



MICHIGAN STATE UNIVERSITY **PARTNERS**

WINTER 2016



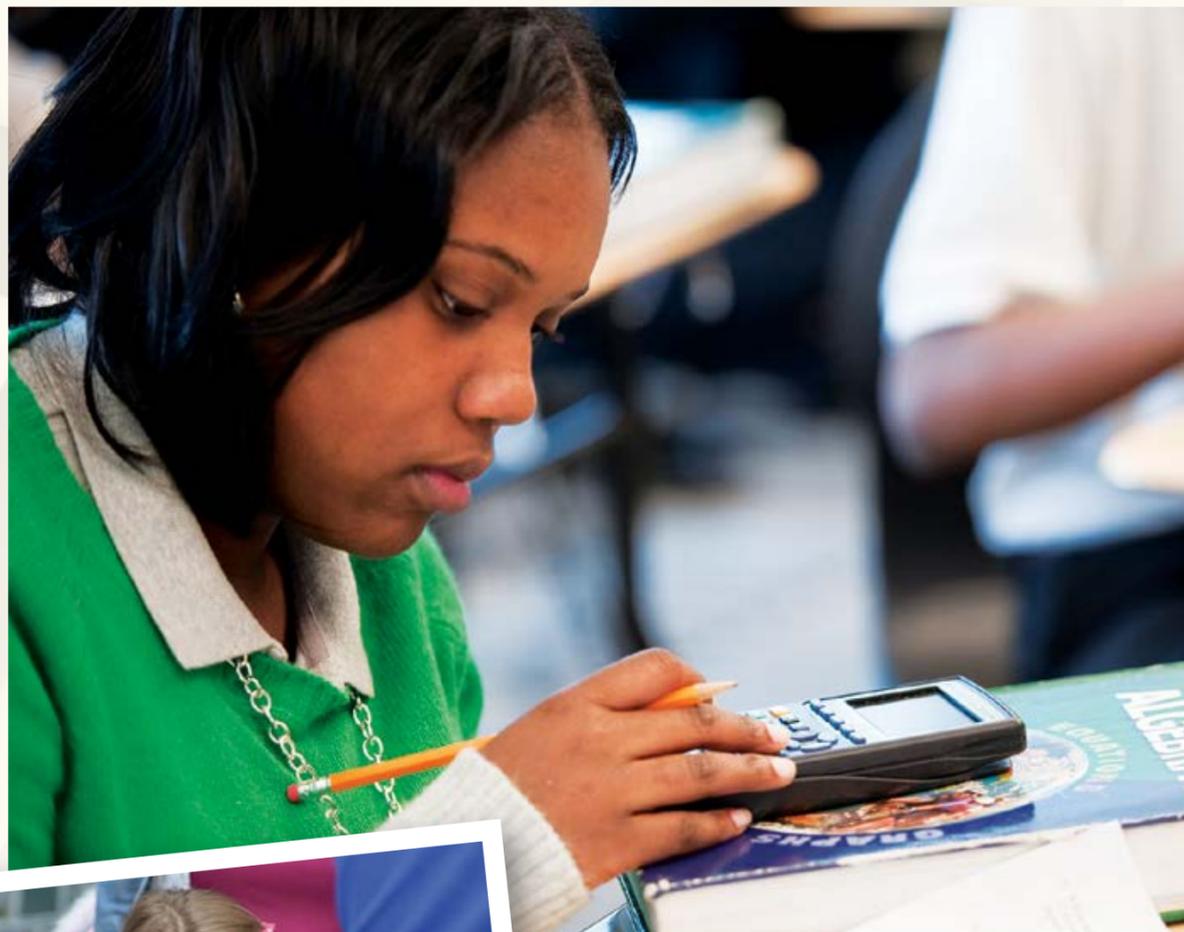
New MSU STEM Center: Midland Funders Invest in the Future

Focus on STEM
p. 1-3

Research Matters
p. 4-7

Product Protection
p. 9

Growing Businesses
p. 13



MSU and Midland Foundations Open **New MSU STEM Center**

Creating more opportunities to motivate teachers, encourage students and empower young people to pursue careers in science, technology, engineering and math is the inspiration behind the new Michigan State University STEM Center for the Great Lakes Bay Region.

The collaboration has been made possible with support from The Herbert H. and Grace A. Dow Foundation, the Rollin M. Gerstacker Foundation, the Charles J. Strosacker Foundation and The Dow Chemical Company Foundation.

Focus on K-12 STEM teaching and learning.

Together these foundations are working with MSU to invest \$10 million into the MSU STEM Center, which will be located at the former Michigan Molecular Institute in Midland.

“We are proud to strengthen our already significant collaborations with MSU, which consistently ranks high in the nation for its educational programming,” said Andrew N. Liveris, Dow chairman and CEO. “By enabling our youth to become STEM problem solvers, we are investing in the shared future of our company, our community and even our planet.”

The center’s curriculum will be targeted at K-12 learners. It also will include select MSU courses for college students as well as innovative teacher enrichment programs in collaboration with MSU’s College of Education. Students, teachers and administrators from Great Lakes Bay Region school districts, including Midland Public Schools, will be engaged in programming and implementation.

“With MSU’s growing presence in Midland with the Midland Research Institute for Value Chain Creation and ongoing community investments through Momentum Midland, this partnership was a natural fit as we pursue more ways to broaden our research,

educational and economic impact in Michigan,” MSU President Lou Anna K. Simon said.

A variety of concepts are under consideration as part of the overall STEM program offerings. They include a Dow scientist-in-residence program that offers learners access to Dow science professionals; laboratories equipped with global communication technology to enable connectivity around the world; and state-of-the-art STEM programming. Initial programming is expected to be launched in May 2016.

The center is a further example of philanthropic and business support for Midland community development, similar to its support of Momentum Midland’s effort to enhance downtown Midland and the surrounding community, said Mike Whiting, president, The Herbert H. and Grace A. Dow Foundation.

“The Herbert H. and Grace A. Dow Foundation has a 45-year legacy of supporting scientific education and research in that very facility since the building opened in 1971,” he said. “This gift builds on that legacy and is further evidence of our desire to collaborate on community priorities, to make a collective and lasting impact.”

George Lucas Educational Foundation Grants \$5M to MSU for Science, Math and Literacy Education

Michigan State University researchers and their partners plan to create a model for teaching elementary students science while also improving their skills in math, reading and writing.

The project is funded by a five-year, \$5 million grant from Lucas Education Research, a division of the George Lucas Educational Foundation. Executive Director Kristin De Vivo said the goal is to bring the benefits of project-based learning (PBL) – an approach that encourages kids to explore real-world problems – to more classrooms throughout the nation.

“Educators are in agreement based on classroom experience that project-based learning keeps students engaged and promotes deeper understanding,” said De Vivo. “However, very little research currently exists to prove the benefits of PBL and also to help educators develop and implement this kind of leading-edge curriculum. This grant supports a team with exceptional credentials and ideas.”

Joseph Krajcik, director of Michigan State’s CREATE for STEM Institute, will lead colleagues from MSU and University of Michigan as they design and develop materials for Grades 3 and 4. Teachers working in under-resourced communities will assist in testing and enacting the new learning units with as many as 1,800 students over the five years, focusing not only on making the curriculum effective but also personally relevant in students’ lives.

Krajcik said the project will build on previous research and help teachers make stronger connections between two sets of education standards now being implemented in most states: the Next Generation Science Standards and the Common Core State Standards in language arts and mathematics.

“We are pleased that Lucas Education Research shares our excitement about what project-based learning can do for our schools and our students,” said Krajcik. “This grant makes it possible for us to design a curriculum that will bring science to life for young learners with thoughtful incorporation of literacy, mathematics and learning technologies to promote collaboration and agency.”

“Michigan State University is at the forefront of conducting research on STEM education and applying the results – a pressing need in our state, across the country and around the world,” said MSU President Lou Anna K. Simon. “We are grateful to the George Lucas Educational Foundation for partnering with us in our quest to enhance STEM skills in students of all ages.”

Literacy researcher Annemarie Sullivan Palincsar, a professor at U-M, is co-principal investigator on the project. Other team members include Deborah Peek-Brown of MSU, Elliot Soloway of U-M and Emily Miller of the University of Wisconsin.



Connecting Families to STEM

Corporate partnership helps annual MSU Science Festival expand its reach

Imagine what would happen if science was taken out of the laboratory, put on display, and explained by a professional, passionate about sharing the wonder and excitement of a science career.

This is the MSU Science Festival: a celebration of science, technology, engineering and mathematics (STEM) that gets everyone involved and inspired.

“We make connections,” says Renee Leone, coordinator and co-founder of the MSU Science Festival. “We connect scientists with the public, professionals with other professionals, and disciplines with other disciplines. We connect people with educators, mentors and career options. We connect STEM with everyday life.”

The Science Festival happens, in large part, thanks to sponsors. “Sponsors make everything possible,” Leone says. “They’re the reason the festival has grown so much and will continue to grow. Most importantly, they’re the reason we’re able to make every single event free of charge.”

Media partners like the *Lansing State Journal* and local TV stations help get the word out about the festival. Some partners contribute goods. Dean Transportation and CATA provide free rides between venues. Sponsors help offset costs for running the festival.

Some corporations take their sponsorship a step further by bringing in display booths of their own as a way to showcase their STEM career opportunities and bring awareness to their work.

One such company is Johnson Controls, which specializes in battery optimization and efficient electrical systems. At the 2015 festival, visitors could learn about generating electricity with unconventional materials like fruit, vegetables and various metals. The seemingly simple experiment demonstrated that a STEM career offers boundless opportunities to experiment, invent and innovate.

Every year, Leone and her team review surveys from those who attended. More than half report being “somewhat interested” in STEM before the festival, but leave with a heightened interest.

Visitors might be curious college students, parents wondering how to foster a child’s interest in science, or children having their first opportunity to engage with a science professional or discover an untapped love for STEM.

“There may be no better way to understand your world than by having an understanding of science,” Leone says, “because it makes you an active participant. You can see that life is happening around you, rather than feel like life is only happening to you.”

As the emphasis on STEM grows, the movement to make science and technology more accessible has gained traction around the world. Leone’s inspiration came from a visit to the UK, where she saw how the Cambridge University Science Festival sparked conversation and curiosity in its visitors.

Now, MSU and more than 40 others in the Science Festival Alliance across the U.S. and Canada collaborate to bring the best science and technology offerings to their communities each year.

MSU’s 2013 inaugural Science Festival attracted 10,000 people. In both 2014 and 2015, it brought in more than twice that number. The festival’s physical presence has grown, too. Initially concentrated on campus and venues around Lansing, the 2015 festival expanded to Detroit for a day, with help from the MSU Detroit Center.

It featured events at the Charles Wright Museum of African American History, the Scarab Club and the Michigan Science Center in Downtown Detroit. Visitors could choose to attend sessions in topics ranging from genomics to vehicle technology to inspiring stories of African Americans who have made great contributions to science. Detroit Day was so successful that an entire week of Detroit events has been added to the 2016 lineup.

Five years from now? “We want the MSU Science Festival to be statewide,” Leone says, “and this state, with its large network of museums and universities, is equipped for it.”

The 2016 MSU Science Festival will take place April 12-16 on MSU’s campus, April 18-24 in Detroit, and will have a statewide astronomy night on April 15.

2015 SPONSORS

- Lansing State Journal
- University Outreach and Engagement
- Delta Dental
- WKAR Curious Crew
- Museum of African American History
- Johnson Controls
- Ford Motor Company
- WILX 10
- Dart Foundation
- Consumers Energy
- K12.COM
- MSU Federal Credit Union
- College of Natural Science
- Meijer, Inc.
- Telling Your Story.TV
- Jackson National Life Insurance Company
- College of Social Science
- Lansing Community College
- LEAP
- CREATE for STEM Institute
- Lansing Convention & Visitors Bureau
- Michigan Science Center
- Foresight Group
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- Hungry Howie’s
- Dean Transportation
- Dean Trailways
- CATA
- Ciesa Design
- Capital Area District Libraries
- Impression 5
- HOMTV
- Scarab Club
- Nature Discovery



Photo: G.L. Kohuth

MSU Astronomer Named Packard Fellow

Michigan State University astronomer Jay Strader has been named a fellow of the David and Lucile Packard Foundation, a prestigious award that honors the country’s most innovative early-career scientists.

Strader and 17 other fellows will receive a grant of \$875,000 over five years to pursue their research.

The Packard Foundation established the national program in 1988 to provide early career scientists with flexible funding and the freedom to take risks and explore new frontiers in their fields.

“I am humbled to have been selected and am honored to represent MSU as a Packard Fellow,” Strader said.

An assistant professor in the Department of Physics and Astronomy, Strader’s work focuses on black holes. Specifically, he discovers and studies black holes in the dense stellar environments of globular clusters using data from optical, X-ray and radio telescopes.

This work sheds light on the formation of black holes in the death throes of massive stars and helps guide tests of Einstein’s theory of general relativity.

Much of Strader’s work is conducted through use of the Southern Astrophysical Research (SOAR) telescope. SOAR is 4.1-meter telescope located in Chile and is a joint venture among MSU, the

University of North Carolina at Chapel Hill, the country of Brazil and the National Optical Astronomy Observatories.

Strader has been an MSU faculty member since 2012. From 2007-2012 he was a Hubble Fellow and Menzel Fellow at the Harvard-Smithsonian Center for Astrophysics.

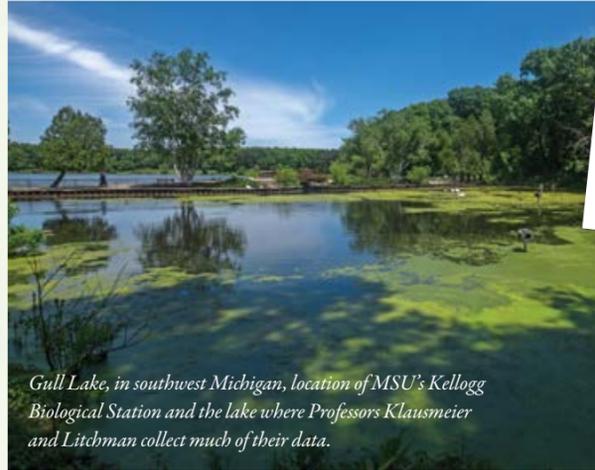
He earned his Bachelor of Science degree in physics and mathematics at Duke University, and his Ph.D. at the University of California-Santa Cruz.

Two other MSU faculty members have won a Packard fellowship: Kay Holekamp, University Distinguished Professor of zoology (1993), and Marcos Dantus, professor of chemistry (1995).

Each year, the foundation invites 50 universities to nominate two faculty members for consideration. The Packard Fellowships Advisory Panel, a group of 12 internationally recognized scientists and engineers, evaluates the nominations and recommends fellows for approval by the Packard Foundation Board of Trustees.

Since 1988, the foundation has awarded \$346 million to support 523 scientists and engineers from 52 top national universities. The Packard Fellowships are among the nation’s largest nongovernmental fellowships, designed to allow maximum flexibility in how the funding is used.

Photo: Communications & Brand Strategy



Gull Lake, in southwest Michigan, location of MSU's Kellogg Biological Station and the lake where Professors Klausmeier and Litchman collect much of their data.



Blue-green algae, a major role-player in the complex plankton communities found in freshwater lakes.

Using Math Models to Study Patterns in Ecological Community

Understanding the overall structures of ecological communities is crucial to maintaining the health of ecosystems. One such complex but vital community is the plankton in freshwater lakes. Combining mathematical models with experiments and analysis of field data, two MSU professors are working to discover the causes behind some of ecology's most widespread structural patterns by studying the structure of plankton communities in lakes and oceans.

The work has received support from the Simons Foundation of New York, which has awarded its first major grant to Michigan State University to support the work of Drs. Christopher Klausmeier and Elena Litchman to study how interactions between species scale up to determine why most species are rare and only a few common in any community. The study is entitled "Microscopic Foundations For Macroecological Patterns," a project fitting the Simons Foundation's mission to advance the frontiers of research in mathematics and the basic sciences.

The Simons Foundation awarded the grant as part of its Targeted Grants in the Mathematical Modeling of Living Systems (MMLS) program, part of the foundation's Mathematics and Physical Sciences and Life Sciences divisions.

The professors are based at MSU's Kellogg Biological Station near Kalamazoo in southwest Michigan. Dr. Klausmeier is a theoretical ecologist who uses mathematical and computational models to uncover the principles that form the structure of ecological communities. His main focus is on plankton communities found in lakes and the ocean. Dr. Litchman is an experimental and conceptual ecologist who also focuses on phytoplankton communities. Her work applies trait-based approaches to plankton ecology, combining lab experiments with meta-analyses and modeling.

Species Abundance Distributions

Dr. Klausmeier explained that species abundance distributions (SADs) — the patterns of commonness and rarity in a community — have fascinated ecologists for over a century. "Over time many explanations have been developed, but they are often based on unrealistic biological assumptions or are merely statistical in nature. In addition, these existing explanations have been tested only by comparing patterns in nature with model predictions. The problem is that many models can lead to the same patterns, leaving these tests unable to distin-

guish among competing hypotheses."

In the new study, Klausmeier and Litchman will develop new models based on more realistic assumptions of how species interact. One key is embedding a local community in the broader landscape through immigration of individuals.

Another novel aspect of the models will be investigating the dynamics of these SADs in changing environments, such as the Michigan lakes the team studies. Finally, the team will put their new models to the test using controlled experiments, a more powerful form of model testing than has been applied to SAD theories.

Litchman and Klausmeier are involved in other ongoing projects, such as: (1) developing and testing models of the vertical distribution of phytoplankton; (2) understanding the role of spatial heterogeneity on species competition and coexistence; (3) determining the causes of seasonal succession in plankton communities; (4) applying game theoretical approaches to models of community assembly; (5) explaining different sources of variation in the elemental stoichiometry of phytoplankton; and (6) exploring the dynamics of nonlinear food web modules.

The Simons Foundation

The Simons Foundation's MMLS program seeks to foster a culture of theory-experiment collaboration similar to the work in the physical sciences. It supports the development of mathematical models that explain classes of experimental results and suggest new directions for research and experimentation aimed at testing theoretical ideas and expanding their reach.

The Targeted Grant in MMLS program supports research in the life sciences that breaks new conceptual or theoretical ground and relates closely to experiment, for example, by introducing new and experimentally testable concepts or by developing models that can explain data and motivate new classes of experiments.



Photo: Harley Seeley

Making "Living with IBD" a Thing of the Past

CCFA research grant helps MSU scientist continue his quest for an innovative treatment.

For Dr. Brian Gulbransen—a researcher in MSU's neuroscience program and Department of Physiology—understanding the actions of the enteric nervous system, especially as they apply to Crohn's and other inflammatory bowel diseases, is a daily pursuit.

Though these diseases are treatable, current treatments are only temporary. They lose effectiveness over time and bring along a list of potentially dangerous side effects. The research being done in Gulbransen's lab, bolstered by a recent \$350,000 Senior Research Award grant from the Crohn's and Colitis Foundation of America (CCFA), has the potential to change that.

Cells Behaving Badly: An Intervention

The enteric nervous system is the boss of all things gastrointestinal, and all of the systems associated with digestion, absorption of nutrients, and expulsion of waste answer to it. With a neuron count that outnumbers even that of the spinal cord, it is often referred to as "the second brain," or "the brain of the gut." When neurons in this "second brain" die as a result of inflammatory bowel diseases, sections of the gut can suffer permanent damage.

Gulbransen's work focuses on those tiny, essential building blocks of the enteric nervous system: neurons and the glial cells that surround them.

After discovering that the neuron support cells, glial cells, can "eavesdrop" on the messages the neurons send to one another, Gulbransen surmised that the subsequent behavior of glial cells might play a role in neuron death. If that is the case, new treatments could be developed that target glial cells.

"Our goal is finding progressive treatment. One that would control the glial cells, reverse the bad signals they're sending to the neurons and repair the damage that has already been done," Gulbransen says. "Paired with an anti-inflammatory, treatment like this could eliminate the need for surgery, which is *very* good."

Supporting Sufferers by Supporting Science

The Crohn's and Colitis Foundation of America is a non-profit, volunteer-driven organization committed to finding a cure for Crohn's, ulcerative colitis, and other inflammatory bowel diseases by supporting research efforts like Gulbransen's.

The CCFA's Senior Research Award is for established researchers who seek funding to gather enough critical preliminary data to become competitive for funding from the government, such as through the National Institutes of Health.

"NIH funding is hard to get," Gulbransen says, "and it isn't usually enough to completely run a lab, which is why funding from other places—like the CCFA—is absolutely necessary at every stage of research.

"Their support, at various points in my career, has allowed me to go down this whole line of work, from the beginning to where I am now," he added. Gulbransen's earlier work as a postdoctoral fellow at the University of Calgary was supported in part by a grant from the Crohn's and Colitis Foundation of Canada.

In addition to its mission to find a cure, the Crohn's and Colitis Foundation, which has more than 40 volunteer chapters nationwide, provides resources and support to the more than 1.4 million individuals of all ages, in the United States alone, living with inflammatory bowel diseases.



Studying Controversial Aspects of Social Inequality

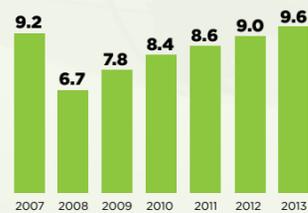
The topic of inequality has gained considerable prominence and stirred passionate debate across the country in recent years. The Russell Sage Foundation and the William T. Grant Foundation have awarded grants to study aspects of social and economic inequality.

How Do the Rich Gain Political Influence?

One complex topic people are debating is just how much influence the wealthy have on decisions politicians make. Through a grant from the Russell Sage Foundation, Associate Professor Matthew Grossman of the MSU Department of Political Science, who is also newly appointed director of MSU's Institute for Public Policy and Social Research, will examine how high-income citizens influence policymaking in the U.S., a study entitled "How Do the Rich Rule? Public Opinion, Parties, and Interest Groups in Unequal Policy Influence."

Dr. Grossman will investigate how high-income citizens and particular groups influence policy, to find out whether the decisions government leaders make on public policy follow the opinions of the affluent more often and to a greater extent than the broader public. Also, the study will look at the channels the affluent use to translate their ideas and opinions into legislative and executive actions.

Number of Millionaire Households



People often think that campaign contributions play a huge role in political influence. But Grossman explains that the issue is much more complex, "American policymakers appear more responsive to the opinions of rich citizens, but it may not be due to bribes or campaign contributions. Both political parties represent the views of the rich on different issues and both may succeed more when they speak for the rich. We look forward to investigating whether

and how American politics reinforces political and economic inequality."

Low-Income Students and Elite Universities

Another topic concerning inequality is the college success of low-income students. The Russell Sage Foundation, along with the William T. Grant Foundation of New York, have made grants to support the work of MSU Professor Scott Imberman, who is studying whether going to an elite university makes a difference in the lives of low-income students. The study, entitled "Does Attending an Elite University Help Low Income Students?" will use data gathered in the Texas Longhorn and Texas A&M Century Scholars Program.

Data from the Census Bureau show that the economic benefit of a college degree as compared to a high school degree have increased while the number of students attaining post-secondary degrees, particularly low-income students, has changed little. Dr. Imberman is seeking ways for policy-makers to intervene that make it more likely for low-income students to enroll in and earn degrees at higher-quality educational institutions.

Imberman's team will try to answer these questions by studying the effects of the State of Texas 1997 ban of the use of affirmative action in college admission decisions. (The co-investigators are Michael Lovenheim of Cornell University and Rodney Andrews of University of Texas, Dallas.) Following the implementation of the 10% Rule, which allowed students in the top 10% of their high school class to attend any Texas public university, many more students were admitted, but overall minority enrollments at UT and A&M fell steeply. Texas then began the Longhorn Opportunity Scholarship program and the Century Scholars program to increase the enrollment and success of low-income students.

Dr. Imberman will study the effects of these interventions in helping UT and

A&M address the disadvantages faced by low-income students. Professor Imberman said the grants will help us deepen our understanding of college achievement, "The grants from the Russell Sage and Grant Foundations have been instrumental in helping our work progress. We are required to travel to work with the data on-site and to hire research assistants as well. There are also substantial up-front and ongoing fees to maintain access to the data. Our work would not be possible without the funding."

The study will look in particular at whether the interventions increase the likelihood that low-income students enroll at UT or A&M; whether enrolled students experience better educational outcomes—in terms of such outcomes as college majors, GPA, graduation and time to degree—and whether greater success in college translates into the students getting higher paying jobs.

The Russell Sage Foundation

The Russell Sage Foundation is the principal American foundation devoted exclusively to research in the social sciences. Located in New York City, it is a research center, a funding source for studies by scholars at other academic and research institutions. It publishes, under its own imprint, books deriving from the work of its grantees and visiting scholars.

The William T. Grant Foundation

The William T. Grant Foundation was established in 1936 by the founder of the W.T. Grant Stores. Grant believed that human relationships and the environment were powerful forces in shaping our abilities to lead successful lives. Building on the vision of its founder, the foundation invests in research with the potential to advance theory, policy, and practice related to children and youth in the United States.

Detroit Students Learn from Career Journalists

Crain Communications and the MSU School of Journalism have come together to support journalism in Detroit high schools.

The Crain MSU Detroit High School Journalism Program will use journalism as a tool to enrich the educational experiences of students in Detroit-area high schools. The program will bring together students at participating schools with professional journalists, MSU faculty and MSU journalism students to produce a newspaper and website about issues affecting the students' schools, their peers and the community.

Fourteen high schools and about 300 students are expected to take part in the program this academic year. Participating students print at least four issues of a the *Detroit Dialogue* magazine each year with sections for each school, post stories online, and learn how to research and publicize stories through social media.

"Crain Communications is proud to support the Detroit High School Journalism Program, guiding, assisting and inspiring young minds to become critical thinkers, better writers and more actively engaged in their schools and community," said KC Crain, executive vice president and director of corporate operations for Crain Communications and group publisher of the Automotive News Group.

The partnership with Crain, which will be led by Detroit-based *Automotive News*, builds on the spirit of a program established in 1985 with support from former *Detroit Free Press* managing editor Neal Shine. The MSU School of Journalism took over management of that program last year.

"The School of Journalism is pleased to work with Crain Communications to carry on a strong legacy of high school journalism in Detroit," said Lucinda Davenport, director of MSU's School of Journalism. "We look forward to continuing to give students an opportunity to get hands-on experience with writing and visual communication for print and online news."

As the lead sponsor, Crain Communications will provide financial support to

help operate the program over a multiyear period. Crain journalists and staff also will work with MSU to assist students and teachers in creating high school publications at least four times per year. The company will be actively engaged with students from story-planning throughout production, including providing meeting space for training and design sessions.

Headquartered in Detroit, Crain Communications is a privately held media company, which publishes a variety of trade newspapers and periodicals, including *Automotive News*, *Crain's Detroit Business* and *Advertising Age*.





UL and the A-CAPP Center Form a **Powerful Team**



Brian Monks with Jeremy Wilson.

The Center for Anti-Counterfeiting and Product Protection (A-CAPP) at Michigan State University has formed important partnerships with companies across many industry sectors. Every one of those partnerships is important, and most – like UL – grow stronger and more multi-dimensional.

UL, which began as Underwriters' Electric Bureau in 1894, has been conducting tests and providing certifications for over 100 years, helping keep people safe worldwide. The company has been involved in anti-counterfeiting efforts since the early 1990s and appreciates the value that a strong academic approach can bring to its work. That's where Michigan State University's A-CAPP Center comes in.

The A-CAPP Center, the first and only academic body focusing on the complex global issues of anti-counterfeiting and protection of all products and brands, across all industries, and in all markets, serves as an international hub for the development and dissemination of evidence-based anti-counterfeit and brand protection strategy. UL is one of several companies with a formal partnership agreement with A-CAPP, but its support has extended to multiple contributions in support of A-CAPP's outreach, education and research activities, including papers on the future of brand protec-

tion and on counterfeits in the electronics industry as well as joint conferences and training programs.

"The industry-academic partnership we have formed with UL has not only added considerable value to the development of our center's scientific and educational foundation, it has propelled forward the field of brand protection in innumerable ways," said A-CAPP Center Director and School of Criminal Justice Professor Jeremy Wilson.

Additional contributions by UL to the A-CAPP Center include support for a brand protection summit for brand owners that the center hosted on campus on October 7 and 8, and support for the A-CAPP Center's executive education program. The latter gift allowed the center to hold training sessions for brand owners in Oak Brook, IL and St. Petersburg, FL, and also helped in offering its first international executive training session to brand owners and law enforcement in Buenos Aires as part of the Interpol Intellectual Property Crime Enforcement Conference.

"UL has been one of our strongest partners in developing and sharing lessons to help industry and law enforcement combat product counterfeits," Wilson added.

At the event in St. Petersburg, UL honored Wilson with an award in recognition of his support and commitment to protecting the integrity of the UL mark.

Brian Monks, UL's vice president of Global Security and Brand Protection, said UL values the partnership with the A-CAPP Center. "They have participated in brand protection conferences we've held around the globe, including in Dubai, Ireland, Scotland and Los Angeles," he said. "Dr. Wilson and his team are dedicated to anti-counterfeiting issues, and their expertise is appreciated by UL and many other organizations. UL is a global leader in brand protection and appreciates the role of academia in addressing complex global problems. MSU can and will play a pivotal role in the advancement of IP protection and the innovative solutions that will be required in the future to thwart the increasingly sophisticated criminal element."

The Michigan State University Center for Anti-Counterfeiting and Product Protection (A-CAPP) is the first and only academic body focusing on the complex global issues of anti-counterfeiting and protection of all products and brands, across all industries, and in all markets. Linking industry, government, academic and other stakeholders through interdisciplinary and translational research, education and outreach, the A-CAPP Center serves as an international hub for the development and dissemination of evidence-based anti-counterfeit and brand protection strategy. For more information visit A-CAPP.msu.edu.

Studying **Firearms Restrictions** and **Domestic Violence**

An MSU Criminal Justice professor has received a grant from the Joyce Foundation to study whether certain state-level laws restricting access to firearms for domestic violence offenders affect levels of domestic violence homicide. Dr. April Zeoli will analyze how effective two main types of laws are: 1) laws restricting people who have been convicted of misdemeanor domestic violence from legally possessing firearms, and 2) laws that restrict those under certain domestic violence restraining orders from accessing firearms.

Dr. Zeoli said, "The study will examine domestic violence homicide levels in 46 states from 1979 through 2013 to determine if they were impacted by the passage of these state-level firearm laws." She also will study the impact of key provisions of the laws, such as whether people prohibited from firearm possession must surrender their firearms or whether state law does not specify that prohibited persons must be dispossessed of firearms currently in their possession.

The Chicago-based Joyce Foundation includes gun violence prevention among its several areas of focus. Program Officer Jessyca Dudley, MPH, believes the research will produce valuable findings. "We look forward to supporting the proposed research, which will have direct implications for policies regarding the enactment and enforcement of domestic violence firearms restrictions. We anticipate the results will provide lessons and insights to inform policymaking and enforcement at the federal, state and local levels."

Dr. Zeoli's study will answer questions regarding whether the strength of legal firearm restrictions for domestic violence impacts domestic violence homicide levels. The study will also look at a number of related issues:

- Because many states do not cover dating partners in their domestic violence firearms restrictions, it is important to know if covering dating partners significantly impacts domestic violence homicide to a

greater degree than not covering dating partners in the law.

- Does domestic violence homicide decrease when a state law provides for the dispossession of firearms from domestic violence offenders?
- Does the presence of a system to prevent prohibited persons from purchasing firearms, such as universal background checks, affect the impact of laws prohibiting domestic violence offenders from purchasing firearms on domestic violence homicide?

Even further, the project will investigate how local jurisdictions enforce state laws that restrict firearms to domestic violence offenders, as well as the conditions that help or inhibit the enforcement of firearms laws in cases of domestic violence.

Dr. Zeoli leads the investigation with collaborators Dr. Daniel Webster and Dr. Shannon Frattaroli from Johns Hopkins Bloomberg School of Public Health.

THE JOYCE FOUNDATION AND THE PREVENTION OF GUN VIOLENCE

Over many years the Joyce Foundation has supported dozens of projects to help law enforcement, policy makers and advocates develop common sense laws and policies that decrease gun violence and promote policies that keep communities safe. The foundation recognizes that this work is an urgent matter. Gun violence inflicts a heavy toll on families and communities in many ways. More than 100,000 Americans are killed or injured in gun violence every year.

A growing body of research shows that strong gun laws correspond with lower rates of gun death and injury. The Joyce Foundation's support for Dr. Zeoli's work is part of its effort to expand on this research, building awareness about the problem of gun violence in America, and to educate the public, policy makers and the media about the effectiveness of policies intended to improve public health and safety.



The Joyce Foundation works with grantee partners to discover, develop and advance innovative and effective policy solutions for the central challenges of our time. With a focus on the Great Lakes region and also achieving national impact, Joyce strives to improve quality of life, promote community vitality and achieve a fair society.

April M. Zeoli, PhD, MPH, is an associate professor and coordinator of undergraduate studies in the School of Criminal Justice at Michigan State University. Her research brings together the fields of public health and criminology and criminal justice. Her main field of investigation has been the prevention of intimate partner violence and homicide through the use of policy and law. Specifically, she has studied closely the role of firearms in intimate partner violence and homicide, as well as the civil and criminal justice systems responses to intimate partner violence. Using an infectious disease model, she also has studied the spread of homicide over time throughout Newark, New Jersey.



OCTOBER
National Domestic Violence Awareness Month



Amita Chudgar with a colleague.

MSU Study Looks at Education Abroad

Michigan State University researcher Amita Chudgar is leading an effort to improve our understanding of why students in developing countries don't stay in school.

Chudgar received a \$200,000 grant from the John D. and Catherine T. MacArthur Foundation to study the home and community life of youth in India, Nigeria, Kenya, Tanzania and Uganda. It will be the first in-depth analysis of large existing datasets that can provide insights for improving secondary education not only in those nations but throughout the world.

Until recently, Chudgar said, researchers have focused on how to get children to start school. "In the last 10 to 15 years, we have had, as a global community, quite a bit of success in that initial goal," said Chudgar. "But now we have another set of issues to think about. We don't see that many children making it through primary and into secondary schools. Once enrolled, retaining children in secondary education is also a challenge."

Assisting with the research are Alyssa Morley, Pablo Bezem and Young Ran Kim,

all students in MSU's Educational Policy doctoral program. Chudgar and her team use nationally representative Demographic and Health Survey data to identify how factors such as health, gender and family circumstances affect secondary education outcomes for youth ranging from 12 to 24 years old. For two countries, India and Nigeria, they use additional data to create a more detailed profile of enrollment and retention patterns.

Chudgar, an associate professor of educational administration and policy, is

committed to encouraging her students and colleagues around the world to explore similar research projects with publicly available resources. "There are so many existing good datasets that are underutilized and could be used to address questions for which we know very little," she said. "Our job is to generate findings that are relevant and that can be used by governments and

policymakers to make a difference."

The MacArthur Foundation funded the project as part of the Partnership to Strengthen Innovation and Practice in Secondary Education, a collaborative that seeks to increase secondary education access and improve learning outcomes for marginalized populations. The partnership works toward this goal by funding

in-country interventions that accelerate innovation, support evidence-based policy reforms, and capture and disseminate learnings to key stakeholders. The Partnership is led by a group of private donors and donor advisors, including the MacArthur Foundation, The MasterCard Foundation, Human Dignity Foundation, Intel Foundation and an anonymous donor.

MasterCard Foundation Scholars Gather in NYC

Every year, about 10 scholars from the MasterCard Foundation Scholars Program's participating institutions across Canada, the United States and Costa Rica take part in its annual partner appreciation dinner in New York. Scholars are selected from a pool of nominations based on the uniqueness of their backgrounds and a well-defined giveback plan. The Annual Partner Appreciation Dinner is an opportunity for partners and scholars present to inspire one another. This year, successful scholars were invited for a three-day event, which included a daylong boot camp on social and business entrepreneurship with successful entrepreneurs such as Miki and Radha Agrawal, Andrew Horn and Doug Akin. The scholars also spent time connecting with counterparts from other universities and countries across Africa (Burundi, Ghana, Lesotho, Nigeria, Tanzania, Uganda and Zimbabwe) to share their personal, education and leadership journeys and their giveback projects with one another. It was also an opportunity to explore New York City and meet with the foundation partners who are thought leaders in education, including university presidents from across the scholars program partnership.

In their opening remarks at the Annual Partnership Appreciation Dinner, Reeta Roy, president and CEO of the MasterCard Foundation and Jim Leech, board chairman of the MasterCard Foundation, acknowledged the contributions of partners who work tirelessly to fulfill the vision of the Foundation in providing university education to academically talented young people in Africa who show a commitment to giving back to their communities. Together with the audience, they recognized the scholars with a standing ovation. In response, scholars expressed their gratitude and shared personal and inspiring stories about their background and life journeys prior to their MasterCard Foundation Scholarship awards.

Caroline Latona, a graduate scholar in advertising who was selected to represent Michigan State University commented that, "every MasterCard Foundation scholar has an interesting and inspiring story, including all 83 of us at Michigan State and others I have met these past three days. Our experiences have motivated us to

reach where we are now and to continue to forge ahead despite the challenges. Not only do we get a first class education at Michigan State, we also get to take part in leadership and personal development trainings that prepare us to become well rounded professionals." Scholars urged the foundation for continued support, as there is so much more to be done in addressing the imbalances in access to education, particularly for the girl-child, the stigmatization of mental illness, unemployment and other concerns based on their experiences.

"For me, it was really a pleasant experience networking with top officials in partner organizations with the MasterCard Foundation but more importantly being inspired by the stories of the scholars who were represented. Sometimes you think you have experienced the worst of things but when you listen to others who have experienced much more, you get really motivated to do more with what you have," Caroline said.



Caroline Latona, Reeta Roy, joined by Isaac Kalumbu, manager of the MasterCard Foundation Scholars Program at MSU.



Visionary Network Strengthens Michigan Food Businesses and Access

Food hubs are an emerging win-win innovation: a business model that makes healthy local food products available to diverse markets and offers a way for small producers and value-added food businesses to succeed.

The MSU Center for Regional Food Systems (CRFS) has received a \$450,000 continuation grant from the Kresge Foundation to expand the Michigan Food Hub Network, the nation's first statewide learning community that helps food hubs become profitable while supplying healthy food to low-income communities.

"With this renewed award, we will build on the network's unique infrastructure, which gathers food hub managers and business partners to develop strategies for business viability, reaching new markets and increasing food security in the state,"

said Rich Pirog, senior associate director of CRFS. "The center will also collaborate with neighboring states to help them learn from our model."

Over the next three years, the project will increase buyer-seller relationships and specialized assistance, emphasizing business collaborations between food hubs and food service directors of institutions (e.g. schools and hospitals).

"Institutional food service directors and buyers across the state continue to express great interest in purchasing Michigan foods, but face challenges in sourcing the foods they want at a local or regional level," said Colleen Matts, farm to institution specialist and co-lead of the Michigan Farm to Institute Network. "Food hubs are in a position to fill that critical gap to help meet institutional demand."

Helping Small Food and Farm Businesses

"With the network's support I was able to attend the University of Vermont's food hub management certificate program, participate in network meetings, and collaborate with other Michigan food hubs in an IT feasibility study," said Rita O'Brien, associate director of Lansing's Allen Market Place. "These experiences helped us to develop a stronger business model which has set our hub on a path of success."

Throughout Michigan, representatives gather three times per year to build peer relationships and share lessons learned. The network also collaborates to address regional food value chain challenges.

For Natasha Lantz, co-lead of the Upper Peninsula Food Exchange, these partnerships have been important. "The Michigan Food

Hub Network has been invaluable in helping us establish, develop, and continue to grow our food hub. The statewide meetings allow us to share resources, get new ideas and set the groundwork to coordinate efforts. The network takes our needs seriously and works with us to obtain resources and find solutions to common challenges. This is evidenced by attention to both farm food safety and food hub technology, two issues that are proving to be challenges to food hubs in our state."

Expanding the Network

Michigan's food hubs are well positioned to expand connections between the state's producers and markets. Over 1.8

million Michigan residents, including an estimated 300,000 children, live in low-income communities with limited supermarket access.

"We have seen too much emphasis on getting local food into the untransparent large distribution system rather than doing the work to build a side-by-side local system that is traceable and trustable," said a participant at a network meeting.

Eighty-two percent of Michigan school food service directors reported interest in purchasing local foods in a 2013 survey. Their top logistical challenges were lack of labor to prepare local foods, lack of storage and lack of a distribution method to get local foods to their programs. Work-

ing together to turn these challenges into opportunities is the Michigan Food Hub Network's philosophy. "Strong, collaborative relationships are key to the success of any business; building such relationships across hubs and their business partners is what the Michigan Food Hub Network does best," said Pirog.

Kresge Foundation

Kresge Foundation is a \$3.5 billion private, national foundation that works to expand opportunities in America's cities through investing in arts and culture, education, environment, health, human services and community development.

United Shore Gift Creates Faculty Fellow Position In Sales

A former Michigan State University basketball player turned business executive is teaming up with the Eli Broad College of Business to enhance sales research and education.

Mat Ishbia, president and CEO of United Shore, a Troy-based mortgage lender, will create a new faculty fellow position with the Department of Marketing through a gift of \$500,000.

"Talent and workforce development are major issues that Michigan companies are facing," said Ishbia, a 2003 graduate of the Broad College. "At United Shore, we have huge passion for the quality of programs and curriculum at Michigan State University, and are committed to investing in their efforts."

Ishbia, a former basketball player and student assistant coach under Head Men's Basketball Coach Tom Izzo, was a member of the 2000 national championship team. He said the donation creates more of a partnership with MSU.

"It's a platform to developing a best-in-class sales program as well as a pipeline between MSU grads to the exciting opportunities that exist in the mortgage industry," he said.

Following graduation, Ishbia joined United Shore and gained experience in each area of the company as he climbed to the position of president and CEO. With a vision to create a more perfect mortgage world, Ishbia has changed the game in the mortgage industry from a commodity to a service focused on relationships, knowledge and speed to market.

Today, United Shore is home to 1,200 of the mortgage industry's most skilled and knowledgeable experts, and has grown into an award-winning top national workplace and home of the nation's top wholesale lender UWM. United Shore's focus on attracting and

developing the nation's top sales talent played a significant role in the company's investment in the resources and bright minds at Michigan State University.

"Fellow positions enable us to recruit and retain the very best up and coming faculty members," said MSU Provost June Pierce Youatt. "We are grateful to United Shore and Mat Ishbia's leadership, which will help keep MSU at the forefront of knowledge and teaching in sales to help develop new generations of sales leaders."

The United Shore gift will allow the Department of Marketing to provide support for a faculty member—even at the assistant professor level—who has exhibited leadership in sales research and sales teaching. A leader in wholesale mortgage lending, United Shore believes in sales as a pivotal and critical aspect of business. "The United Shore gift demonstrates confidence in the Broad College and our ability to graduate strategic thinkers who have a business acumen and can make an impact on the business world from day one," said Sanjay Gupta, Eli and Edythe L. Broad Dean of the business college. "This gift helps us in our commitment to develop transformational thinkers and doers who make business happen."

About United Shore

Founded in 1986, United Shore is home to United Wholesale Mortgage, the top lender among America's independent mortgage brokers. In addition to receiving the Crain's Cool Place to Work in Michigan award, United Shore has been named a Best and Brightest Company to Work For and a *Detroit Free Press* "Top Workplace."

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