

# 2015 Public Engagement Symposium

## Changing Lives through Engagement



**MARCH 10, 2015 • 3:00-6:00 PM**

Alice Campbell Alumni Center • 601 South Lincoln Avenue, Urbana, IL 61801  
Sponsored by the Office of Public Engagement and the Center for Innovation in Teaching & Learning





“ The University of Illinois at Urbana-Champaign will be a pre-eminent public research university with a land-grant mission and global impact. We are positioning ourselves today for the challenges facing our world in the coming 20 to 50 years. Our ability to engage locally, nationally and globally will be critical in this mission. Our unwavering commitment to making the world around us better—to make a significant and visible societal impact—is as recognizable today as it was at our 1867 founding. ”

Phyllis M. Wise  
Chancellor, University of Illinois at  
Urbana-Champaign



The University of Illinois at Urbana-Champaign has a long record of commitment to public engagement and to the discovery and application of knowledge. Its faculty, staff and students collaborate with external audiences and partners to address the needs and opportunities of society. Through these partnerships, critical societal issues are embedded in the research and educational missions of the University.

At this year's symposium, we are celebrating how our campus changes lives through engagement. We'll have the opportunity to learn about a diverse sample of current activities and to engage in dialogue regarding innovative dimensions of public engagement that will frame our efforts in the future. Take a minute to stop by our display and meet the Office of Public Engagement staff to learn more about the engagement opportunities on our campus.

Pradeep Khanna  
Associate Chancellor

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#IllinoisPES





## COMMUNITY OUTREACH

### Center for Education in Small Urban Communities **C1**

William Trent, College of Education; Jill DeHart, Teacher Collaborator; Sarah Durst, Teacher Collaborator; Cara Gutzmer, Teacher Collaborator; Mia Lavizzo, Graduate Assistant; Lila Moore, SOAR Program Coordinator; Victor Perez, Coordinator of Operations; David Requa, Coordinator of School-University Research Relations; Linda Tammen, YLF Program Coordinator; Bradley Thompson, Teacher Collaborator

#### **A Full-time Partnership with schools is the Hallmark of the Center for Education in Small Urban Communities.**

The Center for Education in Small Urban Communities is a research, service, and outreach unit within the College of Education. The Center houses many outreach programs all designed to support and strengthen our local communities. The core program of the Center is providing professional development that serves over 100 teachers each year through an embedded coaching model unique to the Center.

Teacher Collaborators are experienced teachers engaging in partnership with local teachers and administrators to bring current educational research to life in classrooms. Each year the Chancellor's Academy provides an intensive summertime professional development for local teachers to share in their experiences and shape their coming year in professional growth.

The Center's SOAR (Student Opportunities for After-School Resources) program is an after-school tutoring program that provides literacy support and homework help to emergent bilingual students by pairing them with University student volunteers. The Center also sponsors the biennial Youth Literature Festival (YLF), a three-day community-wide event that celebrates the value of literature by bringing together local and national authors to share their craft with children and adults alike. The Center also sponsors the annual Martin Luther King, Jr. Creative Expressions Competition to encourage local students to share their understanding of Dr. King's message through their creativity, passion, and concerns through essays, music, poetry, art work and multimedia productions.

### Bringing the Consulting Experience into the Business Classroom: Engaged Learning in Social Media Strategy **C2**

Eric C. Larson, College of Business/Department of Business Administration; Andrew Allen, Director of Illinois Business Consulting

Students love putting theory into practice. They develop skills that are highly valued in the job market and retain conceptual knowledge when they are forced to apply what they learn to real-world situations.

This partnership between Illinois Business Consulting and a faculty member in the College of Business connects graduate and undergraduate students with local business people (mostly in Champaign-Urbana, with a handful of clients from Chicago, Peoria and outside Illinois) to experience an actual consulting engagement and produce tangible deliverables for the client companies. The consulting engagements, which focus on internet advertising and social media management, are required projects for the social media strategy courses. Students are taught conceptual material including network effects, auction theory, service-oriented systems, social media business models, privacy vs. personalization, financial valuation of social media platforms, co-creation, predictive analytics, and multi-channel engagement. Students also receive workshop training on project methodology, client and team management, and professional communication.

This model of engagement began in Spring 2013, with nearly 250 students and 34 client companies taking part so far. The engagements have provided companies with opportunities to experiment and to gain valuable expertise and perspective from the students, while the students learn what it takes to be a successful business person and how the concepts from the class apply in action.

## CLL Supporting the Community with Transformative Learning Experiences

C3

Katie Shumway, School of Social Work; Sherrie Faulkner, Director of BSW Field Education and the Community Learning Lab; Morgan Tarter, Community Learning Lab Liaison

The University Of Illinois School Of Social Work, supported by a Public Engagement Grant, created the Community Learning Lab in Spring 2013. The Community Learning Lab's goal is to facilitate partnerships between community organizations, School of Social Work classes, and other academic units across campus in the areas of research, program development, and service. The desired outcome is a hands-on learning experience for the students that will produce a tangible product for the partnering organization.

As a result of this support the Community Learning Lab (CLL) has provided over 8,500 hours of community service to our local community, while in return community members have provided students with over 2,000 hours of mentoring and supervision. Since starting the CLL, it has been expanded into working with students from many disciplines including, Social Work, Business, English, and Medicine. Students have participated in over 775 possible partnership opportunities working with over 120 local community partners.

Students have completed countless projects for our community including, but not limited to grant writing, program evaluations, creating policy manuals, tutoring/mentoring, surveying, data analysis, workshop creation and many more!

To learn more about the CLL visit us online at: [socialwork.illinois.edu/community-learning-lab](http://socialwork.illinois.edu/community-learning-lab) or contact us at [ssw-cll@illinois.edu](mailto:ssw-cll@illinois.edu).

## The Creative Technology Research Laboratory: Shifting Education (CTRL-Shift)

C4

George Reese, Office for Mathematics, Science, and Technology Education (MSTE); Martin Wolske, Graduate School of Library and Information Science

The Creative Technology Research Laboratory: Shifting Education (CTRL-Shift) is our Champaign-Urbana-University of Illinois collaboration. It is a set of interwoven community-oriented activities that build on the principles of democracy in the context of 21st century technologies.

We are working together to creatively empower each other in schools, libraries, and all the formal and informal settings we can. We gather to encourage mastery of the new digital teaching and learning mechanisms, and ultimately help each other learn. We not only see participatory democracy as an outcome goal, but as a process embedded within all aspects of our engagement.

CTRL-Shift has no single founding organization or person, but has organically grown as part of ongoing dialogue between community and campus.



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## 2015 Public Engagement Symposium

### CUVolunteer presents the 3rd Annual Community & Campus Day of Service

C5

Michael McKelvey, Office for Mathematics, Science, and Technology Education (MSTE); Maxwell Colon, President, Illini Fighting Hunger; Sarah Zehr, Director of Operations, Office of Public Engagement

CUVolunteer.org is dedicated to helping volunteer organizations and residents of the Champaign-Urbana area connect. It is a partnership between United Way of Champaign County; the University of Illinois Office of Public Engagement; the Office for Mathematics, Science, and Technology Education in the College of Education; and the Office of Volunteer Programs. You can find volunteering opportunities on the website at: <http://cuvolunteer.org>

The Third Annual Community & Campus Day of Service, held on April 11, 2015, will bring together members of the local community and University of Illinois faculty, staff, and students to kick off National Volunteer Week 2015, which will take place from April 12-18.

Our primary project, The Food Packaging Project, involves packaging 148,000 meals - one thousand for every year of public engagement since the University was chartered - for local food banks to be distributed to needy families in Champaign-Urbana. Learn more at: <http://cuvolunteer.org/DayOfService>

### Design for America @ UIUC

C6

Karrie G. Karahalios, Associate Professor of Computer Science; Sean Griffin, Undergraduate Student; Sahil Kumar, Undergraduate Student; Annlin Sheih, Undergraduate Student

Design for America (DFA) is an organization dedicated to teaching students the human-centered design process and helping them apply these skills towards improving social and economic development in their local community. By learning how to understand the problem at hand, build prototypes of their proposed solutions, and test their ideas with potential users, students cultivate a methodical approach towards problem solving. Members are also able to develop skills in empathy, research, design, entrepreneurship, and leadership, helping them to become effective global citizens.

This academic year, DFA has focused their energy on three topics concerning Champaign-Urbana: reducing the stress experienced by Alzheimer's caregivers, urban flooding, and children's fitness. During the fall 2014 semester, each of these project groups collaborated with local community partners to gain accurate insights to the problem at hand. They listened to their potential user's stories, observed where issues occur most frequently, and discovered new challenges that they had not thought of before. They then narrowed down the scope of their project to a daring, fearless, and applicable goal and brainstormed solutions they could possibly implement.

For the spring 2015 semester, DFA looks forward to implementing effective solutions towards these projects to create visible improvement towards these people's lives. They will start out the semester by finalizing their brainstorming and building their first prototypes by the middle of the semester. By the end of the semester, groups will receive feedback and refine their prototypes into usable products or services.

### Engage Illinois: The Public Engagement Portal

C7

Michael McKelvey, Office for Mathematics, Science, and Technology Education (MSTE); George Reese, Office for Mathematics, Science, and Technology Education (MSTE); Beth Kirchgessner, Office for Mathematics, Science, and Technology Education (MSTE)

Looking for summer camps, workshops, conferences, or festivals? The Public Engagement Portal (<http://engage.illinois.edu>) is the most comprehensive source for information about public engagement programs, events, and resources offered by the University of Illinois at Urbana-Champaign.

Find activities for kids, browse resources for teachers, see events in your area, and check out ongoing programs. Search programs based on location, keyword, or content area. View a map of public engagement programs and events across the state of Illinois.

Stop by to find out more about getting your University engagement project in the PE Portal.

## International Education at the University Library: The Work of the International and Area Studies Teaching and Engagement Committee (iTEC)

C8

Antonio Sotomayor, Librarian for Latin American and Caribbean Studies and Assistant Professor in the International and Area Studies Library at the University of Illinois; Rachel S. Suntop, Graduate Assistant, International and Area Studies Library, the Social Science, Health and Education Library and in Reference and Information Services.

This poster presentation will introduce the audience to the work being undertaken by the newly established International and Area Studies Teaching and Engagement Committee (iTEC) at the University Library. Taking into consideration the educational leadership of the faculty at the University Library, this committee has been designed to leverage opportunities to meld campus teaching and research interests with public engagement activities in ways that are embedded in and enrich the curriculum while also benefiting the intellectual life of the broader local community. Furthermore, these activities are done with a deliberately interdisciplinary and international context, supporting campus commitments to building diversity and multicultural understanding. This poster will outline and highlight different events carried out during the last year in order to showcase our approach and engage the audience in exploring other educational strategies.

## Media University

C9

Rhiannon Clifton, Kyle Potthast, College of Media

Media University is a unique opportunity for high school students to explore the advertising/media industry while being immersed in the life of living on campus. This past summer, 21 high school students from around the world came to Media University to understand all that the world of advertising has to offer. Funding from the Office of Public Engagement at Illinois and State Farm allowed us to offer diversity scholarships to 43% of participants.

The College of Media administers Media University in order to introduce high school students to the many facets of advertising as a viable college major and the potential career choices in

advertising through hands-on learning activities. Four teams of students worked on client projects for State Farm's Celebrate My Drive Contest and Kraft Miracle Whip.

The two week camp teaches the fundamentals and key practices of advertising, media, multiculturalism, ethics, brainstorming, teamwork, leadership and other topics.

Media University is led by renowned faculty at the University of Illinois and provides valuable hands-on experiences. Media University will be offering two residential programs in 2015:

- \$820: Imagination U Camp (June 15-19, 2015):  
<http://experience.media.illinois.edu/creativity/>
- \$920: Media Entrepreneurship Camp (June 22-27, 2015):  
<http://experience.media.illinois.edu/mediaeship/>

## Modernizing Extension and Advisory Systems:

C10

Farmer Advisory Services in Tajikistan (FAST)  
Integrating Farmbook in Kenya for Smallholder Farmers  
Integrating Gender and Nutrition in  
Agricultural Extension Services (INGENAES)  
Strengthening Extension and Advisory Services in  
Georgia (SEAS)

Katy Heinz, College of ACES, MEAS

**Farmer Advisory Services in Tajikistan (FAST):** Smallholder farms, whether run by households for themselves or as small commercial operations, are the main source of subsistence and cash income for most people in Tajikistan. Smallholder farmers need freer access to markets, improved inputs, including more land, assured irrigation water, and easier access to knowledge, in order to operate their farms more efficiently and improve their livelihoods. Within the U.S. Government's Feed the Future Initiative, the USAID-funded FAST Program improves the livelihoods of smallholder farmers in the Republic of Tajikistan by supporting an agricultural extension and advisory system in Khatlon Province and providing support for agrarian reform, building the capacity of local institutions and community-based organizations and completion of effective agrarian reform. This includes designing and building capacity for an agriculture

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extension and advisory system that assists smallholder and household farmers in increasing and improving agricultural production for family consumption and sale, as well as supporting agrarian reform and development policies, making possible real positive change in rural people's lives.

**Integrating Farmbook in Kenya for Smallholder Farmers:** The Modernizing Extension and Advisory Services project, funded by USAID and housed in the ACES department at University of Illinois, has partnered with Catholic Relief Services (CRS) to increase farmers' market knowledge and good business practices. Smallholder farmers frequently lack the skills to analyze market opportunities and cannot meet the costs to engage in the market, while traditional extension agents often lack the tools to analyze markets, which makes it difficult to test the profitability of the crop varieties or production techniques they promote. Further, agricultural programs rarely capture the costs of technical packages and impact on farmer incomes. Therefore, this project tackles the question: How can we ensure we are providing sound business advice to farmers? Farmbook is a field-based business application developed by CRS to help farmers plan their farm businesses more effectively and evaluate their productivity and profitability, to help field agents be better business advisors, and to provide customized business information for farmers rather than general market information.

**Integrating Gender and Nutrition in Agricultural Extension Services (INGENAES):** Better gender and nutrition integration in agriculture is an increasingly high-profile issue in the agribusiness, agricultural development, and international development fields. In the same way, good nutrition and agricultural practices that involve both men and women at the household level are critical to livelihood sustainability, especially in developing communities. INGENAES is designed to assist partners in Feed the Future countries ([www.feedthefuture.gov](http://www.feedthefuture.gov)) to build more robust, gender-responsive, and nutrition-sensitive institutions, projects and programs capable of assessing and responding to the needs of both men and women farmers through EAS; disseminate

gender-appropriate and nutrition-enhancing technologies and access to inputs to improve women's agricultural productivity and enhance household nutrition; identify, test efficacy, and scale proven mechanisms for delivering improved EAS to women farmer; and apply effective, nutrition-sensitive, extension approaches and tools for engaging both men and women. We work to improve agricultural livelihoods focusing on strengthening extension and advisory services to empower and engage smallholder farmers, male and female.

**Strengthening Extension and Advisory Services in Georgia (SEAS):** The Strengthening Extension and Advisory Services (SEAS) activity is a USAID-funded project supporting the efforts of the Georgian Ministry of Agriculture (MOA) in further developing its recently implemented public agricultural extension and advisory service system. A major component of the SEAS project includes the development of staff training, mentoring, and continuing education programs for MOA employees who are charged to work directly with farmers regarding improved agricultural knowledge and technology transfer. University extension faculty and other experts from the U.S. and other countries provide the training on education outreach methodology and technical subject matter. Efforts are intended to increase the ability of MOA field agents and specialists to transfer appropriate knowledge to farmers so that farm productivity and household incomes can increase. Extension agents use such methods as hands-on workshops on a wide variety of vegetable, small orchard fruits and vineyard production, as well as using Information and Communications Technology (ICT) to train farmers.

## Preventing Global Postharvest Losses: Applied Research and International Engagement for Societal Impact

C11

Kari Wozniak, Program Coordinator, ADM Institute for the Prevention of Postharvest Loss

Estimates suggest that each year 1/3 of all food is lost or wasted along agricultural supply chains, causing significant impact on food security, environmental sustainability, and rural development worldwide. The ADM Institute for the Prevention of Postharvest Loss at the University of Illinois at Urbana-Champaign is an international information and technology hub for evaluating, creating, and disseminating economically viable technologies, practices, and systems to reduce postharvest loss in staple crops.

Established in 2011, The ADM Institute is a well-recognized leader in its field, known for its multi-faceted research, engagement, and outreach activities. The ADM Institute has funded and collaborated with international partners, such as the International Rice Research Institute, the Bill and Melinda Gates Foundation, The Research Center for Rural Economy in China, and the Rockefeller Foundation, on postharvest loss prevention projects in Bangladesh, Brazil, China, India, and many other countries to reduce postharvest losses and impact people and communities across the globe.

## Regional Economic Development in Fulton County, IL

C12

Manish Singh, Department of Urban and Regional Planning, University of Illinois at Urbana-Champaign; Dr. Stacy Harwood, Associate Professor, Department of Urban and Regional Planning, University of Illinois at Urbana-Champaign; Kathie Brown, Economic Development Education, University of Illinois Extension

The shrinking human and financial capital in the rural Midwest has pushed communities to look back on their existing potential for economic development than any external support. Fulton County, a rural county in West Central Illinois strives to regain its economic potential by exploring their local and regional resources. Spoon River Partnership for Economic Development (SRPED), a non-profit organization in Fulton County, has

collaborated with Department of Urban and Regional Planning at the University of Illinois at Urbana-Champaign and University of Illinois Extension to promote economic development in the county.

Manish Singh, a Master of Urban Planning graduate student is working on a three pronged project with SRPED to enable Fulton County achieve its goals.

The first part of the project is an economic opportunity assessment of the county to analyze the labor market, income trends, industrial mix and employment specialization in the county. The assessment engages the community and businesses to find economic development niches in the county through stakeholder interviews and a business climate survey.

The second part is to collect International Economic Development Council Site Selection Data Standards for the county to publicize the community to relocating employers.

The third part of the project is to create a business development toolkit that would help entrepreneurs in the area to open and expand businesses. The outcome of this project would give SRPED the ground work to orchestrate future economic development initiatives.

## Statistics in the Community: Providing the Local Community with Analytical Assistance

C13

Lyndsay Shand, Undergraduate Student University of Illinois; Robert Eisinger, Ph.D candidate in Statistics, University of Illinois; David Unger, Statistics, University of Illinois

Statistics in the Community (StatCom) is a student-run pro bono statistical consulting organization associated with the Statistics department at the University of Illinois at Urbana-Champaign.

Our consultants are undergraduates, masters and Ph.D. students from the Department of Statistics. We provide services to local educators, non-profit organizations, and government institutions. Types of services include: designing and analyzing surveys, making predictions, finding meaningful information in large data sets, and more.

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Recently, we've worked with the Food Science and Nutrition Department at the University of Illinois, the Eastern Illinois Foodbank, the Circle of Friends Adult Day Center, the Cohen Center for Jewish Life, and the Urbana-Champaign Cradle to Career Program. In each of these cases, our statistical expertise enabled data to drive policy decisions and improve program efficacy.

At the 2015 Public Engagement Symposium, we plan to show results of our work, its impact with a number of local organizations and how we will continue to reach out and offer our analytical support to the community. Our service creates cross-disciplinary relationships and an enriching learning environment by providing our clients with practical statistical benefits and StatCom consultants with hands-on data analysis experience.

### The Illinois New Teacher Collaborative (INTC) Induction Networks



Chris Roegge, College of Education; Amber Behrens, Doctoral Student, Curriculum and Instruction, College of Education; Annie Insana, Doctoral Candidate, Curriculum and Instruction, College of Education; Nancy Johnson, Assistant Director, Illinois New Teacher Collaborative



Illinois New Teacher Collaborative Induction Networks, funded by a University of Illinois Public Engagement Grant, helped school districts support new teachers bridging the gap between pre-service training and the realities of the classroom. Each Induction Network included mentors, program coordinators, and administrators from local school districts, and the network meetings provided them with targeted professional development, structured time for district representatives to make plans as a team, and opportunities for districts to share ideas and plan for local collaborations. Participating districts are high-needs: they are small or rural or they have large numbers of low-income students.

INTC formed three networks, one in the southern part of the state, one in the central, and one in the north. Additionally, the INTC Regional Induction Specialists (RISs) who facilitated the networks were available between meetings for consulting and on-site trainings. Evaluations conducted after each network session showed participant response to be overwhelmingly positive. Results from quantitative and open-ended questions show that all participants very much appreciated the opportunity to participate in the networks. Districts that have not historically provided much support for their new teachers developed plans for induction and mentoring programs, and districts with more established programs formed specific plans for improvements.

### University Academic Programs and Services



Teri Karpman, Brenda Pacey, Dena Lawrence, Scott Johnson: University Academic Programs and Services at the University of Illinois

The University Academic Programs and Services (UAPS) unit of the Vice President for Academic Affairs office serves to facilitate the relationship between the University and outside organizations and agencies. The unit functions as a point of contact between these external entities and the campuses, a conduit through which information flows between the agencies and campus administration.

UAPS sets its priorities with those of the Vice President for Academic Affairs, i.e. to advise and provide leadership in academic programs, teaching and learning, student affairs, and public engagement. Specifically, the mission of the UAPS units is to support the academic, student affairs, and public service programs of the University, particularly in managing and coordinating University-wide programs and projects.

## Writing Together: Engaging Teachers and Students in the University of Illinois Writing Project

C16

Jenn Raskauskas, Graduate Assistant for the University of Illinois Writing Project

The University of Illinois Writing Project, an affiliate of the National Writing Project, provides professional development for local teachers at all levels and in all disciplines to encourage and support the teaching of writing. The UIWP is a collaboration between the College of Education, the College of LAS, and the Center for Writing Studies, and has the support of Champaign and Urbana Schools, Regional Office of Education, and the National Council of Teachers of English.

Annually since 2008, the UIWP has held a Summer Institute, for kindergarten through university teachers in Champaign, Urbana, and surrounding districts. Teachers selected for the Institute demonstrate their own best practices, study writing research, and experience the writing process by composing and sharing their own writing in small groups. Through hands-on training, teachers learn about digital literacy, and publish their work as blogs, podcasts, electronic portfolios, and digital videos. UIWP teachers have become leaders in their school buildings as advocates for increased student writing and the creative use of technology.

The UIWP supports teachers after they return to the classroom with Fall and Spring Conferences and other professional development opportunities. We extend our love of writing to students who attend our Elementary and Secondary Young Writers Camps in the summer. Taught by UIWP teacher-leaders, these camps give area students a chance to experiment with writing genres and technology.

In this session, we will share the goals and outcomes of the UIWP and showcase blogs, podcasts, videos, writing samples and electronic portfolios done by teachers.

## ENVIRONMENT AND SUSTAINABILITY

### Education and Research Excellence in the Great Lakes

E1

Kirsten Hope Walker, Illinois-Indiana Sea Grant; Allison Neubauer, Illinois-Indiana Sea Grant Educator

Illinois-Indiana Sea Grant (IISG) is the product of a close partnership between University of Illinois Extension and Purdue University. One of 33 National Sea Grant College Programs located in every coastal and Great Lakes state and US territory, IISG combines research, education, and outreach to empower southern Lake Michigan communities to secure a healthy environment and economy.

Our research program has grappled with critical issues related to Lake Michigan's coastal resources. Our outreach and education programs utilize this research to provide the latest information to a variety of audiences. IISG's education team meets the challenge of improving today's science education through its professional training for educators and innovative curriculum resources for students and teachers, grades K-16.

Areas of research and education include persistent issues like aquaculture, aquatic invasive species and organisms in trade, climate change, coastal restoration, Great Lakes health, and fish consumption. Emerging issues include pharmaceuticals and personal care products entering our waterways, micro-plastics and plastic fiber pollution, and other concerns that affect the Great Lakes. IISG is on the forefront of information dissemination to the public by utilizing Great Lakes Literacy Principles, community stewardship opportunities, as well as university courses and fellowships. We have a variety of resources, both in print and online, available to those who visit our site.



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## Establishing Boundaries for Growth: Prosperity Garden

E2

Mark Taylor, School of Architecture/FAA

Since 2010 the non-for-profit organization Prosperity Gardens has been building partnerships to improve access to affordable, locally produced fruits and vegetables. Prosperity Gardens' engagement with the urban communities of north Champaign include educational and employment programs for teenagers, health and wellness programs focused around healthy eating, and a farm-stand from which they sell the produce from their urban vegetable gardens.

In 2015 the City of Champaign pledged to support the vision of Prosperity Gardens by providing them access to one acre of derelict land close to the center of downtown Champaign. Sixteen architecture students have spent the first part of the spring semester developing a master plan for the site that will extend the impact Prosperity Gardens can have on the Champaign community. By the summer of 2015 the hope is the work of the students will be presented in a public format, opinions received, and the construction of the first phase of a master plan implemented.

Prosperity Gardens has previously had a number of successful collaborations with the university community. The hope is the expansion site on Walnut St. in Champaign will provide further opportunities for students from multiple disciplines to engage with the communities of north Champaign.



## Growing a Sustainable Food System in Peoria County

E3

Nancy Smebak, Fine and Applied Arts; Mary Edwards, Urban and Regional Planning

This project documents and describes the food system in Peoria County and the surrounding region through participatory and analytic mapping and key informant interviews and videos. Case studies and academic research provide suggestions for improving profitability, equity, civic engagement, and health in the local food system.

## Hand in Hand: The Illinois State Geological Survey and Chicago Park District lead you on walk through Burnham Park

E4

Renae Strawbridge, Illinois State Geological Survey

The Illinois State Geological Survey (ISGS), a division of the Prairie Research Institute at the University of Illinois at Urbana-Champaign, has offered geological field trips to the public for more than 85 years. The field trips are designed to acquaint citizens with geological processes and deposits throughout the state and are especially helpful to those who teach earth science. Additional engagement priorities include providing geological resources to government and constituent groups.

In an effort to reach a wider audience, the Illinois State Geological Survey and the Chicago Park District partnered to create a walking guide for Chicago's Burnham Park. This project was funded in part by a 2010 Public Engagement Grant from the Office of the Vice Chancellor for Public Engagement. In 2014, the Illinois State Geological Survey received a grant from Illinois Department of Natural Resources Coastal Management Program providing for an update and reprint of the Burnham Park guide and a field trip. The brochure and walking tour incorporate both the geology and historical and cultural aspects of the park, and has the potential to reach thousands of people.

Available for distribution at the poster session will be the brochure, A Walking Guide to the History & Features of Burnham Park, Chicago, Illinois. Next time you find yourself in the Windy City, stroll through the park with the brochure and learn about its historical, cultural, and geologic features.

Look for a similar brochure on Chicago's Lincoln Park in Spring 2015!

### Illinois Parks: Creating Healthy Spaces for Healthy Lungs

E5

Megan Owens, Office of Recreation and Park Resources; Jarrod Scheunemann, Department of Recreation, Sport and Tourism

The Office of Recreation and Park Resources assists in the building of healthy communities throughout Illinois and beyond. This goal is accomplished through providing knowledgeable expertise to a variety of public agencies seeking assistance and guidance with strategic planning, policy development, and enhancing community engagement. Health departments and parks and recreation agencies are increasingly interested in establishing smoke-free park policies.

Many agencies are reluctant to create comprehensive policies and have sought input from ORPR with their decisions. ORPR partnered with the Illinois Department of Natural Resources to gather information from Illinois parks and recreation agencies regarding current smoke-free park policies and practices. These results have been disseminated to Illinois health departments, parks and recreation agencies, and other interested parties via website download, email distribution, conference presentations, as well as individual requests.

The study found 42% of responding agencies had a smoke-free parks policy. However, only 21% of agencies had designated entire parks as smoke-free zones compared to a greater number that designated playgrounds or outdoor pools as smoke-free areas. Collecting and disseminating this information has provided agencies with a clearer understanding of the prevalence and conditions of these policies.

For instance, the Champaign County Health Department utilized this report when assisting the Urbana Park District develop their smoke-free park policies. Community health and wellness is at the forefront of ORPR's collaboration with IDNR. This partnership created the opportunity to gather and distribute relevant information for community organizations to use when drafting their own smoke-free park policies.

### SEDAC Saves Energy Throughout Illinois

E6

Ann Campbell, FAA/DURP/SEDAC; Holly Nelson, Urban and Regional Planning; Wesley Clayborn, Urban and Regional Planning

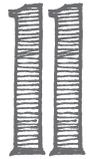
The Smart Energy Design Assistance Center (SEDAC) provides advice and analysis to assist public and private facilities within the State of Illinois achieve energy efficiency savings and reduce the Illinois energy footprint. SEDAC is an applied research program at the University of Illinois at Urbana-Champaign supported by the Illinois Department of Commerce and Economic Opportunity (DCEO) Illinois Energy Now program. SEDAC is a public-private partnership that operates in collaboration with the 360 Energy Group along with other energy entities across the state.

### The Private Well Class

E7

Steve Wilson, Illinois State Water Survey at the Prairie Research Institute; Jennifer Wilson, Illinois Water Resource Center

The Private Well Class is a free, step-by-step education program to help well owners understand groundwater basics, well care best practices, and how to find assistance. The class is self-paced and delivered via email to anyone who signs up. It provides guidance on how to sample a well, how to interpret sample results, and what well owners can do to protect their well and source water from contamination.



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### HEALTH, WELL BEING AND SOCIAL JUSTICE

#### Anti-Drug Abuse Act of 1986

H1

Madeline Knoll, Undergraduate Student, School of Social Work

When Richard Nixon declared a war on drugs in 1971, he started a dialogue with America about drug use. Since then, and even leading up to his declaration, drug use and abuse has caused controversy in the U.S. The issue is incredibly complex because it is often associated with violence and can lead to death. The Anti-Drug Abuse Act of 1986 aimed to tackle this problem by increasing the penalties for using, abusing and selling drugs. It is a broad policy, aimed at any community infected with drugs. It also came with its own set of issues, including racial disparities in sentencing and a wide target, demanding many more resources. The following policy analysis examines the effectiveness and the unintended consequences of the Act.

#### Culture for Health Splash: A Community Partnership Approach to Positive Youth Behaviors

H2

Nuno Ribeiro Cardoso, Department of Recreation, Sport and Tourism, College of Applied Health Sciences; Corky Emberson, Superintendent of Recreation, Urbana Park District; Jarrod Scheunemann, Community Services and Education Coordinator, Office of Recreation and Park Resources, Department of Recreation, Sport, and Tourism; Megan Owens, Graduate Student, Department of Recreation, Sport, and Tourism

This project addresses the need for community-based partnerships that target culture, recreation, and positive health behaviors of young people living in the local community. This university-community collaboration aims to extend the research and outreach missions of the University of Illinois by engaging in a partnership between two campus units (the Department of Recreation, Sport and Tourism and the Office of Recreation and Park Resources) and two local agencies (the Urbana Park

District and the Urbana School District), to facilitate the delivery of cultural-based health workshops via a well-established after-school recreation program (SPLASH) that serves young people in the Urbana Park District.

Through the delivery and evaluation of twelve workshops over the course of six weeks and two semesters, this project addresses risky youth behaviors within a leisure context, from a positive community perspective, and students participating in the program learn by playing about risky behaviors such as alcohol and drug consumption, tobacco consumption, in a culturally-sensitive environment. By participating in culturally-appropriate activities in a safe environment, this partnership seeks to strengthen youth's cultural understanding of distinct health-related behaviors in a leisure/recreation context, increase their cultural resilience, and reinforce positive behaviors, whilst discouraging negative ones.

Expected outcomes from the implementation of this project include: increased cultural awareness and cultural resilience; increased awareness of risky youth behaviors; decreased propensity to engage in negative health behaviors; strengthening of ties between stakeholders involved; and a model of collaboration and programming that can be reproduced locally or statewide.

#### Developing a Central Illinois Non-Profit Training Institute

H3

Benjamin Lough, Assistant Professor, School of Social Work; Laura Huth, President and CEO, do good Consulting; Sue Grey, President and CEO, United Way of Champaign County

The need for leadership training in the non-profit sector in Central Illinois is acute. Baby boom leaders are approaching retirement, and the next generation of frontline providers need leadership and management training in order to succeed. However, the closest opportunities are in Chicago, Indianapolis, or St. Louis, making training an expensive and time-consuming venture, and all-too-often, an ill-fit for Central Illinois non-profit needs. Our project is creating an affordable and comprehensive curriculum- and cohort-driven program specifically for Central Illinois non-profit leaders.

A broad spectrum of stakeholders representing universities, non-profit leaders, and private sector organizations are involved in developing the Institute's basic framework and accreditation standards. The training will include a mix of in-person and online training sessions occurring over 6 to 12 months, with bi-weekly or monthly training sessions lasting 6 to 8 hours. The sessions will be taught by leaders experienced in non-profit management. A cohort-focused structure will build leadership and strengthen ties in the non-profit sector across the entire region.

At program completion, successful participants will earn a certificate from participating colleges or universities, including UIUC, creating a competitive edge for non-profit organizations and employees. Post-completion, participants will make deep and long term impacts back in their organizations, and all will be expected to continue their Institute participation through on-going check-ins and mentoring roles with future participants.

#### Engaging Women and Girls through the Community Advocacy Project (CAP) and Girls Advocacy Project (GAP)

H4

Nicole Allen, Associate Professor, Department of Psychology; Suvarna Menon, Student; Liz Trawick, Student

The Community Advocacy Project (CAP) and Girls Advocacy Project (GAP) are short-term evidence-based intervention programs wherein trained advocates work with women and girls in the community to advocate for and empower them to mobilize community resources that meet their needs.

CAP works with survivors of sexual assault or domestic violence while GAP works with girls with juvenile justice system involvement. The programs therefore engage both students and community members as participants. Both programs adopt a trauma-informed and strengths-based approach wherein advocates use skills like active listening, demonstrate empathy, and engage in risk assessment and safety planning with participants.

Advocates engage in both client-level advocacy, where they work with and on behalf of their clients, and systems-level advocacy, where they make active efforts to make institutions more responsive to participants' needs. The advocacy model strongly emphasizes that participants are the drivers of their own bus. We view our role as that of invited passengers who can navigate for certain parts of the trip by helping participants understand their options and choices.

Each intervention is completely individualized and tailored to meet the needs of the participant. However, the goal of all interventions is to make the community more responsive to the needs of women and girls and to empower participants to assume a self-advocacy position.

The programs have shown consistent positive outcomes for both women and girls like reduced physical violence and depression, increased social support and quality of life, and effectiveness in meeting goals and obtaining resources (Sullivan and Bybee, 1999).

#### Health Informatics to Improve Public Health Response

H5

Marilyn O'Hara Ruiz, Veterinary Medicine/Pathobiology; John Herrmann, Clinical Associate Professor, Veterinary Clinical Medicine; Ian Brooks, Research Scientist, Library and Information Science

The multi-faceted demands on local health departments (LHD) are ongoing and critical to community well-being. Vulnerable populations are a particular concern; but everybody benefits from clean water and food, safe work places, and productive, healthy citizens.

Through Public Health Informatics, the University of Illinois has contributed to improving health by engaging with LHDs to address data and analysis needs. Some analyses involve technical complexities, and LHD staff may not have the time or background to accomplish this work.

Data synthesis helps LHDs to respond to important public health problems and to measure program results. The projects highlighted here were carried out by a multi-disciplinary collaboration focused on health informatics, geographic

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information science and epidemiology. It extends over the past decade with projects at local and state health departments; and most prominently, with the Champaign-Urbana Public Health District (CUPHD),

Every five years, health departments conduct a community health assessment, which rely heavily on data. At the local level, we have consulted on these plans and have created maps of health indicators and socio-demographic data. We have also developed an automated approach to reduce the burden of evaluating these data. Visualization is an important tool, and we have used spatial technologies to show patterns of obesity, vaccination rates, and low birth weight infants and have created a novel system to improve disease surveillance.

These analyses and visualizations in combination with student and faculty involvement help LHDs to better target invention efforts and are important intelligence gathering for decision-makers.

### Illinois Students Working to Promote Health Equity through Avicenna Community Health Center

H6

Diamond Powell, Student, Applied Health Sciences/Community Health/Avicenna; Katherine Magerko, Graduate Student, Department of Human and Community and College of Medicine and Assistant Clinic Manager at Avicenna Community Health Center; Dr. Irfan Ahmad, Center for Nanoscale Science and Technology and President of Avicenna Community Health Center; Ben Mueller; Paven Aujla, Student; Samuel Logan

Students from a variety of disciplines have been volunteering with Avicenna Community Health Center since 2009. Through this collaborative work, undergraduate, graduate and professional students from a variety of disciplines have had a chance to broaden their horizons volunteering in a health care context. Students in medicine, nursing, business, engineering, community health, social work, nutrition and others have had the unique experience of working as a team to promote preventative health care in the community. Together with community physicians and nurse practitioners these students have served uninsured adults in over 2000 visits for primary preventive services and chronic disease management.

Across the community at health fairs, soup kitchens and food banks, and local festivals, students have been promoting health by providing health screenings and educational displays. Specifically, students have made almost 400 contacts in the past two years at the Daily Bread Soup Kitchen.

Several of the students involved with Avicenna have since been inspired and were awarded a UIUC Focal Point Grant. This grant has funded an interactive seminar series using a multidisciplinary approach focused on local and global health disparities.

On average, about 60 students, faculty members, and community members have been attending these events. Witnessing first hand and publically discussing important health issues prepares UIUC students to be leaders that create solutions that ameliorate health disparities and promote health equity for all.

### Justice Through Engagement

H7

Rebecca Ginsburg, Associate Professor and Director, Education Justice Project, Department of Education Policy

Our display will explore the three points of the triangle that composes the Education Justice Project's work: our community library at Danville Correctional Center, outreach to loved ones impacted by incarceration in Chicago and drawing on what we learn from our activities in Danville and Chicago's programs back on the Urbana-Champaign campus that allow us to reflect on our outreach while raising critical awareness around incarceration.

Our name says it all. We believe in changing lives, but also in contributing to struggles that change the conditions in which people find themselves living less than fulfilled lives in the first place. Engagement as justice work. This is not something that comes easily or that is yet crystal clear to us, but with other like-minded programs across the country we are exploring what it means to view engagement as participation in social and political struggles that strive for fundamental change.

## Money Mentors: Promoting Healthy Financial Habits through One-on-One Education and Coaching

H8

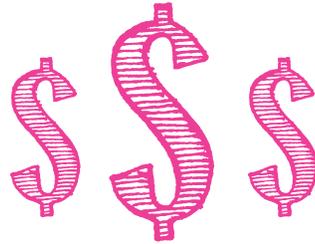
Cayla Waters, University of Illinois Extension; Pam Atkinson, Consumer Economics Educator, University of Illinois Extension serving Livingston, McLean and Woodford counties; Amanda DeRuw, Consumer Economics Program Coordinator, University of Illinois Extension, serving Livingston, McLean and Woodford counties; Kathy Sweedler, Consumer Economics Educator, University of Illinois Extension, serving Champaign, Ford, Iroquois and Vermilion counties

Many people strive to improve their financial situation but lack the information and motivation needed to practice healthy financial habits. To answer this growing need, University of Illinois Extension has launched the Money Mentors program.

Money Mentors is a volunteer program that matches volunteers with mentees and people who ask for assistance with basic money management. This pilot program began in the fall of 2013. In a little over a year, the University of Illinois Extension Money Mentors program has conducted six training sessions resulting in 59 trained volunteers. Marketing efforts have resulted in 108 people applying to be a mentee.

Currently, this program is reaching people in seven central Illinois counties. University of Illinois Extension Consumer Economics Educators, Pam Atkinson and Kathy Sweedler train mentors in financial management strategies. Then, mentors teach people the basics of personal money management through one-on-one mentoring. Common financial goals of mentees include: creating a spending plan, paying down debt and organizing finances. Mentors also offer outreach programs with informational displays at community events and other financial education projects.

Since the program began, Mentors have contributed approximately 811 hours of volunteer time (a value of \$18,288 by standard calculating methods) meeting with mentees and contributing to other University of Illinois Extension financial education outreach efforts.



Mentees are already reporting positive changes in their financial situations and behaviors. In addition, each mentor is currently working with one or more mentees; watch us continue to grow in 2015 with more trainings and outreach.

## Policy Analysis: Illinois Domestic Violence Act of 1986

H9

Emily Dietze, College of Liberal Arts and Sciences, Psychology

The Illinois Domestic Violence Act of 1986 is an essential piece of legislation. The policy, most importantly, identifies domestic violence as a crime. At the time the Act was passed, this was a large step as domestic violence is a crime with a long, silent history that crosses over many cultures. Additionally, the policy outlines the survivors' rights as a victim of this crime. It breaks down the various resources as well as the responsibilities that the court, criminal justice, and health care system must uphold.

Although the Illinois Domestic Violence Act of 1986 only applies to Illinois residents, the policy is gender neutral so it is able to help all victims regardless of gender identity. With the development of technology and different societal norms, the policy is not up to date; therefore a revision is necessary in the near future.

## Social Innovation at Illinois

H10

Noah Isserman, College of Business and School of Social Work; Ryan Singh, Manager of Social Innovation at Illinois

Social Innovation at Illinois (SII) is a cross-campus initiative of the University of Illinois that aims to provide students and faculty with even more ways to apply their knowledge to solving the biggest social challenges of the 21st century.

We are steadily building curriculum, applied research opportunities, and related programs in service of the vision. Through a three-stage social entrepreneurship course pipeline, students learn the theory behind social entrepreneurship and design, launch and scale products, nonprofits, and firms that create social value in both the local and global community. Each

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student has access to world-class startup advisors and capacity funding to help turn their ideas into a reality.

Furthermore, we are developing a faculty fellowship program to assist faculty members in translating their research into tangible products, firms, and nonprofits, with the help of multi-disciplinary student fellows over the course of one-semester.

### The Illinois-ROMP Collaboration: Engaging Internationally to Provide Low-Cost, Highly Functional Prostheses in Developing Nations

H11

Aadeel Akhtar, Neuroscience; Mary Nguyen, MS Student, Aerospace Engineering; Timothy Bretl, Aerospace Engineering

According to the World Health Organization, roughly 80% of people with amputations live in low-income countries, while less than 3% of these people have access to appropriate rehabilitative care.

Furthermore, current state-of-the-art prosthetic devices cost between \$30,000-40,000. In our project, we contribute to a more equitable distribution of prosthetic care by providing a highly functional and low-cost prosthetic hand to people with below-elbow amputations in Quito, Ecuador (where access to affordable prosthetic care has been limited). Our hand costs less than \$500 to manufacture and has the same functionality as state-of-the-art prostheses. We will train prosthetists in Quito to build and maintain it themselves in their own community.

Our international collaboration with the non-profit Range of Motion Project (ROMP) presents a model of engagement between academic researchers in engineering and the populations they hope to serve.

Since 2005, ROMP has provided over 1,000 prosthetic devices to patients throughout the Americas. It maintains a locally-staffed, fully-operational prosthetic clinic in Zacapa, Guatemala, as well as

in Quito. This collaboration provides a new opportunity for Illinois students who are studying at the Universidad San Francisco de Quito to volunteer with ROMP in the area of prosthetic care and will likely encourage more science and engineering students to study abroad in Ecuador.

Additionally, the project will add to the portfolio of high-visibility and high-impact public engagement activities that can be used to support and provide leverage for the proposed Engineering-based College of Medicine at the University of Illinois.

### Caffeine Consumption in College Students' Diets: Use It, Don't Abuse It

H12

Marian Huhman, Assistant Professor, Department of Communication; Jaesung An, Priyanka Bose, Kaylee Lukacena, Dennis Lusiana, and Sayeh Saidi

Social marketing targets complex, and often socially controversial, behaviors with delayed and distant benefits to people who often don't recognize they have a problem and are not looking for a solution. One of these behaviors is over-consumption of caffeinated drinks, which are a staple in many college student diets. Because the over-consumption of caffeine by adults in their 20s is a concern for health experts, our research team wanted to learn more about the behaviors, attitudes, and perceptions of caffeine consumption among University of Illinois at Urbana-Champaign (UIUC) students. Our poster presentation will exhibit our findings based on three focus group discussions and a survey that were conducted with UIUC undergraduate and graduate students.

The findings from our focus group will be used to help determine the motivators and barriers that accompany efforts to reduce the amount of caffeine intake among college students. A better understanding of why college students drink excessive amounts of caffeine and why they rely on these drinks will help health educators, dining services, and college students to not only learn the effects of excessive caffeine, but to also find other ways to boost energy and reduce fatigue.

### Attracting the Next Generation of Engineers

M1

Joe Muskin, College of Engineering, Department of Mechanical Science and Engineering; Tina Lehr, Science Teacher at Urbana Middle School; Martha Henss, STEM Coordinator at Champaign Unit 4 Schools and teacher at Washington Elementary.

The Mechanical Science and Engineering department has developed and implemented several activities with several classes of students in local and regional schools to encourage students to consider engineering as a career. For example, we have worked with high school engineering students from Uni High School to develop an air maze exhibit for the Orpheum Children's Science Museum. Another example is working with Jefferson Middle school on a project where students made percussion instruments and engineered systems where computers and motors played the instruments.

In addition, several larger events have been coordinated using student organizations or older school children teaching younger school children. For example, we worked with many classrooms in local schools, as well as in larger venues such as the St. Louis Science center.

We will showcase some of the activities and events that we have engaged in this year, with an emphasis on how units can leverage resources to make a bigger impact and reach more participants.

### Exploring Electricity in Minecraft: TCIPG MINECRAFT WORLD OF POWER

M2

Jana Sebestik, Office for Mathematics, Science, and Technology Education; Brandan Pflugmacher, Information Trust Institute; Brendan McDonnell, University of Illinois Student

TCIPG (Trustworthy Cyber Infrastructure for the Power Grid) Education is developing an educational energy world for use with the MinecraftEdu mod for the popular game and teaching tool, Minecraft.

Minecraft started as a simple game of breaking and placing blocks in a massive 3D world. It has since evolved to allow for the creation of complex worlds where anything is possible. Educators quickly realized the teaching potential of this game and have developed several educational worlds to use in classes.

In this world students work together to learn basic circuitry and several power utility components in order to complete and run a functional power grid. They build several power generation sites including a wind farm, solar farm, hydro-electricity dam, and gas powered plant. Students learn how to operate and utilize each power generation site and how to use the different sites together to provide power to the grid.

### Institute for Genomic Biology: Where Science Meets Society

M3

Sara Haag, Coordinator of Outreach Activities at the Institute for Genomic Biology; Melissa McKillip, Director of Development and Outreach at the Institute for Genomic Biology

Using state-of-the-art equipment and shared lab spaces, the Institute for Genomic Biology's (IGB) unique facility stimulates exciting discoveries and on-going interdisciplinary collaborations among its world-class researchers. IGB embraces the concept of 'Where Science Meets Society,' and hosts events intended to raise the awareness of the transformative research taking place at the Institute, and also to facilitate the interaction between IGB members and the greater community.

The *Art of Science: Images from the Institute for Genomic Biology*, now in its fifth year, is a celebration of common ground between science and art. The research images are selected and some are artistically enhanced to highlight the beauty and fascination encountered daily in scientific endeavors. IGB will partner with Indi Go Artist Co-Op for an exhibit taking place April 23-27, 2015.

The IGB will host its third Pollen Power camp July 6-10, 2015. Pollen Power is a weeklong science day camp for middle school girls. Campers use pollen to study past and future plant responses to climate change, tour campus research labs and facilities, conduct real-world pollen research, and create video presentations using a green screen.



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## 2015 Public Engagement Symposium

The public is invited to learn about genomes, genes, DNA and evolution at the Orpheum Children's Museum on November 7, 2015. The annual open house is free and offers a wide variety of hands-on activities to learn from researchers at the IGB. Volunteers from SACNAS (Society for Advancement of Chicanos and Native Americans in Science) provide bilingual support for the event.

### NanoSTRUCT: Nanoscale Science and Technology Resources for Community Teaching



Irfan Ahmad, Center for Nanoscale Science and Technology; Carrie Kouadio, Project Coordinator for Micro and Nanotechnology Lab ; Alex Cerjanic, MD/PhD Student, Bioengineering; Vahid Mirshafiee, PhD Student, Materials Science and Engineering; Ritu Raman, PhD Student, Mechanical Science and Engineering; Brittany Weida, PhD Student, Bioengineering; Jonathan Yen, PhD Student, Bioengineering; Elizabeth Dabrowski, Third Grade Teacher, Booker T. Washington STEM Academy; Caila Giboney, Third Grade Teacher, Booker T. Washington STEM Academy; Lauren Johnson, Third Grade Teacher, Booker T. Washington STEM Academy

The University of Illinois at Urbana-Champaign is a national leader in nanotechnology. The Center for Nanoscale Science and Technology (CNST) works in collaboration toward a seamless integration of interdisciplinary research. CNST has engaged the community through nanotechnology outreach, educating students and teachers about the applications, benefits, with potential to solve energy, health, security, agriculture, and environmental issues. CNST has developed programs for local K-12 community that introduces STEM concepts, skills, and related careers. Nanotechnology at the Public Square, Engineering Open House, WILL radio, presentations, lab tours, museum collaborations, and development of educator resources have comprised CNST's outreach activities.

In 2014-2015, through NanoSTRUCT, CNST is expanding its impact by expanding distribution of the CNST-produced *Nanotechnologist* and *Bioengineer* books in local classrooms and libraries; supporting student-led outreach and disseminating these outreach materials; developing a K-12 STEM Educators Workshop; creating high school research opportunities; and generating introduction to nanotechnology educational kits.

Graduate trainees in the Midwest-Cancer Nanotechnology Training Center (M-CNTC), Cellular and Molecular Mechanics and BioNanotechnology-Integrative Graduate Education and Research Traineeship (CMMB-IGERT), and Emergent Behaviors of Integrated Cellular Systems (EBICS) are participating as the CNST-Student Initiative (CNST-SI). Through a partnership with Booker T. Washington STEM Academy, we are expanding previous student-led outreach efforts and reaching diverse local elementary students and K-12 attendees at Engineering Open House.

Through all of these efforts, CNST is increasing the local community's understanding of science, technology, and engineering through a focus on an important emerging technology that will impact numerous high-need areas in the global arena.

### NetMath



Joe Nance, NetMath; Zac Schoenrock, NetMath

NetMath is an online distance learning program of the Department of Mathematics at the University of Illinois at Urbana-Champaign. Our mission is to bring the academic resources from one of the nation's top public universities to students around the world.

Through our Partner High School program, high schools may offer University of Illinois courses to their students in a partnership with NetMath. As partners with NetMath, high school teachers work with our program to handle some of the instructional duties of the course for a group of students.

### Outreach at the Illinois Geometry Lab



Michelle Delcourt, Illinois Geometry Lab; Jayadev Athreya, Department of Mathematics

The Illinois Geometry Lab (IGL) seeks to spark interest in mathematics through showing the creative side of mathematics, in particular, by visualizing and fabricating mathematical concepts using a hands-on experimental approach. These types of ideas have been pioneered and developed by Illinois mathematics

faculty since the late 19th century, and the IGL builds on this rich tradition.

Since Fall 2011, the IGL has been working to bring students and faculty together to work on open problems in mathematics and mathematics visualization, spark the interest of elementary, middle, and high-school students through targeted outreach activities, and provide mathematical activities to the community, in particular via our website. We have developed partnerships with local schools, created an environment for vertically integrated research activities on campus, and been publicly recognized by Scientific American magazine as a leader in undergraduate research in mathematical visualization.

### Robotics outreach for 4-12 grade students in Central Illinois by iRobotics, Illini Robotics, and 4-H Robotics

M7

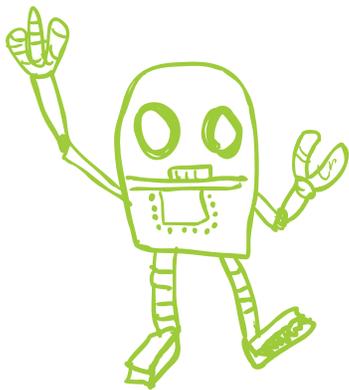
Athrey Nadhan, iRobotics and undergraduate student at the University of Illinois; Rebecca Nothof, iRobotics and undergraduate student at the University of Illinois; Elizabeth Hsiao-Wecksler, Associate Professor, Mechanical Science and Engineering

iRobotics is a student-run robotic engineering organization at the University of Illinois at Urbana-Champaign that prides itself on its encouragement of STEM development in younger students at the

elementary, middle, and high school levels. iRobotics organizes numerous outreach activities at multiple elementary and middle schools to encourage interest in technology and engineering, impacting more than 200 students in the Champaign-Urbana area. iRobotics supplements its community involvement with its cooperation with FIRST Lego League (FLL), FIRST Robotics Competition (FRC), and 4-H Robotics to support

emerging robotic engineering clubs in primary and secondary schools across Central Illinois.

In addition to its members mentoring emerging teams to guide them in the right direction, iRobotics also promotes positive



engineering methods and principles by hosting workshops for robot design as well as robot programming, so that students develop strong skills in project design and management. Finally, to provide a forum for different teams to interact and collaborate, iRobotics works with FLL and 4-H to host practice tournaments and scrimmages for students to practice and experience the thrill of competition.

### The 21st Century Scientists: Working to Elevate Communication and Community Engagement

M8

Daniel Urban, undergraduate student at the University of Illinois; Jessica Hekman, undergraduate student at the University of Illinois; Katharine Lee, undergraduate student at the University of Illinois; Mary Rogers, undergraduate student at the University of Illinois; Daniel Sorensen, undergraduate student at the University of Illinois; Kathryn Clancy, Assistant Professor of Anthropology; Karen Sears, Assistant Professor of Animal Biology

Engaging with the public should be one of the primary missions of a 21st century scientist. Yet too often there is a lack of emphasis on training and incentivizing science communication. To help address this gap we created the 21st Century Scientist Working Group, a collection of faculty, staff, and graduate students working to promote science communication.

Our goals are to improve training for those who want to become engaged scientists, and to create a community of support for re-conceptualizing the role of scientists in today's society. Specifically, we strive to develop best practices for science communication (science writing, outreach, and engagement), train students at the graduate level, and promote the value of science communication to policy makers in order to advocate for new incentives within academic science. We actively further these aims by:

- 1) Leading weekly meetings and monthly journal clubs focused on the importance of science outreach and effective techniques of scientific communication
- 2) Organizing seminars that bring outside speakers to educate and inspire the University of Illinois community on the scholarship and practice of science communication



## 2015 Public Engagement Symposium

- 3) Hosting a yearly conference on best practices in science communication
- 4) Developing a graduate student minor in science communication to boost preparation in writing, communicating and transmission of ideas to the public and future scientists

By creating development opportunities that are readily available for diverse individuals from multidisciplinary backgrounds, we hope to foster collaborations and elevate the standards of science communication and public engagement.

### The Growing CU Community Fab Lab Network

M9

Jeff Ginger, Project Coordinator, Illinois Informatics Institute; Lisa Bievenue, Assistant Director of the Illinois Informatics Institute

The Champaign-Urbana Community Fab Lab is a collaborative workshop space for computer-based innovation, design and fabrication. The Fab Lab allows you to dream up, design and make almost anything you can imagine by leveraging open source software, DIY equipment and a powerful network of makers.

In the past couple of years our programs and services have grown considerably. The Fab Lab now has partnerships with half a dozen organizations around the community, from public libraries to schools to even a retirement village.

We are part of several grants to establish makerspace-style curriculum and collaborative learning contexts to foster digital literacy in both community and university settings. We would like to share our resources and connect with other partners who work in education, research, art and entrepreneurship. This includes workshops and classes for youth organizations, training for educators, lab and equipment rental, consulting and event showcases and more.

## YOUTH AND FAMILY

Y1

### Celebrating High School Innovators

Raymond L. Price, Professor and William H. Severns Chair of Human Behavior, Co-Director, iFoundry, UIUC; Amy Koester, Program Coordinator iFoundry, College of Engineering; Paul Ritter, 2014 White House Presidential Innovation Award for Environmental Educators, President, Illinois Science Teachers Association, Pontiac Township High School Science Teacher

Educators know that test scores and grade point averages don't always tell the whole story. To recognize and celebrate high school students throughout the state of Illinois whose contributions are innovative, creative, or inspirational, regardless of their test scores or GPA, The Illinois Foundry for Innovation in Engineering Education (iFoundry), has launched a new awards program, Celebrating High School Innovators.

Applicants submit a 1000-word personal statement describing who they are, what they have done that is innovative, and why it matters. Students apply in one of five areas: Arts, Media, & Literature; Business Entrepreneurship; Food, Health & Nutrition; Social Entrepreneurship; and STEM. The new program has the endorsement of several Illinois teachers associations, the regional superintendents of schools, and the Governor's office.

The 20 competition finalists have been selected, and will have their achievements recognized in a first-of-its-kind Illinois Innovation Celebration at the University of Illinois at Urbana-Champaign in May 2015. The event will include an opportunity for students to get to know each other and work together, to collaborate with innovative professionals in each area, and to engage with UIUC students, professors, and administrators. Students will also be profiled in a book of young innovators.

For additional information, visit: [innovative100.engineering.illinois.edu](http://innovative100.engineering.illinois.edu)

## C-U 1 to 1 Mentor Program and Urbana Schools Tutor Programs

Y2

Lorene Ellinger, Community Involvement Coordinator, Urbana High School ; Patti Pattison, Community Outreach Coordinator, Urbana School District #116

The C-U 1 to 1 Mentor Program is a school based mentoring program available to students in all public schools in Urbana and Champaign. Currently, there are more than 650 community members who volunteer weekly through this program. But there are many more students seeking mentors. We wish to inform University of Illinois faculty, staff and students about this life-changing program and encourage their participation as volunteer mentors.

We also work with the College of Education and the LAS Secondary Education Program to provide opportunities for U of I students to volunteer in Urbana Schools. U of I tutors gain valuable experience and Urbana School students and staff benefit from the knowledge and enthusiasm of these tutors.

## Early Intervention Training Program at the University of Illinois

Y3

Chelsea Guillen, College of Education, Special Education, Early Intervention Training Program; Rosa Santos, Professor, Special Education, University of Illinois; Michaelene Ostrosky, Professor, Special Education, University of Illinois; Tweety Yates, Research Assistant Professor, Special Education, University of Illinois; Ted Burke, Director of the Early Intervention Training Program; Alissa Jones, Research Specialist, Special Education, University of Illinois



The Early Intervention Training Program at the University of Illinois is funded by the Illinois Department of Human Services Bureau of Early Intervention to deliver professional development to early interventionists serving children and families in the Illinois Early Intervention System.

The mission of the Early Intervention Training Program at the University of Illinois is

to develop a comprehensive system of personnel development that is regionalized, responsive and reflective of best practice in the field of early intervention. In addition to providing numerous training opportunities for early interventionists across the state, collecting data on family and professional needs, and serving as a resource point for early intervention and early childhood information, current projects include the development of video, digital, and print materials to (1) inform childcare providers to successfully collaborate with early interventionists and (2) introduce families to early intervention in Illinois.

## Entrepreneurial Leadership in STEM Teaching and Learning

Y4

David Bergandine, Office of the Provost/University Laboratory High School; Dr. Christian Ray, Director of General Chemistry at the University of Illinois; Shalonda Carr, 2/3/5 ESL teacher, Martin Luther King Jr. Elementary School, Urbana

About 20 juniors and seniors at University Laboratory High School are volunteers helping teach science lessons at local elementary schools. This program grew out of the EnLiST teacher training workshops that have been offered here at UIUC.

Pat Shapley (a Uni parent and former professor of chemistry) designed the chemistry training portion of EnLiST training, and I had the opportunity to work with her as well. In the summer of 2011, several of my upper level chemistry students assisted in the teacher workshop, and their participation was roundly lauded. Some teachers conspired to 'kidnap' them and take them back to school in the fall. Thus began a plan to create a cadre of Uni student volunteers to work with kids at two nearby schools: Booker T. Washington in Campaign and Martin Luther King Jr. in Urbana.

In our fourth year now, we continue to serve in the ELL classroom of Ms. Shalonda Carr at MLK.

After the retirement of Pat Shapley, Christian Ray from UIUC General Chemistry has taken on lesson development. This has become an effective collaboration because we have motivated and willing partners from the UIUC campus as well as the local community.

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Engagement



## 2015 Public Engagement Symposium

While the focus is on the learning experiences of the young children in the classroom, the high school volunteers have also benefited greatly from the experience of practicing public engagement.

### Immigrant Parent Leadership Program

Y5

Efadul Huq, Undergraduate Student, College of Fine & Applied Arts/ Department of Urban & Regional Planning; Germainy D. Mokeleba, Undergraduate Student in the Department of Global Studies; Stacy Harwood, Associate Professor Urban and Regional Planning

Whether through creating learning environment at home or navigating the school system in an informed manner, parent engagement has been shown to affect children's education. Seen in this light, it becomes crucial for immigrant communities to mobilize the network of children's intimate relations outside school spaces for reinforcing academic and social growth.

In the context of Champaign-Urbana, a mini-ethnographic inquiry found that parent engagement and advocacy in immigrant communities can be further increased. This is similar to reports from other school districts. Studies conducted on the matter explain this phenomenon as the immigrant parent following his or her cultural script, that is, parents who seem disengaged are, from their culturally situated perspective, respectful of the authority of the school to do its work while maintaining active involvement in the life of the child at home. In fact, some may even interpret engaging with school's decision-making as disrespectful. Such non-engagement can be reinforced through concerns of being undocumented, single or non-resident parent, lacking understanding of school expectations and processes, lacking access to transportation, or lacking confidence in communicating with teachers/administrators and helping children with academics.

The Immigrant Parent Leadership Program is aimed to engage parents in constructing parental roles where immigrant parents are active agents in decision-making processes at school districts. Leadership and advocacy workshops for parents in Champaign-Urbana is presented here as a strategy to pave the way for more immigrant friendly school districts.

### KAM/WAM: Krannert Art Museum Week at the Museum

Y6

Kamila Glowacki, Krannert Art Museum

KAM/WAM is a program that provides classes of elementary students with the opportunity to attend school at Krannert Art Museum for an entire week. KAM/WAM focuses on integrating the arts into curricular areas with attention to best practices and grade-level learning goals. It is a unique and constantly evolving educational experience founded in partnership with community educators who value interactive, non-traditional approaches to teaching curricular areas using the art at the museum. In addition to the one-week program, in 2013/2014 KAM also added a one-day program (KAM/BAM) and a year-long learning endeavor (KAM/JAM).

### Setting the GOAL of Higher Education for Teen Parents

Y7

Jeanette Weider, Associate Director of University Housing for Family & Graduate Housing Director of Family & Graduate Housing; Tasha Thompson founder of the GOALS Project: Going On Against Life's Struggles

This local not-for-profit organization empowers teen parents, ages 13 to 19, to set and attain life goals despite the obstacles presented to them. Specifically, the GOALS Project takes a holistic approach and provides teen parents the tools to become productive adults and successful parents through teaching, mentoring, and support.

The GOALS Project (GOALS) works to improve the personal and academic success of our teen parent participants. One key component is educational advancement, our participants have different levels of educational goals. *Setting the GOAL of Higher Education for Teen Parents* will expose teen parents to many higher education options. Too often teen parent programs only expose participants to local options, community colleges, and career training programs. These are great options for some teen parents; however, we recognize teen parents need to understand the breadth of options for higher education and the support

systems specific institutions offer, like university owned family housing.

The GOALS Project is coordinating college campus tours that include housing options for students with dependents, admission process, and the financial aid process.

University of Illinois Urbana Champaign University Housing staff from Family & Graduate Housing are assisting GOALS with the tour arrangement and establishing a contact to meet with in family housing at each institution. The GOALS teen parents will be taking an official tour of University of Illinois and meet with representatives to discuss the admissions process and housing options.

The GOALS Project will also collaborate with Tiffany Pucket, current PhD student in the College of Education, who was an undergraduate student parenting a young child. She will meet with the GOALS teens to share her experience of being a teen parent who pursued her undergraduate degree and attends law school at the University of Illinois while parenting.

## Spanish in the Community

Y8

Vicky Pavlou, Undergraduate Student, University of Illinois, Spanish 332; Ann Abbott, Associate Professor, Department of Undergraduate Study, Spanish and Portuguese

Spanish 232 and 332 courses offered by the Spanish Language Department of UIUC are based on core values of community work, team building, and service. Through the in-class work, students gain a new level of cultural understanding. The courses are also designed to address relevant cultural issues and other difficulties with the language that non-native speakers may face. Through these lessons and integrating oneself into the community, the students are able to take action and truly do what they are passionate about.

Along with learning the importance of service and teamwork, Spanish 232 and 332 teach the students to



be self-starters, something that is extremely valuable for their respective career paths.

While in-class learning is imperative to the enrichment of the student's knowledge, these two courses offer a unique way for the student to apply their newly acquired knowledge directly into the community. Volunteer opportunities are continuously offered to students whether they choose to work in a classroom setting with other children, or in a hospital setting with translational services.

Ultimately, the classes are designed to enrich not only the student, but also the Champaign-Urbana community.

## St. Elmo Brady STEM Academy

Y9

Ricky Greer, University of Illinois Chemical & Biomolecular Engineering; Dr. Jerrod A. Henderson, Lecturer, Chemical & Biomolecular Engineering

This program was developed to expose underrepresented 4th and 5th grade boys to science, technology, engineering, and mathematics using an innovative approach.

First, participants are engaged in hands-on S.T.E.M. experiments and encouraged to learn through inquiry. Next, participants learn about S.T.E.M. pioneers and inventors through weekly videos and exploration activities. They also interact with underrepresented University of Illinois graduate and undergraduate students, faculty and staff to complete experiments. Finally, fathers, male relatives or mentors attend session and conduct experiments alongside participants.

Students explore S.T.E.M. in a deeper way than they might in the classroom. During sessions participants engage the scientific method and the engineering design process. Research projects enable student to develop higher level thinking skills and become better problem solvers.

We are exposing participants to positive S.T.E.M. experiences and creating a community of young scientists who may one day consider S.T.E.M. careers.

## Supporting Early Intervention Providers and Families Via Telepractice (i-PiCS)

Y10

Hedda Meadan, Professor, College of Education, Department of Special Education; Melinda Snodgrass, Research Assistant; Moon Chung, Research Assistant; Jamie Pearson, Research Assistant; Yusuf Akamoglu, Research Assistant; James Halle, Professor Emeritus, Special Education

We have developed a program, called the Internet-based Parent-implemented Communication Strategies (i-PiCS) program, to provide parents of young children with communication delays and disorders who receive early intervention (EI) services with training and coaching in the use of naturalistic communication teaching strategies.

EI service providers (e.g., developmental therapists, speech pathologists) face many challenges in delivering EI services to families, especially families who live in rural areas or who are experiencing poverty. The i-PiCS program is designed to allow service providers to train and coach parents in evidence-based strategies to help their child develop all from a distance using videoconferencing and other online technologies.

These features of the i-PiCS program reduce travel time and costs for the service providers and can allow the EI providers to serve families who may otherwise go under- or un-served.

Having piloted the i-PiCS program here at the University, we are now collaborating with EI service providers in the surrounding communities to develop the capacity to make the i-PiCS program broadly available to EI service providers in the state of Illinois and beyond.

## Tap In Leadership Academy & the University of Illinois: A Creative Collaboration for Community Youth Empowerment Programs

Y11

Leila El-Badawi, University of Illinois Student; Angela Slates, doctoral candidate College of Education and Program Director for Tap In Leadership Academy

Tap In Leadership Academy is a 21st Century Community Learning Program that has served over 1,800 elementary, middle and high school aged students in Champaign, Chicago, and Arcola. Enrollment continues to increase with the addition of its school readiness program, Tap In Prep Academy.

In addition to tutoring, students exercise leadership skills and participate in intentional hands-on, multicultural enrichment activities in STEM fields. Tap In's innovative approach to learning is powered by a solid collaboration with several departments within the University of Illinois at Urbana-Champaign.

University undergraduate, graduate students, and faculty tutor Tap In students, facilitate enrichment activities and projects based on their area of expertise, and provide Tap In students with early exposure to UIUC campus.

As a reciprocal exchange, our scholars provide UIUC students and faculty opportunities for community outreach, data collection, relationship building and real world experience with a diverse population of students and staff. Examples of such collaborations include but are not limited to:

An Afterschool Business Club for Tap In students interested in entrepreneurship facilitated by College of Business students; experimental projects at the Nanotechnology Lab; African Drumming classes; a collaboration with the Graduate School of Library and Information Science to design and implement a kickback lounge to include hard and software for digital music production, film editing, and 3D printing; staff and scholar

workshops, enrichments and trainings facilitated through the University of Illinois 4-H Extension; coding and computer science enrichment workshops facilitated by the Department of Computer Science.

This presentation will display the exemplary collaboration between community and University programs.

### The Autism Program (TAP) at UIUC

Y12

Aaron Ebata, Associate Professor of Social Development, Family Life co-Director, The Autism Program Training Center at UIUC, Department of Human & Community Development; Linda Tortorelli, Program Coordinator, The Autism Program, Department of Human and Community Development; Anne Hall, Resource Coordinator, Department of Human and Community Development

The Autism Program at UIUC (TAP-UIUC) is a unique collaboration between the Department of Human and Community Development (College of ACES) and the Department of Special Education (College of Education). As part of the statewide Autism Program of Illinois Service Network (funded by the Illinois Department of Human Services), TAP-UIUC serves and supports persons with autism spectrum disorder (ASD) and their families while developing, utilizing, and sharing best and promising practices.

TAP-UIUC is housed in Doris Kelley Christopher Hall and features a community Resource Center in partnership with the Family Resiliency Center. We provide free resources and educational materials, consultation, and education and training programs for families and professionals. We provide internship and training opportunities for undergraduate and graduate students from a variety of campus units, and collaborate with campus faculty on research, teaching, and engagement projects.

### The Third Kind

Y13

Amy Atkinson, University Laboratory High School

As a *third space* in the K-12 environment, the school library is uniquely situated to bridge the gap between home and school and further students' social emotional learning. Through various programming, from student-led examinations of feminism to **Girls Who Code** meetings, to group discussions of hot-button social issues, such as the Michael Brown case, the Uni High Library has facilitated the use of the space as one to address the whole child, hopefully contributing to the formation of the whole adult.

### Word Transformers— An Afterschool Literacy Program

Y14

Patricia Cetin, Speech and Hearing Science; Mary Kubalanza, doctoral candidate in the Department of Speech and Hearing Science

Word Transformers is a language-based literacy program with elementary students in the Champaign public school district. This project connects literacy experts in the Department of Speech and Hearing Science to students and teachers by expanding an existing after school program at Garden Hills Elementary School.

The goal is to increase reading accuracy and comprehension among third-grade children through focused morphological awareness instruction. Morphological awareness is the ability to recognize, understand, and utilize meaningful word parts. The correlation between morphological awareness and reading ability has been well documented in the literature, and more recent research has highlighted the effectiveness of explicit morphology instruction in elementary literacy curricula.

The program emphasizes how words are transformed by combining root words, prefixes and suffixes with interactive hands-on activities. The program also creates opportunities for graduate student clinicians from the speech-language pathology Master's program to gain clinical experiences through service learning.

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