

## Externally-Funded Activities at Macalester College 2010-2014

Faculty Awards: 1 January 2010 – 31 December 2013

**Thomas Halverson, Mathematics, Statistics, and Computer Science, 2013-2018**

Simons Foundation

*Combinatorial Representation Theory*

**Paul Fischer, Chemistry, 2013-2018**

Camille & Henry Dreyfus Foundation

*Studies on Group VI and Group VIII Metal Complexes of Donor-Functionalized Cyclopentadienyl and Anionic Bis(phosphino)borate Ligands*

**John Craddock, Geology, 2013-2016**

Binational Science Foundation

*Neotectonics of the Dead Sea Transform based on strain analysis and U-Th dating of syntectonic calcite*

**Holly Barcus, Geography, 2013-2016**

Andrew W. Mellon Foundation

*The migration-culture nexus in Mongolia specifically, and Central Asia more broadly*

**Kathryn Splan, Chemistry, 2013-2016**

National Science Foundation

*RUI: Copper(I) Interactions With Zinc Finger Domains*

**Julie Dolan, Political Science, 2013-2016**

National Science Foundation

*RUI: Representative Bureaucracy: The Role of Gender Consciousness in Improving Health Care for Female Veterans*

**Tom Varberg, Chemistry, 2013-2016**

National Science Foundation

*RUI: High-Resolution Electronic Spectroscopy of Transition Metal-Containing Free Radicals in the Gas Phase*

**John Cannon, Physics and Astronomy, 2012-2015**

National Science Foundation

*RUI: The Survey of HI in Extremely Low-mass Dwarfs (SHIELD)*

**Elizabeth Shoop, Mathematics, Statistics, and Computer Science, 2012-2015**

National Science Foundation

*Collaborative research: CS in Parallel: Scaling an incremental modular approach to injecting parallel computing throughout CS curricula*

**Christina Manning, Environmental Studies, 2011-2015**

Minnesota Pollution Control Agency (Contract)

*2011 Eco Experience Evaluation and Survey*

**Kristina Curry Rogers, Geology/Biology, 2010-2015**

National Science Foundation

*CAREER: Comparative Osteohistology: Exploring Microstructural Signatures of Environmental Stress in Modern and Fossil Ecosystems*

**Andrew Beveridge, Mathematics, Statistics, and Computer Science, 2012-2015**

National Science Foundation

*REU Site: Interdisciplinary Mathematics Research*

**Raymond Rogers, Geology, 2010-2015**

US Dept of Interior, Bureau of Land Management

*Developing Interpretive Materials Related to the Paleontology and Geology of the Upper Missouri River Breaks National Monument*

**Kelly MacGregor & Raymond Rogers, Geology, 2010-2014**

University of Minnesota (NASA)

*Minnesota Space Grant Consortium*

**John Cannon, Physics and Astronomy, 2011-2014**

Space Telescope Science Institute

*Fundamental Parameters of the SHIELD Galaxies*

**David Lanegran, Geography, 2013-2014**

National Geographic Education Foundation

*Minnesota 2013/2014 Alliance Grant*

**David Lanegran, Geography, 2012-2013**

National Geographic Education Foundation

*Minnesota 2012/2013 Alliance Grant*

**Roopali Phadke & Christina Manning, Environmental Studies, 2013-2014**

Greater Lakes Integrated Sciences and Assessments Center

*Making it Personal: Diversity and Deliberation on Climate Adaptation*

**Devavani Chatterjea, Biology, 2010-2014**

National Institutes of Health

*Roles of Mast Cells in Inflammatory Pain*

**Tonnis ter Veldhuis, Physics and Astronomy, 2011-2014**

National Science Foundation

*RUI: Beyond the Standard Model: Model Building and Phenomenology*

**John Cannon, Physics and Astronomy, 2011-2014**

Jet Propulsion Laboratory

*Fundamental Parameters of the SHIELD Galaxies*

**John Cannon, Physics and Astronomy, 2010-2014**

Space Telescope Science Institute

*The Holistic Evolution of Dwarf Galaxies: Internal and External Processes in NGC 6822*

**Karl Wirth, Geology, 2010-2014**

National Science Foundation

*Collaborative Research: GARNET II: Self-Regulated Learning and the Affective Domain in Physical Geology*

**Devavani Chatterjea, Biology, 2013-2014**

National Vulvodynia Association

*Modeling allergen-provoked vulvodynia in mice*

**Ronald Brisbois, Chemistry, 2012-2014**

Northern Kentucky University Research Foundation (National Science Foundation)

*Dispersed REU Site: Theoretically Interesting Molecules (TIM)*

**Sarah Boyer, Biology, 2010-2014**

National Science Foundation

*RUI Collaborative Research: Systematics and Biogeography of Mite Harvestmen of the Australian Wet Tropics*

**Chad Higdon-Topaz, Mathematics, Statistics, and Computer Science, 2010-2014**

National Science Foundation

*RUI - Pattern forming dynamical systems in theory and experiment*

**Roopali Phadke, Environmental Studies, 2010-2014**

National Science Foundation

*Landscapes of Power: Deliberating the New Energy Economy*

**Kathryn Splan, Chemistry, 2010-2014**

American Chemical Society Petroleum Research Fund  
*Photophysical Characterization of Free-base Bis(arylethynyl)porphyrin Diacids and Aggregates*

**Louisa Bradtmiller, Environmental Studies, 2011-2014**

National Science Foundation

*RUI: Using opal and organic carbon as proxies for wind-driven upwelling during the onset and termination of the African Humid Period in a transect of African margin cores*

**Raymond Rogers, Geology, 2013-2014**

US Dept of Interior, Bureau of Land Management

*Cow Creek Paleontological Inventory*

**Patrick Schmidt, Political Science, 2014**

Fulbright/Council for International Exchange of Scholars

*Macedonia: Rule of Law, Judiciary Reform, and Civil Society*

**Wayne Roberts, Mathematics, Statistics, and Computer Science, 2013-2014**

Minnesota Office of Higher Education

*Teachers Facilitating School Success*

**David Lanegran, Geography, 2013-2014**

Minnesota Office of Higher Education

*Authentic Pedagogy for Integrating Instructional Technology, the Common Core Standards and the New Minnesota Academic Standards for Geography*

**Raymond Rogers, Geology & Kristina Curry Rogers, Geology/Biology, 2011-2014**

National Science Foundation

*RUI: Deciphering Origins of Vertebrate Microfossil Bonebeds: A Comparative Taphonomic and Paleoecological Approach in the Late Cretaceous of Montana*

**Paul Fischer, Chemistry, 2010-2014**

National Science Foundation

*RUI - Synthesis and Reactivity of Coordinatively Unsaturated Zwitterionic Half-Sandwich Group VII Metal Complexes*

**Scott Legge, Anthropology, 2012-2014**

Minnesota Historical Society

*Exploring the Past at the Katharine Ordway Natural History Study Area Through Phase I Archaeological Survey*

**Brooke Lea, Psychology, 2011-2014**

National Science Foundation

*Eye Trackers for Behavioral Science at Macalester and Augsburg Colleges*

**Vittorio Addona, Mathematics, Statistics, and Computer Science, 2012-2014**

McGill University (Canadian Institutes of Health Research)

*Accelerating the Generation of Results from Longitudinal Studies of Aging*

**Shilad Sen, Mathematics, Statistics, and Computer Science, 2010-2014**

National Science Foundation

*HCC: Medium: Collaborative Research: Guiding Folksonomy Development to Enable Novel Tagging Applications*

**Gary Erickson, Art and Art History, 2013-2014**

Minnesota State Arts Board

*China porcelain exhibition in Minnesota*

**Gary Erickson, Art and Art History, 2013-2014**

Chinese Heritage Foundation

*Jingdezhen China Porcelain*

**Ron Barrett, Anthropology, 2009-2014**

National Science Foundation

*Social networks among marginalized populations at risk for avian influenzas*

**Ernesto Capello, History, 2013-2014**

National Endowment for the Humanities

*The Second French Geodesic Mission to Ecuador: Politics & Aesthetics of Commemorative Cartography*

**Christina Manning, Environmental Studies, 2013**

Capitol Region Watershed District

*Evaluating Public Education Displays on Local Water Run-Off Issues*

**Dan Hornbach, Mark Hove & Sarah Boyer, Biology, 2012-2013**

National Park Service

*Support Recovery of Endangered Winged Mapleleaf Mussel and Determine Genetics of Zooplankton on the St. Croix National Scenic Riverway*

**Roopali Phadke, Environmental Studies, 2013**

Arizona State University (National Science Foundation)

*Futurescapes City Tour Fall 2013*

**David Lanegran, Geography, 2011-2013**

National Geographic Education Foundation

*Minnesota 2011/2012 Alliance Grant*

**Keith Kuwata, Chemistry, 2010-2013**

National Science Foundation

*MRI: Acquisition of a Computer Cluster for Undergraduate Chemistry Research, Research Training, and Teaching by the Midwest Undergraduate Computational Chemistry Consortium (MU3C)*

**Jerald Dosch, Biology, 2012-2013**

Public Art Saint Paul

*Call for Scientists and STEM Professionals: City Art Collaboratory*

**Ernesto Capello, History, 2013**

The Huntington Library

*Inventing Equatorial Pyramids: Commemorative French Geodesy in Ecuador, 18th-21st Centuries*

**Clay Steinman, Media and Cultural Studies, 2012-2013**

Fulbright/ Council for International Exchange of Scholars

*China - Study of the United States*

**James Heyman, Physics and Astronomy, 2010-2013**

National Science Foundation

*Ultrafast Conductivity Measurements of Graphene Films*

**Holly Barcus, Geography, 2013**

Great Lakes Colleges Association

*Learning about Japan through guided conference field excursions*

**Jane Rhodes, American Studies, 2012-2013**

Radcliffe Institute for Advanced Study

*Transatlantic Blackness in the Era of Jim Crow: Race and Gender in the Life of an African American Expatriate*

**John Cannon, Physics and Astronomy, 2013**

Georgia Southern University (National Science Foundation)

*The Undergraduate ALFALFA Team*

**Paul Fischer, Chemistry, 2010-2013**

National Science Foundation

*MRI: Acquisition of a 400 MHz NMR Spectrometer to Facilitate Research and Undergraduate Research Training*

**Raymond Rogers, Geology, 2012-2013**

US Dept of Interior, Bureau of Land Management (Contract)  
*UMRBNM Fossil replicas/Paleontology presentations*

**Alicia Muñoz, Hispanic Studies, 2012-2013**

Woodrow Wilson National Fellowship Foundation

*Representations of women who kill: An investigation of contemporary Latin American narrative and popular culture*

**Wayne Roberts, Mathematics, Statistics, and Computer Science, 2012-2013**

Minnesota Office of Higher Education

*Unifying Views of Mathematical Topics in Middle and Senior High School*

**David Lanegran, Geography, 2012-2013**

Minnesota Office of Higher Education

*Authentic Pedagogy for Integrating Instructional Technology, the Common Core Standards and the New Minnesota Academic Standards for Geography*

**Chris Wells, Environmental Studies, 2012-2013**

Minnesota Historical Society

*Minnesota's Environmental History*

**Devavani Chatterjea, Biology, 2011-2013**

National Vulvodynia Association

*Establishing a mast-cell dependent model of vulvar pain in C57BL/6 mice*

**Ernesto Capello, History, 2012-2013**

Smithsonian Institution

*Second French geodesic mission to Ecuador: Commemoration, Cartography, Monuments (1901-1906)*

**Brett Wilson, Religious Studies, 2012-2013**

Institute for Turkish Studies

*Printing and Translating the Qur'an in Late Ottoman and Modern Turkey*

**David Lanegran, Geography, 2012**

Library of Congress

*Using Maps as Primary Documents in Social Science Inquiry Lessons*

**Erik Davis, Religious Studies, 2012**

Wabash Center

*An Interview with Nuon Chea: Preparing an Article based on an interview with the Khmer Rouge's "Brother No.2"*

**David Lanegran, Geography, 2012**

CHS Foundation

*Exploring Minnesota Agriculture: An Up-Close Opportunity for Social Studies Teachers*

**John Cannon, Physics and Astronomy, 2012**

Georgia Southern University (National Science Foundation)

*The Undergraduate ALFALFA Team: The Survey of HI in Extremely Low-mass Dwarfs*

**David Lanegran, Geography, 2010-2012**

National Geographic Education Foundation

*Minnesota 2010/2011 Alliance Grant*

**John Craddock, Geology, 2011-2012**

Keck Geology Consortium (National Science Foundation)

*Eocene Tectonic Evolution of the Teton-Absaroka Ranges, Wyoming (Year 2)*

**Wayne Roberts, Mathematics, Statistics, and Computer Science, 2011-2012**

Minnesota Office of Higher Education

*Combinatorics for Middle and Senior High School*

**David Lanegran, Geography, 2011-2012**

Minnesota Office of Higher Education

*Authentic Pedagogy for Integrating Reading, Writing and Instructional Technology into the New Minnesota Academic Standards for Geography*

**Shilad Sen, Mathematics, Statistics, and Computer Science, 2012**

University of Minnesota (National Science Foundation)

*Supporting Newcomer Socialization in Online Production Communities*

**James Heyman, Physics and Astronomy, 2010-2012**

National Science Foundation

*MRI-R2: Acquisition of a High-Power Femtosecond Ti:Sapphire Laser for Ultrafast Terahertz Spectroscopy*

**Dan Hornbach & Mark Hove, Biology, 2011-2012**

National Park Service

*Winged Mapleleaf Mussels Recovery*

**Roopali Phadke & Christina Manning, Environmental Studies, 2011 (Contract)**

Alliance for Economic Success

*Understanding Wind Initiative*

**Sarah Boyer, Biology, 2010-2011**



National Park Service  
*Determining Genetic Markers for Native Mussels*

**Dan Hornbach & Mark Hove, Biology, 2010-2011**

National Park Service

*Winged Mapleleaf Mussels: Propagation Efforts and Habitat & Range Assessment*

**Shilad Sen, Mathematics, Statistics, and Computer Science, 2010-2011**

Associated Colleges of the Midwest

*Opening Macademia to all ACM Institutions*

**Paru Shah, Political Science, 2010-2011**

National Science Foundation

*Collaborative Research: Local Elections in America Project*

**Laura Nichols, Music; Eric Wiertelak, Psychology; & Adrienne Christianson, Political Science, 2011**

Associated Colleges of the Midwest

*High Stakes Performance by Liberal Arts College Students: Understanding and Coping with Anxiety*

**David Lanegran, Geography, 2011**

National Geographic Education Foundation

*Enhancing Geographic Literacy in Minnesota: A proposal to implement a Strategic Planning Process*

**Sarah Boyer, Biology, 2011**

National Geographic Society

*Understanding the Origin of Rainforest Diversity: Historical Biogeography of Mite Harvestmen from the Australian Wet Tropics*

**Pritika Chowdhry, Art and Art History, 2011**

American Institute of Indian Studies

*Memories of Place: The Role of Monuments*

**John Cannon, Physics and Astronomy, 2011**

Georgia Southern University (National Science Foundation)

*The Undergraduate ALFALFA Team: The Survey of HI in Extremely Low-mass Dwarfs*

**Chris Wells, Environmental Studies, 2010-2011**

Minnesota Historical Society

*Environmental History Resources Collaboration*

**David Lanegran, Geography, 2010-2011**

Minnesota Office of Higher Education

*Developing Teacher Leaders for Geography Instruction and Assessment*

**Wayne Roberts, Mathematics, Statistics, and Computer Science, 2010-2012**

Minnesota Office of Higher Education

*Number Theory for Middle and Senior High School*

**David Lanegran, Geography, 2010-2011**

Minnesota Historical Society

*Veritas Caput: Defining the Source of the Mississippi*

**John Craddock, Geology, 2010-2011**

Keck Geology Consortium (National Science Foundation)

*Wyoming – Tetons: Eocene Tectonic Evolution of the Teton Range, Wyoming*

**Kelly MacGregor, Geology, 2010-2011**

Keck Geology Consortium (National Science Foundation)

*Montana - Glacier National Park: Geomorphologic and paleoenvironmental change in Glacier National Park, Montana, June 29 - July 27, 2010*

**David Martyn, German and Russian Studies, 2011**

Center for Literary Studies

*Literature and Statistics in the Nineteenth Century*

**David Martyn, German and Russian Studies, 2011**

University of Konstanz

*Literature and Statistics in the Nineteenth Century*

**Vasant Sukhatme, Economics, 2010**

Fulbright/ Council for International Exchange of Scholars

*Fulbright (India)*

**Franklin Adler, Political Science, 2010**

National Endowment for the Humanities

*Fascist Italy's Campaign Against the Jews*

*Institutional Awards: 1 January 2010 – 31 December 2013*

**Andrew W. Mellon Foundation, 2013-2017**

*Creating Lifelong Learners: Linking Immersive Experiences to the Liberal Arts Foundation*

Directed by Christy Hanson, Dean, Institute for Global Citizenship

**Howard Hughes Medical Institute, 2012-2016**

*Transforming Data into Knowledge: Curricular Innovations in the Era of Big Data*

Directed by Paul Overvoorde, Biology

**Andrew W. Mellon Foundation, 2012-2016**

*Sustaining a Culture of Intellectual Engagement and Success: A Request for Renewed Support of The Mellon Mays Undergraduate Fellowship Program*

Directed by Jane Rhodes, American Studies

**F.R. Bigelow Foundation, 2011-2015**

*Janet Wallace Fine Arts Center Renovation*

Directed by Kathleen M. Murray, Provost

**Andrew W. Mellon Foundation, 2011-2014**

*Faculty Development at Macalester College: Next Stages and New Challenges*

Directed by Kathleen M. Murray, Provost

**Minnesota Pollution Control Agency, 2012-2014**

*Electric Vehicle Charging Stations*

Directed by Suzanne Savanick Hansen, Sustainability Manager

**Teagle Foundation (Imagining America), 2012-2014**

*Civic Professionalism: A New Paradigm for Undergraduate Liberal Arts Education*

Directed by Paul Schadewald, Civic Engagement Center

**Andrew W. Mellon Foundation, 2012-2014**

*Collaborative Planning for the Digital Humanities: A Grant Request to the Andrew W. Mellon Foundation On Behalf of Macalester, Carleton and St. Olaf Colleges*

Directed by Kathleen M. Murray, Provost

**Howard Hughes Medical Institute, 2013-2014**

*Defining the Quantitative and Computational Skills of Incoming Science Students*

Directed by Paul Overvoorde, Biology

**Project Pericles, Inc, 2013**

*Creating Cohesive Paths to Civic Engagement*

Directed by Paul Schadewald & Karin Trail-Johnson, Civic Engagement Center

**Xcel Energy Inc, 2012-2013**

*Electric Vehicle Charging Stations*

Directed by Suzanne Savanick Hansen, Sustainability Manager

**Minnesota Campus Compact, 2013**

*Central Corridor Summer Fellowship Program*

Directed by Paul Schadewald & Karin Trail-Johnson, Civic Engagement Center

**Davis United World College Scholars Program, 2013**

*Davis Projects for Peace - Zinc and Latrines for Peace*

*Davis Projects for Peace - Reconciliation through Education in Ljubuški, Bosnia and Herzegovina*

Directed by Karin Trail-Johnson, Civic Engagement Center

**Andrew W. Mellon Foundation, 2010-2013**

*Mid-Career Presidential Grant*

Directed by Brian Rosenberg, President

**Medtronic, Inc., 2011-2013**

*Global Health Scholars Program: Planning Exercises*

Directed by Elizabeth Jansen, Biology; Rebecca Hoye, Chemistry; & Joan Toohey, Science and Research Office

**Capitol Region Watershed District, 2011-2012**

*Cambridge Avenue Parking Lot Stormwater Retrofit at Macalester College*

Directed by Mark Dickinson, Facilities & Suzanne Savanick Hansen, Sustainability Manager

**Mansergh-Stuessy Fund for College Innovation of the St. Paul Foundation, 2012**

*Sustainable Wellness through Collaboration, Education, and Innovation*

Directed by Denise Ward, Lisa Broek, Health and Wellness Center & Vanessa Seljeskog, Athletics

**Davis United World College Scholars Program, 2012**

*Davis Projects for Peace - Green Lake Water Project: Sustainable, Safe Water for All*

*Davis Projects for Peace - The Bike Library for Carishinas*

Directed by Karin Trail-Johnson, Civic Engagement Center

**Bonner Foundation, 2011-2012**

*2011-2012 Bonner Leader Program Enrichment Grant*

Directed by Karin Trail-Johnson, Ruth Janisch Lake & Consuelo Gutierrez-Crosby, Civic Engagement Center

**Barnard College (Andrew W. Mellon Foundation), 2010-2012**

*Third Mellon 23 Assembly Funds*

Directed by Kathleen M. Murray, Provost & Adrienne Christiansen, Political Science

**Project Pericles, Inc, 2010-2011**

*Periclean Faculty Leadership*

Directed by Paul Schadewald & Karin Trail-Johnson, Civic Engagement Center

**Syracuse University (Imagining America), 2010-2011**

*IA Collaboratories 2010-2011*

Directed by Paul Schadewald, Civic Engagement Center

**Davis United World College Scholars Program, 2011**

*Davis Projects for Peace - Library for Education Equality*

*Davis Projects for Peace - Women and Peanut Processing, Economic justice, Women's Enterprise and Community Development in Maradi, Niger*

Directed by Paul Schadewald & Karin Trail-Johnson, Civic Engagement Center

**Minnesota Historical Society, 2010-2011**

*Digitization of Historic Macalester College Publications*

Directed by Ellen Holt-Werle, Archivist

**North Central College Health Association, 2010**

*Sustainable Students*

Directed by Lisa Broek, Health and Wellness Center

**Davis United World College Scholars Program, 2010**

*Davis Projects for Peace - "Building Walls and Breaking Barriers", The Container School Project in Manila*

*Davis Projects for Peace - A Passionate Solution: Creating a Better World Through Passion Fruit Wine*

Directed by Karin Trail-Johnson, Civic Engagement Center

**Vanessa Seljeskog, Athletics , 2011-2013**

National Collegiate Athletic Association

*NCAA Ethnic Minority and Women's Internship Grant*

**Ellen Holt-Werle, Archivist, 2012-2013**

National Endowment for the Humanities

*Conservation Assessment and Storage Materials to Preserve Library's Audiovisual Materials*