exhibition Engaging the Last Moments in the Life of Amelia Earhart"

Provost's New Faculty Research Awards

Howard Cass

Music and Dance and
Communication, Media and
Theatre Arts

*"Recording of Musical
Compositions Based on the
Writings of Kurt Vonnegut"*

Elizabeth Currans

Women's and Gender Studies

*"Engendering Publics: Women's
Demonstrations in the 21st
Century U.S."*

Jason DeMarte

Art

"Nature Preserve"

Xianghong Feng

Sociology, Anthropology
and Criminology

"Place, Culture, and

Consumption:

*The McDonaldization of
Tourism in Fenghuang, China"*

Jason Ferguson

Art

"Domestic Carnival"

Katherine Greenwald

Biology

*"A New Mode of Reproduction in
Salamanders: Adaptive Benefits
and Conservation Implications"*

Rob Halpern

English Language and
Literature

*"Becoming a Patient of History:
Poetry, Politics, and the Crisis of
Agency (scholarly essays) and
My Augustine (poems)"*

Peter Higgins

History and Philosophy

*"Justice and Immigrant
Admissions"*

Margaret Koopman

Biology

*"Investigating the Genetic
Structure of Carnivorous
Pitcher Plants"*

David Pawlowski

Physics and Astronomy

*"Towards a 27-Day Prediction of
Ionospheric and Thermospheric
Space Weather"*

Robert Peavler

Music and Dance

*"Recording of Various 20th-
and 21st-Century American
Art Songs"*

Megan Rickard

Health Promotion and Human
Performance

*"Midwest College Students'
Perceptions about Individuals
with Sexually Transmitted
Infections"*

Jamie Scaglione

Chemistry

*"Characterization of the
Pladienolide Thioesterase"*

Nitya Singh

Political Science

*"Understanding the Role of
Economic Factors in the Growth
of Left-Wing Extremist
Movements: A Study of the
Naxalite Movement in India"*

David Wozniak

Accounting and Finance

*"The Effects of Ambiguity and
Information for Individual
Decision Making"*

EASTERN MICHIGAN UNIVERSITY

OFFICE OF RESEARCH DEVELOPMENT

Starkweather Hall

Eastern Michigan University is a public, comprehensive, metropolitan university offering programs in the arts, sciences, and professions. EMU prepares students with the intellectual skills and practical experiences to succeed in their lives and careers and be worthy and effective citizens.

Byron D. Bond,
Associate Provost and Associate Vice President for Research

OFFICE OF RESEARCH DEVELOPMENT

Caryn Charter, *Associate Director (Interim)*
Alethea Helbig, *Faculty Associate, Publications and Editing*
Harriet Lindsay, *Faculty Associate, Undergraduate Research*
Russell Olwell, *Faculty Associate, Proposal Development*
Philip Rufe, *Faculty Associate, Technology Transfer*
Susan Campbell, *Project Officer*
Claresta Davis, *Project Officer*
Rich Magyar, *Systems Administrator*
Marjorie Dargo, *Senior Secretary*

OFFICE OF RESEARCH DEVELOPMENT

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