[2015]

VENTUREWELL™

march 20–21, 2015 // washington, d.c.

MEETING LEVEL 4

open [2015]

VentureWell extends a heartfelt thank you to our generous conference sponsors.

You have helped us convene a national and international network of innovators that will lead to connections, collaborations and big ideas that will grow entrepreneurship education and nurture innovative solutions to the world's most pressing problems.

20 years of improving lives through invention — the Lemelson foundation

epicenter National Center for Engineering Pathways to Innovation

NSF

KEEN KERN ENTREPRENEURIAL ENGINEERING NETWORK

HermanMiller

VENTUREWELL idea to impact

VENTUREWELL
idea to impact

VentureWell would like to take this opportunity to thank our funders for supporting us in our mission to nurture new ventures from an emerging generation of young inventors driven to improve life for people and the planet.

We are proud that leading institutions, from foundations to government agencies to major businesses, support our mission to transform higher education and social entrepreneurship. The Lemelson Foundation, National Science Foundation (NSF), Epicenter, Bill and Melinda Gates Foundation Grand Challenges Explorations, and USAID are among those who recognize ours as a powerful model for training and launching a new generation of creative doers that will change the world.

20 the Lemelson foundation
years of improving lives through invention

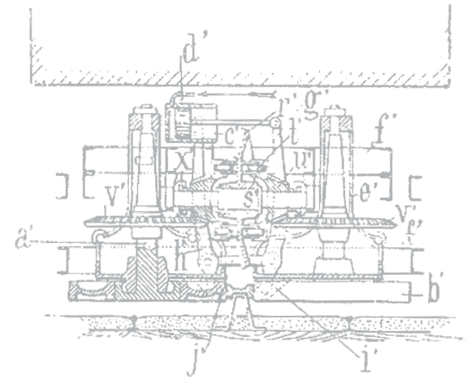
epicenter National Center for Engineering Pathways to Innovation

NSF

Grand Challenges EXPLORATIONS

USAID FROM THE AMERICAN PEOPLE

WELCOME TO open[2015]



Dear Colleagues,

Welcome to Washington, D.C. and Open 2015, brought to you by VentureWell in partnership with Epicenter. We are deeply appreciative to our principal sponsor, The Lemelson Foundation, whose generous, ongoing support makes this conference possible.

This year's program features a bounty of inspiring sessions, events and networking opportunities. We've introduced some new session formats and stretched our boundaries to enable you to explore more new ideas and discover more useful tools and resources.

Some key program highlights:

- Aneesh Chopra, who will keynote the **Sustainable Practice Impact Award** luncheon on Friday afternoon, was the nation's first Chief Technology Officer.
- The luncheon plenary on Saturday featuring NPR science correspondent Joe Palca with a panel of successful **VentureWell alumni entrepreneurs.**
- A series of high-energy Ignite-style presentations on Friday and Saturday mornings featuring faculty leaders and **University Innovation Fellows** describing programs from around the country.
- **Open Meetups,** a series of dynamic, interactive conversations on compelling topics. Come stir the pot! Check the schedule on Saturday for the list of Meetup topics.
- **Open Minds** at the Smithsonian's National Museum of American History on Saturday night—a showcase of our best student teams and their emerging innovations. A perennial favorite and outstanding opportunity to get to know your colleagues in a spectacular setting!

Throughout the conference you'll have access to a wealth of excellent papers, panels and workshops offering original thinking on compelling topics in learning and leading invention, innovation and entrepreneurship in higher education. The sessions are designed to provide actionable information and valuable connections to take home with you, so plan your path with care and take time to meet the many participants at this year's conference.

Please don't hesitate to call upon any VentureWell staff throughout the conference for help, to learn more about us, or for anything else we can do to make this conference a success for you.

Enjoy!

Phil Weilerstein
President, VentureWell

P.S. See this beautiful city on foot! Get up early and join us for a guided walk or 1–2 mile run Saturday morning at 7 am.

VENTUREWELL STAFF

Rachel Agoglia
Grants Manager

Alisa Ainbinder
Senior Research and Evaluation Analyst

Tim Binkert
Communications Associate

Patricia Boynton
E-Team Program Associate

Dorn Carranza
Senior Program Officer, Entrepreneurship and Venture Development

Will Coffey
Programs Administrator

Hollie Crisler
Events Associate

Janet Daisley
Vice President of Programs

Nick D'Amico
IT Manager

Chris Desrosiers
Director of Finance

Katie Dzugan
University Innovation Fellows Program Associate

Janine Elliott
Program Officer, Venture Development

Humera Fasihuddin
Senior Program Officer, University Innovation Fellows

Kirstin Gadiel
Events Associate

Allyson Greene
Accountant

Jennifer Holme
Vice President of Finance and Administration

Aria Ingraham
Accountant

Jennifer Keller Jackson
Senior Program Officer, Special Projects

Amanda Kirk
Communications Associate

Leann Leake
Research and Evaluation Associate

Tara Loomis
Program Officer, I-Corps™

Victoria Matthew
Senior Program Officer, Faculty Development

Liz Nilsen
Senior Program Officer, STEM Initiatives

Kim Noble
Operations Manager

Eric Phelps
Vice President of Development

Laura Sampath
Senior Program Officer, Global Programs

Amewusika D. Sedzro
Program Officer, I-Corps™

Angela Shartrand
Director of Research and Evaluation

Joseph Steig
Senior Advisor

Jennifer Taub
Assistant Director of Development

Kate Tobin
Office Manager

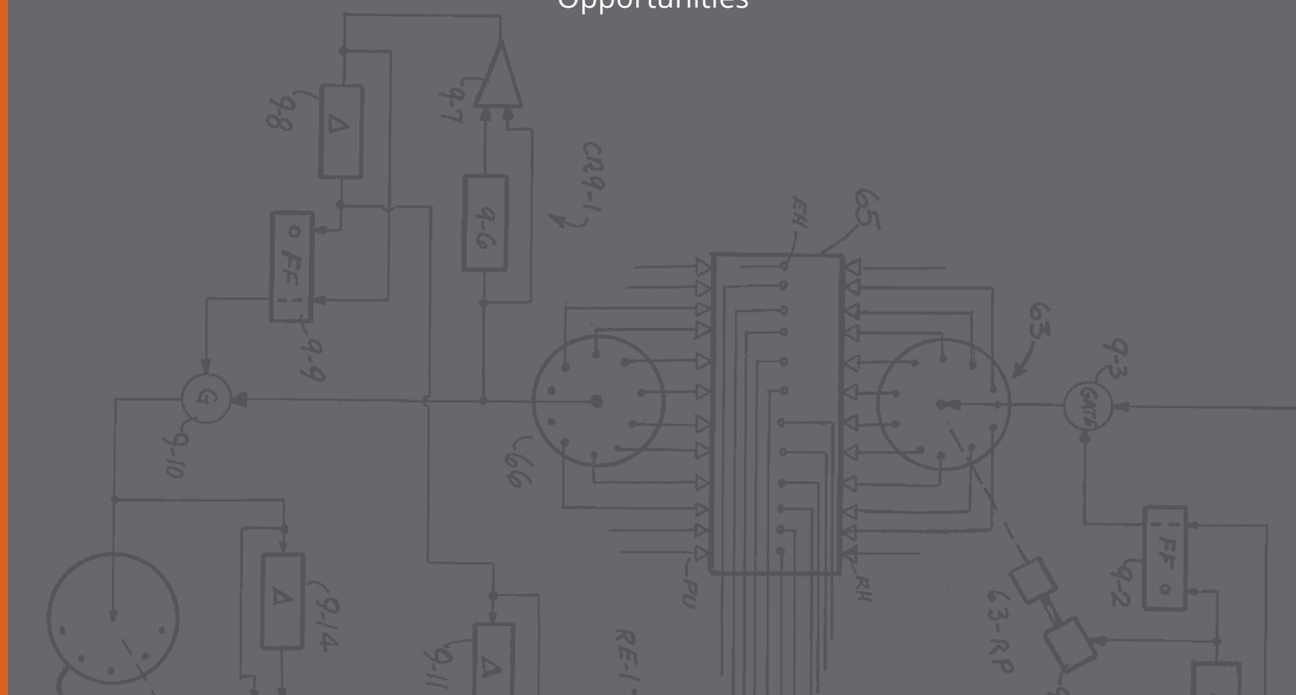
Dat Tran
Senior Venture Development Officer, Global Programs

Ari Turrentine
Research and Evaluation Analyst

Jo Ellen Warner
Director of Communications

Phil Weilerstein
President

TABLE OF CONTENTS



CONFERENCE AT A GLANCE

Schedule is also available on your mobile device at *venturewell.org/open/schedule*

Denotes sessions related to Epicenter, a program funded by the National Science Foundation and managed by Stanford University and VentureWell. Epicenter is empowering U.S. undergraduate engineering students to bring their ideas to life for the benefit of our economy and society.

Denotes sessions related to invention, innovation and entrepreneurship in low-resource settings.

FRIDAY, MARCH 20

7:00 am – 5:00 pm: Registration

7:00 am: Breakfast on your own

8:00 am – 9:00 am: Conference Kickoff

9:00 am – 10:15 am: Breakout Session 1

Mentoring	Tools	Inventor Perspectives	Global	Program Models	Biomedical Engineering
Panel	*Workshop*	*Panel*	*Papers*	*Papers*	*Workshop*
Supreme Court	Monument	Salon N	Salon P	Salon O	Archives

10:15 am – 11:00 am: University Innovation Fellows presentations (Liberty Ballroom)

11:00 am – 12:15 pm: Breakout Session 2

Global	Tools	Program Models	Intellectual Property	Assessment	Biomedical Engineering
Panel	*Panel*	*Workshop*	*Panel*	*Papers*	*Papers*
Supreme Court	Archives	Monument	Salon P	Salon O	Salon N

12:15 pm – 2:15 pm: Award luncheon with keynote speaker Aneesh Chopra

2:15 pm – 3:30 pm: Breakout Session 3

Program Models	Games	Women in Entrep.	Global	Program Models	Maker Spaces
Panel	*Workshop*	*Panel*	*Workshop*	*Papers*	*Papers*
Supreme Court	Monument	Salon P	Archives	Salon O	Salon N

BREAK 3:30 pm – 4:00 pm

4:00 pm – 5:15 pm: Breakout Session 4

Maker Spaces	Creativity	Assessment	Program Models	Competitions	Student Perspectives
Panel	*Workshop*	*Workshop*	*Panel*	*Papers*	*Papers*
Supreme Court	Monument	Archives	Salon N	Salon P	Salon O

5:15 pm – 6:45 pm: Poster Session + Meetup

7:00 pm: Dinner on your own

SATURDAY, MARCH 21

6:55 am – 7:45 am: Optional fun run/walk

8:00 am: Breakfast on your own

8:30 am – 5:00 pm: Registration

9:00 am – 10:15 am: Breakout Session 1

Student Perspectives	Lean LaunchPad	Group Discussion	Program Models	Design	Biomedical Engineering	Maker Spaces
Panel	*Workshop*	*Open Meetup*	*Workshop*	*Papers*	*Papers*	*Panel*
Salon P	Monument	Archives	Congress	Salon O	Salon N	Supreme Court

10:15 am – 11:00 am: Open Mini presentations (Liberty Ballroom)

11:00 am – 12:15 pm: Breakout Session 2

Compe-titions	Group Discussion	Program Models	Program Models	Resources	Creativity	Global
Workshop	*Open Meetup*	*Panel*	*Panel*	*Panel*	*Papers*	*Papers*
Monument	Archives	Salon P	Supreme Court	Congress	Salon O	Salon N

12:15 pm – 2:00 pm: Luncheon with VentureWell alumni panel moderated by Joe Palca

2:00 pm – 3:15 pm: Breakout Session 3

Design	Group Discussion	Global	Program Models	Program Models	Accelerators	Program Models
Panel	*Open Meetup*	*Panel*	*Panel*	*Panel*	*Papers*	*Papers*
Salon P	Archives	Supreme Court	Monument	Congress	Salon O	Salon N

BREAK 3:15 pm – 3:45 pm

3:45 pm – 5:00 pm: Breakout Session 4

Group Discussion	Program Models	Tools	Global	Creativity	Program Models	Assess-ment
Open Meetup	*Panel*	*Workshop*	*Panel*	*Workshop*	*Papers*	*Papers*
Archives	Salon P	Monument	Congress	Supreme Court	Salon O	Salon N

6:30 pm – 9:30 pm: Open Minds at the Smithsonian's National Museum of American History

Schedule is also available on your mobile device at *venturewell.org/open/schedule*

FRIDAY 7:00 am – 5:00 pm

Registration
Registration desk

FRIDAY 7:00 am – 8:00 am

Breakfast on your own

FRIDAY 8:00 am – 9:00 am

Conference kickoff
Liberty Ballroom

Patently Obvious
Victoria Matthew, VentureWell

Test your wits and compete for coveted prizes in this fun, innovators' take on the NPR current events quiz, *Wait Wait...Don't Tell Me!*

FRIDAY 9:00 am – 10:15 am

Mentoring
Supreme Court
9:00 am – 10:15 am

Panel

Good Practices for Running a Mentoring Program: Learnings from the Intel Mentoring Summit
Phil Weilerstein, VentureWell
Aileen Huang-Saad, University of Michigan, Ann Arbor
Abigail Barrow, Massachusetts Technology Transfer Center
Kerri Smith, Rice University
Jim Chung, George Washington University

What you'll take away from this session: key factors and lessons learned in building an effective mentoring program.

This working session will build on the learnings and outcomes of the Intel Mentoring Summit. Presenters will identify the key factors and lessons learned and discuss ways in which programs can be developed around tested ideas and principles.

The Intel Mentoring Summit (held November 11–13, 2014) focused on developing a framework for building effective mentoring programs for science- and technology-oriented innovators. The group worked to define a common framework for developing, managing and sustaining mentoring programs, identifying best practices and what practices might, if codified and disseminated, help spread effective mentoring and improve access to mentors outside the global entrepreneurial hubs.

The summit brought together leading faculty in innovation and entrepreneurship from universities across the U.S. and around the world along with selected corporate and incubator program directors to develop a Global Mentor Network for supporting, guiding, and mentoring emerging entrepreneurs.

open[2015] FRIDAY, MARCH 20 SATURDAY, MARCH 21

Tools
Monument
9:00 am – 10:15 am

Workshop

The Five Practices of Entrepreneurship Education
Heidi Neck and Candida Brush, Babson College

What you'll take away from this session: theory-based exercises on five specific practices of entrepreneurship education.

Many argue, us included, that in order to learn entrepreneurship one must do entrepreneurship. This statement immediately conjures images of the practitioner imparting his words of wisdom to students based on his experience and only his experience. But we do not ignore the theoretical component of entrepreneurship education; rather, we demand that theory form an essential part of entrepreneurship education. Where we depart from the norm, however, is that we do not care if students know the theory by name or even know it is there. The theory is invisible and actionable and requires practice. Given the complexity and multidisciplinary focus of entrepreneurship there is no single practice of entrepreneurship. Entrepreneurship education requires a portfolio of practices that comprise a method of thinking and acting entrepreneurially: the practice of play; the practice of empathy; the practice of creation; the practice of experimentation, and the practice of reflection.

Inventor Perspectives
Salon N
9:00 am – 10:15 am

Panel

Changing the World One Invention at a Time
Yolanda Comedy, American Association for the Advancement of Science
Vinod Veedu, Oceanit
Steve Sasson, retired from Kodak
Karen Burg, Kansas State University

What you'll take away from this session: lessons learned from conversations with prominent inventors and entrepreneurs.

This panel will discuss the role invention plays in tackling global problems and what it will take to nurture the next generation of inventors. The panelists, representatives of the inaugural class of the AAAS-Lemelson Invention Ambassadors, are prominent inventors and entrepreneurs.

Each panel member will spend ten minutes discussing their invention(s) and which global problem the invention addressed. During the final 30 minutes, Ambassadors will disperse to separate tables where the audience can join to ask questions and have a discussion.

Global
Salon P
9:00 am – 10:15 am

Papers

Pathways to Scale: The ten types of innovation
Eric Reynolds, Elizabeth Hoffecker Moreno, Kate Bergeron and Harald Quintus-Bosz, Massachusetts Institute of Technology

What you'll take away from this presentation: a deepened understanding of the key types of innovation/competitive advantage that lead to large scale impact in less-industrialized economies, presented with case studies.

Keeley, et al. has presented a framework for building breakthrough companies that they call the Ten Types of Innovation. The presenters will share this framework, how they've used it to analyze tech-based social ventures of various scales, and the initial findings. For example, a high-growth, high-impact venture may possess key innovations in their distribution channel, branding, aftermarket service and perhaps product performance. On the contrary, a lower-growth, lower-impact venture may possess a key innovation in only their product performance. Analysis of product and venture development pathways of social ventures and their key types of innovation will be presented.

...continued

Global
Salon P
9:00 am – 10:15 am

Papers

The East African Microcosm: How culture and context shape innovation in resource-constrained environments
Shruthi Baskaran and Khanjan Mehta, Pennsylvania State University

What you'll take away from this presentation: an understanding of East African youth perspectives on innovation.

Individuals and communities in the developing world are extraordinarily innovative. Given the specific nature of resource constraints and needs in their communities, reliance on the innovation capabilities of their own ecosystems is essential for ensuring sustainable development. Using provisional narratives, our team sought to develop a repository of innovation snapshots to facilitate a dialogue on developmental entrepreneurship by conceptualizing and operationalizing innovation as perceived by the people in such communities. Based on 200 interviews with youth across Kenya and Tanzania, this article presents nuanced indigenous perspectives on innovation. Further, we compare and contrast these narratives along several spectra: major themes of innovations, driving factors and rationale.

First-year Design Thinking for Extreme Affordability
Elizabeth Kisenwether and Sarah Ritter, Pennsylvania State University

What you'll take away from this presentation: tips on how to structure a seven-week design project for extreme affordability.

Design of products for emerging markets is an important skill for engineering students. In a first-year course entitled "Introduction to Engineering Design" at Penn State, student teams use design thinking in a seven-week design project, choosing between two options: improving the use of a UTI (urinary-tract infection) test strip, and improving the process for staking out a small greenhouse post pattern. These projects come from work abroad by upperclass students in the Humanitarian Engineering and Social Entrepreneurship (HESE) Program. HESE students who have worked in Africa provide the first-year students insights into context, users and resources. Students learn from failure and improve their designs through two prototyping stages. In this project, students of various ages and experiences work together and see these designs through additional prototyping and implementation in country.

Program Models
Salon O
9:00 am – 10:15 am

Papers

Evolution and Evaluation of a Marketing High-technology Products and Innovations Course
James Green, Alyssa Cohen Sherman and Vince Bellitti, University of Maryland

What you'll take away from this presentation: best practices for integrating a venture accelerator-style program into an academic course.

To address the growing number of undergraduate students from the science and technology disciplines who can have great product ideas but insufficient understanding of the go-to-market strategies to commercialize their concepts, we utilized a three-year VentureWell grant to create a Marketing High-Technology Products and Innovations course. The course merged the academic side of learning marketing concepts with real-life application, and provided nominal funding to facilitate the creation of undergraduate ventures. This presentation will outline the evolution of the three-year course grant. We will evaluate the course's ability to increase the number of innovative technology-based student ventures, and improve students' skills to commercialize innovations. We will share our lessons learned and best practices to enable the creation of more undergraduate high-technology ventures nationwide.

...continued

Program Models
Salon O
9:00 am – 10:15 am

Papers

Venture College: A non-credit program to help students launch businesses while pursuing their education
Kevin Learned, Boise State University

What you'll take away from this presentation: a model of a non-credit entrepreneurship program.

I will present the Boise State Venture College model. The program helps students of all disciplines and class standing (freshman through graduate) launch their own businesses while pursuing their education. The program is extracurricular, not for credit, which eliminates the constraints of academic deliverables and the academic calendar. Successful entrepreneurs and angel investors direct the program, and we award a digital badge to signify skills acquisition. After the first year, 50% of the entrepreneurs had achieved revenue.

Embedding Design Thinking in a Multidisciplinary Engineering Curriculum
Beth Altringer and Fawwaz Habbal, Harvard University

What you'll take away from this presentation: details on Harvard's interdisciplinary school of engineering.

The 21st Century inherited complex challenges that require new methodologies and processes to solve. Engineering has a critical role to play in solving these problems, but our educational system needs to evolve. Engineering embedded in a liberal-arts education provides unique opportunities, especially when innovation education is integrated throughout the curriculum. We analyze the case of Harvard's School of Engineering and Applied Sciences curriculum development. Established in 2007, SEAS (Harvard's newest school) has no departments, mostly interdisciplinary research and a substantial portion of cross-disciplinary and system-level courses that are transforming undergraduate engineering education. In four years, in the area of multidisciplinary design, engineering and entrepreneurship, SEAS has increased: its faculty by 144%; courses by 500% (and enrollment in these courses by non-engineering students by 142%); teaching lab space by 367%; and support staff by 400%. In addition, they have created innovative teaching and learning assessment and implemented major extracurricular support programs.

Biomedical Engineering
Archives
9:00 am – 10:15 am

Workshop

Improvisational Acting for Stimulating Creativity in Biomedical Design
James Antaki, Carnegie Mellon University
Justin Zell, Steel City Improv

What you'll take away from this session: an understanding of the foundational principles of improvisational acting and their relevance to inventive problem solving in biomedical engineering.

In the fall of 2013, our department introduced a new course, "Inventive Problem Solving in Biomedical Engineering," to cultivate creative skills and teach techniques that nurture ideation. The course also adopted a flipped classroom model, with reading assignments and pre-recorded lectures assigned before class and "homework" performed in-class. This provided an opportunity to explore creative uses of face-to-face time during class. One such experiment was to introduce improvisational acting (improv), with the idea of encouraging engineering students to step out of their comfort zone and build confidence in thinking on their feet, and to liberate their creativity. This workshop will share some of the principles, techniques, and games we have found to be effective. Audience participation will be required! But don't be frightened—remember, "Life is improv!"

FRIDAY 10:15 am – 11:00 am

Liberty Ballroom

University Innovation Fellows Presentations

Ben Riddle, Furman University
Bre Przestrzelski, Clemson University
Greg Wilson, University of Georgia
Ryan Phillips, University of Oklahoma
Valerie Sherry, University of Maryland
Rachel Ford, Georgia Institute of Technology

Epicenter is an NSF-funded initiative aiming at embedding innovation and entrepreneurship in engineering education. One of the most effective strategies toward this goal has been to recruit, train and support students who act as change agents at their institutions. These student leaders, called University Innovation Fellows, have been recognized nationally for their work spearheading the creation of innovation and maker spaces, as well as the development of learning experiences for their peers. Come to the ballroom to hear six short, fast-paced Ignite-style presentations and learn more about them at http://epicenter.stanford.edu/page/university-innovation-fellows.

FRIDAY 11:00 am – 12:15 pm

Global
Supreme Court
11 am – 12:15 pm

Panel

Doing Something with Nothing and Nothing with Something

Toby Cumberbatch, Cooper Union
Khanjan Mehta, Pennsylvania State University
Pritpal Singh, Villanova University

What you'll take away from this session: common themes, mistakes, successes, and best practices to understand what is really required to introduce and make technology work in low-resource settings.

Engineering for socio-economic impact in developing countries demands the highest levels of technological, business and social innovation with the implementation process taking on as much importance as the product itself. The introduction of a product into the marketplace for the poor demands a fine balance between innovation, imitation, and adaptation for it to be successful and sustainable. In this quest for sustainable solutions, a very large number of questions emerge; most of which are highly context-specific and tend to be trade-offs rather than questions with crisp answers. This panel will present a series of thought-provoking questions and share learning experiences gained from the introduction of technology products into rural communities. An explicit goal is to identify and debunk common assumptions and myths around global development challenges and the role of technology innovation in addressing them.

Tools
Archives
11 am – 12:15 pm

Panel

Nifty Assignments in Entrepreneurship Education

Michel Lehman, Lehigh University
Clif Kussmaul, Muhlenberg College
Trexler Proffitt, Emory University

What you'll take away from this session: nifty assignments to adopt immediately following the conference.

VentureWell meetings are a great place to learn about assignments and activities that work well in teaching and could be adapted to other situations. However, many such nifty assignments (NAs) aren't presented at conferences or in formal publications. This panel session is an opportunity to share our NAs. The NA sessions at the last four VentureWell conferences were popular and lively. A great NA is easy to adopt and adapt, broadly relevant, thought provoking, and fun for students and teachers.

Program Models
Monument
11 am – 12:15 pm

Workshop

How NSF I-Corps™ Can Help Entrepreneurship at Your Institution

Janet Daisley and Tara Loomis, VentureWell
Dean Chang, University of Maryland
Anita Leffel, University of Texas at San Antonio
John Lovitt, Missouri University of Science and Technology

What you'll take away from this session: details on the I-Corps™ program.

In the last two years the NSF I-Corps™ program has grown from three to 33 universities and created a National Innovation Network (NIN) of researchers schooled in turning ideas into successful commercial products. In this session you will learn how I-Corps™ and the NIN can accelerate entrepreneurship at your school. Opportunities range from four-week training programs for researchers to three-year NSF grants for making your institution an official I-Corps™ "Site" of entrepreneurship education. Panelists will lead the discussion based on their personal experience participating in I-Corps™.

Intellectual Property
Salon P
11 am – 12:15 pm

Panel

Best Practices Related to Student-generated IP

Nathalie Duval-Couetil, Purdue University
Phil Weilerstein, VentureWell
Abigail Barrow, Massachusetts Technology Transfer Center

What you'll take away from this session: new research and tips on how to manage student intellectual property in higher education.

As students become more actively involved in "real-world" innovation and invention, more attention is being paid to how to manage student-generated intellectual property (IP). Circumstances under which students develop and protect their IP are varied and complex, requiring more understanding of factors involved from the student, faculty, and university perspective. Over the years, VentureWell has been at the forefront of supporting research and practice related to this topic. This session will review the work that has been conducted in this area including views of technology transfer offices and faculty toward the management of student-generated IP. The session will showcase a recent publication on best practices titled "Managing Student Intellectual Property Issues at Institutions of Higher Education," which was created in collaboration with the Association of University Technology Managers (AUTM).

Assessment
Salon O
11 am – 12:15 pm

Papers

Research-based Program Assessment: Measuring innovation self-efficacy

Elizabeth Gerber, Northwestern University

What you'll take away from this presentation: deeper theoretical and practical insight into research assessing innovation self-efficacy.

Innovation is critical to our economic and social prosperity. We rely on industry, university, and government employees to develop, modify, and implement innovative ideas while navigating ambiguous problem contexts, overcoming setbacks, and persisting in competition with courses of action. Research has shown that self-efficacy, or individuals' belief in their ability, influences the pursuit of and persistence in challenging work, suggesting the criticality of self-efficacy for innovation. Despite resource-intensive efforts to foster innovation in organizations, we inadequately understand how to measure the impact of these interventions on individuals' judgment of their own innovation ability. As part of our work to design innovation-related interventions and evaluate impact, we share early stage work to develop and validate a survey measure for Innovation Self-efficacy (ISE), or the belief in one's ability to innovate.

...continued

Assessment
Salon O
11 am – 12:15 pm

Papers

The Role of Peer Evaluation in the Development of Students' Design and Innovation Skills
Mary Goldberg, Jon Pearlman and Mahender Mandala, University of Pittsburgh

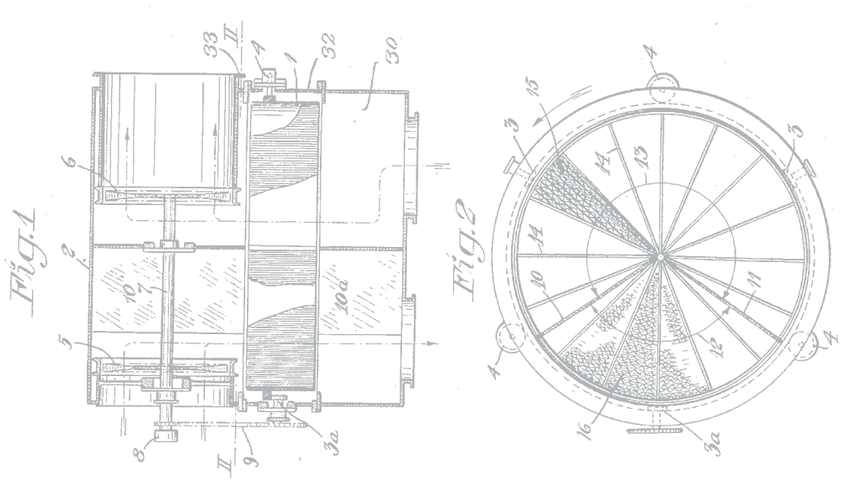
What you'll take away from this presentation: an understanding of peer assessment and the tools to integrate it into a course.

We will present on our work in the field of peer-assessment of engineering design projects conducted at an undergraduate design-based learning unit. Students in design education courses often receive little experience or overall exposure to the breadth of design problems typically encountered by designers within the time frame of a course. While participating in design-based learning courses, students often focus on a single project, losing the opportunity to learn from other peer designs and peer design thinking. Self and peer evaluation may be helpful in improving a student's design skills. Understanding peer evaluation, its upsides and pitfalls, could help future implementations of such assessment methods by targeting aspects that improve student learning.

Best Practices in Survey Development for the Evaluation of Student Gains from Entrepreneurship Programs and Classes
Jessica Menold, Pennsylvania State University

What you'll take away from this presentation: a systematic and robust method for the creation of surveys to measure and enhance entrepreneurship education.

According to the Princeton Review, there are 2,000 entrepreneurship courses currently offered at a wide variety of universities across the country. With so much effort focused on enhancing entrepreneurship education, evaluating the impact that these courses have on students has garnered much interest in recent years. One of the most common methods used to measure the effect that a project, course, or program has on an individual's entrepreneurial mindset is the use of class or program-wide surveys. Although surveys to measure gains in entrepreneurial mindset are used widely, they often lack a theoretical framework to guide their creation. This can lead to results that reflect the poor psychometric properties of the survey rather than the actual impact of the programs and courses. This paper will reflect on the current state of survey techniques within entrepreneurship education, as well as proposing a process for more robust survey creation.



Biomedical Engineering
Salon N
11 am – 12:15 pm

Papers

Biodesign Through Clinical Immersion
Sameer Sood and Matthew Short, Rowan University

What you'll take away from this presentation: practical understanding of the development and delivery of a bioengineering education immersion program.

The Congressional Budget Office has stated that total healthcare spending was 17.2% of the GDP in 2012, and projects that without changes it could be 25% in 2025 and 37% in 2050. There is a clear need to streamline healthcare to reduce costs while enhancing patient care through efficient, clinical solutions. To meet this, we must increase the number and quality of bioengineers trained with a clinical focus to identify and solve problems in healthcare. Rowan University set out to improve team-based design education for engineers by creating projects identified from unmet clinical needs through collaboration and clinical mentorship from Rowan-affiliated hospitals. We established an eight-week immersion program providing students with a comprehensive course including a hospital immersion to recognize unmet needs, create deliverables outlining need specifications and proposing plans that integrate classroom, clinical and engineering principles to initiate the undergraduate Engineering Clinic design experience.

Jump-starting Biomedical Design Education in the Sophomore Year: A human-centered approach
Raja Schaar and James Rains, Georgia Institute of Technology

What you'll take away from this presentation: examples of course activities and assignments used in a foundational BME design course.

We will review the pedagogical structure of The Wallace H. Coulter Department of Biomedical Engineering at GA Tech and Emory University's sophomore design class. The department as a whole has had many device industry success stories, and at their foundation is the sophomore engineering design course, BMED 2300. BMED 2300 is a required preparatory engineering design course, separate from capstone design, which introduces undergraduate biomedical engineering students to the skills and processes required to be successful in the medical device industry. Through the reverse engineering of an existing medical device, students gain an invaluable foundation in engineering intuition, design thinking, and collaboration strategies. Special emphasis is placed on human-centered design methodologies and an understanding of the users involved as well as the clinical need for the device. Evidence of this new understanding is demonstrated through drawings, CAD models, physical prototypes, formal presentations, and technical documentation.

IDEA Labs: Innovation, Design, & Engineering in Action
Joshua Siegel and Avik Som, Washington University in St. Louis

What you'll take away from this presentation: what worked and didn't work in starting and running a new BME accelerator program.

IDEA Labs is a novel, completely student-run and founded entrepreneurship incubator that has created the platform necessary to develop new bioentrepreneurial ventures in the medical field. In the program, engineering and medical students work with clinician mentors to invent and create new products. To develop this program, students have forged bridges across schools and industry; developed their own mentoring services, prototyping space and equipment; and raised initial prototyping funding. Since its beginning 18 months ago IDEA Labs has had 16 teams that completed the program, encompassing over 100 students. Seventy-five percent of teams completed proof of concept prototypes, several have currently placed or won several national competitions, four have filed provisional patents, and five teams are currently LLCs.

FRIDAY 12:15 pm – 2:15 pm

Luncheon
Liberty Ballroom

Sustainable Practice Impact Award luncheon with keynote speaker Aneesh Chopra

This luncheon will include the presentation of the Sustainable Practice Impact Award, which recognizes companies or individuals who have demonstrated outstanding achievement in developing clean technologies, implementing sustainable practices in their businesses or providing exceptional educational opportunities to university students. The award reflects The Lemelson Foundation and VentureWell's strong commitment to supporting technological innovation that improves the world.

Aneesh Chopra, former (and first) U.S. Chief Technology Officer
Aneesh Chopra is the former (and first) U.S. Chief Technology Officer. As an Assistant to the President, he designed the National Wireless Initiative, helped launch Startup America and executed an "open innovation" strategy across the government built on private sector collaboration—opening up data, convening on standards and staffing "lean government startups." In his book, Innovative State: How New Technologies can Transform Government (May 2014), he focuses on how we can tap entrepreneurial problem solvers to address challenges in health, energy and education markets among other public and regulated sectors. Chopra is currently the co-founder and executive vice president of Hunch Analytics, a startup focused on improving the productivity of public and regulated sectors of the economy through data analytics. In 2011, Chopra was named to Modern Healthcare's list of the 100 Most Influential People in Healthcare (#39) and in 2008, to Government Technology magazine's Top 25 in their Doers, Dreamers, and Drivers issue. Upon his departure, President Obama noted, "As the federal government's first Chief Technology Officer, Aneesh Chopra did groundbreaking work to bring our government into the 21st century. Aneesh found countless ways to engage the American people using technology, from electronic health records for veterans, to expanding access to broadband for rural communities, to modernizing government records. His legacy of leadership and innovation will benefit Americans for years to come, and I thank him for his outstanding service."

FRIDAY 2:15 pm – 3:30 pm

Program Models
Supreme Court
2:15 pm – 3:30 pm

Panel

I Don't Have Time for This Entrepreneurship Thing, I Have to Get to My Waitressing Job!

Liz Nilsen, VentureWell
Tim Faley, University of the Virgin Islands
Chad Womack, UNCF
John Jordan, Remix

What you'll take away from this session: ideas for improving innovation and entrepreneurship training, especially in resource-challenged settings.

Students from "under-represented minorities" are more likely to be interested in I&E—and more committed to following through on that interest—than their "majority" classmates. This session will explore how to capitalize on that interest and provide opportunities for all students, while boosting student persistence/retention in the process. Hear from colleagues who have made it work and explore how to adapt their ideas to your institution.

Games
Monument
2:15 pm – 3:30 pm

Workshop

Transdisciplinary Game-based Learning, Teaching, and Tools

Jorge Vanegas, Texas A&M University
Nathaniel Stern, University of Wisconsin-Milwaukee

What you'll take away from this session: insights on how to use games to support learning and teaching.

How do you get students to throw aside their inhibitions and work together, creatively, in the classroom? Which best practices support communicating across disciplines efficiently? Why bring only our disciplinary modes into collaborations, but not our other identities – as parents, or runners, or amateur film-lovers? Trained as an artist and as an architect respectively, but working and teaching in engineering departments, the facilitators will demonstrate and play a series of proven, successful games with participants, games which help student teams from a variety of backgrounds become fast and supportive friends and colleagues, work together, think creatively across domains, scaffold and build on each other's ideas, and innovate toward meaningful ends.

Women in Entrepreneurship
Salon P
2:15 pm – 3:30 pm

Panel

Leading the Way: Strategies to break down gender bias in STEM and entrepreneurship

Janet Daisley and Ari Turrentine, VentureWell
Mary Juhas, The Ohio State University
Diane Matt, WEPAN
Nathalie Duval-Couetil, Purdue University

What you'll take away from this session: strategies to address the barriers women face when advancing in the academy and engaging in commercialization.

This panel will explore a variety of barriers women face when advancing in the academy and engaging in commercialization, including how gender discrimination influences behavioral and attitudinal factors, work-life balance, and network inclusion. Panelists will share research related to these issues as well as a variety of strategies that can be implemented to close the gap for women advancing in STEM fields and entrepreneurship. A particular area of focus for this panel is barriers and strategies related to women seeking to commercialize their technologies and further their careers as entrepreneurs.

Global
Archives
2:15 pm – 3:30 pm

Workshop

Recognizing and Responding to Signs of Failure

Eric Reynolds, Sher Vogel and Ariel Phillips, Massachusetts Institute of Technology

What you'll take away from this session: strategies for recognizing and responding to potential failure modes, a deepened understanding of why this can be so hard, and a learned activity that participants may use with their students or others.

The goal of this workshop is to explore what it means to anticipate failure against the backdrop of real-world stresses and pressures. It will include a brief presentation of strategies for anticipating and responding to potential failure, an experiential activity, and debrief. During the activity, participants will work in teams in a dynamic scenario containing typical pressures and indicators of incipient trouble or failure. Following the scenario, teams will debrief with the larger group on their discoveries, successes, and challenges in anticipating and responding to signs of failure. The activity write-up and resources will be shared so that participants may try/evolve it with their students, budding entrepreneurs, and/or veteran leadership teams.

Program Models
Salon O
2:15 pm – 3:30 pm

Papers

Lessons Learned from Adapting NSF I-Corps™ Curriculum to Undergraduate Engineering Student Entrepreneurship Training
Christina Pellicane and John Blaho, City University of New York (CUNY)

What you'll take away from this presentation: details on how the NSF I-Corps™ curriculum can be adapted for undergraduate engineering entrepreneurship training.

NSF I-Corps™ adapts Lean LaunchPad for technology-focused teams. The NYC Regional Innovation Node is one of seven NSF I-Corps™ Nodes and pioneered testing the I-Corps™ curriculum for feasibility in undergraduate engineering. We compared and contrasted a senior design competition with a core freshman class. We found that emphasizing fast failure very early is essential for student success. Engineering students, used to success being synonymous with creating and building rather than failing and iterating, find the I-Corps™ process hard to grasp. While freshmen in particular suffered though ideation, both groups clung to initial ideas and showed resistance in embracing pivots based on insights from interviews. The underclassmen benefited more from the modified inverted classroom approach, which challenged their honesty in assignments and reporting interviews. Checking in with teams via regular office hours and informal conversations proved essential to understanding team dynamics, struggles and alleviating failure modes.

Launch-in-9
Charla Mathwick and Antonie Jetter, Portland State University

What you'll take away from this presentation: details on a cross-disciplinary tech entrepreneurship program.

Launch-in-9 (L9) is a cross-disciplinary program designed to bring MBA and senior engineering/computer science student teams together to launch student-initiated business concepts. L9 leverages existing capstone requirements across various schools, uniting diverse teams around a shared start-up project. The cross-disciplinary nature of L9 creates a natural tension between market-pull versus tech-push approaches to innovation. Students are trained to use a structured ideation approach woven throughout the entire lean start-up experience to diffuse interdisciplinary conflict. To help students clarify their entrepreneurial aspirations, student reflections captured throughout the L9 experience are synthesized into a culminating debrief which encourages students to consider their next steps including remaining with their venture as well as pursuing intra- or entrepreneurial career options. Launch-in-9 is a branded curricular pathway, aiming to become the signature university program to prepare students to transition into product development, R&D, or start-up careers.

Supporting an Entrepreneurial Ecosystem
William McHenry, Mary White, Lurlene Irvin, Don Causey and Almesha Campbell, Jackson State University

What you'll take away from this presentation: details on a program designed to infuse entrepreneurial culture throughout campus and the surrounding communities.

The Mississippi e-Center at Jackson State University (JSU) is leading the development of an entrepreneurial ecosystem. This early stage ecosystem provides space for ideas, regardless of origin (faculty, students, or community innovators), to mature. JSU is a historically black institution with five colleges—Business, Liberal Arts, Education and Human Development, Science, Technology & Engineering and Public Service—and students and faculty from all colleges participate in the entrepreneurial ecosystem. The focus of this presentation involves infusing entrepreneurial spirit to foster institutional change.

Maker Spaces
Salon N
2:15 pm – 3:30 pm

Papers

Going from Curious to Maker: New user experiences in a university maker space
Brian O'Connell, Tufts University

What you'll take away from this presentation: description of the experiences of several users who had never previously entered a maker space and hadn't considered themselves makers.

In the summer of 2014, Tufts University's Center for Engineering Education and Outreach and Tisch Library teamed up and, with support from VentureWell, converted a library conference room to Jumbo's Makerstudio. The purpose of this pilot maker space was to examine the effectiveness of opening up a maker space in a centralized location on Tufts University's Medford campus and to examine its appeal to the larger university community. This paper describes the experiences of several users who had never previously entered a maker space and had not considered themselves makers until now. These new user case studies follow two librarians, an administrative assistant, a software engineer, and a biomedical engineering grad student who all came in with an interest in finding out what the maker space could offer and left understanding the tools available and having completed several projects.

Igniting the Academic Maker Space: Programming that brings a maker space to life
Kate Canales and Greg Needel, Southern Methodist University

What you'll take away from this presentation: ideas for and reflections on structured programs for academic maker spaces.

An empty room with a 3D printer does not a maker space make. This presentation will highlight specific programs that make maker spaces work in the specific context of higher education. Topics will include: how to engage students (who might not actively seek us out), how to partner with industry, running competitions, appropriate grants to seek, how to make the most of academic breaks, and how to partner with existing curricular programs. Southern Methodist University's Innovation Gym, now in its fifth year, is the maker space of the Lyle School of Engineering. In that time, we've learned some lessons and evolved our programming to attract student interest, provide support and training, but still keep the framework of the space as flexible and student-driven as possible.

Maker Faire: Connecting educators and the community
Marc de Vinck and Lisa Getzler-Linn, Lehigh University

What you'll take away from this presentation: an understanding of the importance of participating in a Maker Faire and a list of the top challenges faced by faire producers.

Attending a Maker Faire is something every educator should do at least once a year. Participating in one is even better, but hosting your own Mini Maker Faire can be a rewarding experience for everyone involved. In this presentation we'll talk about what exactly a Maker Faire is and why it's so important to educators and the community. Our first annual Lehigh Valley Mini Maker Faire far exceeded anyone's expectations, with close to 100 innovators, inventors, makers and artists displaying their work for over 5,000 attendees.

BREAK 3:30 pm – 4:00 pm

FRIDAY 4:00 pm – 5:15 pm

Maker Spaces
Supreme Court
4:00 pm – 5:15 pm

Panel

Creation and Assessment of a Collaborative Innovation Workspace
Bonnie Sanborn and Tom Schryver, Cornell University; Joseph A. Rondinelli and Stephen Erwin, Shepley Bulfinch; Jacqueline Ashby, Simon Fraser University

What you'll take away from this session: lessons learned and a series of tools on the planning, design, and evaluation of creative spaces.

Innovation labs and entrepreneurial hubs are sprouting in our university communities. These unique facilities intersect disciplines and support collaboration among students, faculty, and community members. Exploratory research in creativity and entrepreneurship indicates that context plays a significant role in the sharing and development of ideas. Our panel's purpose is to engage the audience in a contextual dialogue focused on the planning, design, and evaluation of creative space. Panel members will introduce state-of-the-art facilities built to encourage everything from idea formation to product development. These projects include Cornell University's Rev: Ithaca Startup Works and eHub in addition to Harvard University's iLab. We will also discuss and interrogate the methods for analyzing the usage, user experience, and overall success of these contemporary learning environments. Examples in evidence-based design and assessment methods will provide participants with a series of tools to further inform their space-making efforts at their campus.

Creativity
Monument
4:00 pm – 5:15 pm

Workshop

Workshop on De Bono's Concept Fan: A tool to help ensure you've made a thorough search of the concept space
Jonathan Weaver and Darrell Kleinke, University of Detroit Mercy

What you'll take away from this session: a tool for organizing a large number of ideas.

A myriad of concept generation tools exist that are intended to facilitate development of a wide array of concepts, thereby minimizing the likelihood that an individual or team would proceed with development of a relatively weak concept for lack of having generated better alternatives. We promote the generation of a minimum of 100 ideas before committing to any single concept. A Concept Fan is a tool that can be used to organize a large number of ideas and to establish entirely new categories of solutions and ideas. This workshop will engage the participants in the live creation of a Concept Fan for a relatively simple problem. We believe that more entrepreneurs and intrapreneurs will be successful if they apply this technique.

Assessment
Archives
4:00 pm – 5:15 pm

Workshop

Entrepreneurial Mindset: A concept many use but few define
Sarah Zappe, Elizabeth Kisenwether and D. Jake Follmer, Pennsylvania State University
Cory Hixson, Virginia Polytechnic Institute and State University
Nathalie Duval-Couetil, Purdue University; Joseph Tranquillo, Bucknell University

What you'll take away from this session: a method to define what "entrepreneurial mindset" means at your institution based on desired knowledge, skills and attitudes.

In the past five years, the term "entrepreneurial mindset" has been adopted by entrepreneurship and innovation programs across the U.S. as part of a rationale for offering courses and initiatives that develop this quality among students. However, in most cases, the definition is assumed but not provided. As a result the knowledge, skills and attitudes (KSAs) that describe entrepreneurial mindset are ill defined. This raises a key challenge for the entrepreneurship education community: If we don't have a KSA-based definition of entrepreneurial mindset, how do we measure the extent to which we are teaching it? And how do we know if students are building their entrepreneurial mindset KSAs as a result of our programs and courses? Attendees will take away a method to discuss the definition of entrepreneurial mindset at their institution based on desired KSAs. Artifacts can be defined for these KSAs and used to develop clear, effective assessment plans.

Program Models
Salon N
4:00 pm – 5:15 pm

Panel

Innovating Within Universities: A guide to navigating the university environment to build impactful programming, initiatives, and organizations
Kunal Parikh, Justin Hanes, Youseph Yazdi and Eric Rice, Johns Hopkins University
Mike Weikert, Maryland Institute College of Art

What you'll take away from this session: lessons learned through the creation and growth of incubators, centers, partnerships, and training programs.

Building new initiatives, organizations, and partnerships within a university requires disruption of the status quo and a reallocation of finite resources. This environment incentivizes incremental change and can serve to impede the creation of needed programs and the implementation of best practices. This session hopes to provide attendees with strategies, best practices, and foresight in the development of novel initiatives with the potential to further innovation, invention, translation, and entrepreneurial education within a university setting. Through the use of individual case studies from the Maryland Institute College of Art, Johns Hopkins University, and the Johns Hopkins University School of Medicine, panelists will share lessons learned through the creation and growth of incubators, centers, partnerships, and training programs. This will include discussion of needs identification and validation, stakeholder building, communication, funding strategies, and impact metrics.

Competitions
Salon P
4:00 pm – 5:15 pm

Papers

Aggies Invent : 48-hour Innovation Challenges
Magdalini Lagoudas, Texas A&M University

What you'll take away from this presentation: details on the outcomes and effectiveness of informal innovation challenges.

What is the educational value of 48-hour Innovation Challenges? While both curricular and co-curricular activities can play a significant role in the development of innovative thinking skills and entrepreneurial mindsets, there is limited flexibility within the formal curriculum, which must meet ABET requirements. In contrast, informal activities offer great flexibility in program duration and also unique opportunities for active industry engagement. Furthermore, since the participants of the informal programs inherently have high motivation levels to pursue these challenges, the impact of the informal curriculum is expected to be greater. This paper will report on the assessment outcomes of two weekend innovation challenges where students participated in open-ended problems provided by industry and over a 48-hour period developed hardware prototypes. The data will include student self-assessment, industry observations, and post-event student-industry collaborations.

The Spark Competition: Igniting entrepreneurship through industry collaboration
Ariel DuChene, Syracuse University
Catherine Kinrade, O'Brien & Gere

What you'll take away from this presentation: an understanding of the structure of a competition, the key lessons learned along the way and the key benefits.

The Spark competition at Syracuse was launched to address two major challenges in academia: providing real-world industry problems for students to solve and igniting the spirit of creativity and innovation in the engineering and computer science curriculum. By providing students with current consulting projects, O'Brien & Gere was able to tap into the enthusiasm of Syracuse students while energizing the company's employees and subject matter experts. The Spark program serves to exemplify the opportunity to highlight the entrepreneurial opportunities that can arise within existing companies.

...continued

Competitions
Salon P
4:00 pm – 5:15 pm

Papers

TTU EagleWorks: One approach to an innovation and entrepreneurship student competition
Vahid Motevalli, Tennessee Technological University

What you'll take away from this presentation: an example of a multi-track, interdisciplinary entrepreneurship competition.

TTU EagleWorks 2015 is an innovation and entrepreneurship competition open to all Tennessee Tech University (TTU) students. The competition presents a unique opportunity for TTU students to form interdisciplinary teams to compete in several tracks: Technovate™, traditional entrepreneurship, social entrepreneurship and creative entrepreneurship. Teams must be able to demonstrate the viability of their ideas based on the track requirements. For example, the Technovate™ track requires a working prototype to demonstrate the technical innovation, but also establish possible customer base and potential business viability. In the traditional entrepreneurship track, the emphasis is on developing an innovative service or process with a proposed business plan. The social entrepreneurship competition has the requirement of presenting a plan to generate revenue needed for sustainability while maximizing social benefit. In general, the concept in these tracks might be a product, a service, a process or an artistic creation. The competition is open to all undergraduate and graduate students at TTU.

Student Perspectives
Salon O
4:00 pm – 5:15 pm

Papers

Student Learnings from a Multidisciplinary Capstone Entrepreneurship Course
Aileen Huang-Saad and Matt Gibson, University of Michigan, Ann Arbor

What you'll take away from this presentation: student journal reflections on major barriers (and solutions) to their participation in entrepreneurship.

In recent years, universities and colleges have been addressing the need for innovation through the creation of entrepreneurship programs. These programs offer courses, competitions, and mentors to help students with their entrepreneurial endeavors. New programs traditionally create courses that focus on business skills and seminars that teach students about entrepreneurs. While these courses are often content-rich, students may not transfer these skills into action without additional experiences with entrepreneurship. Seven years of experience with the University of Michigan multidisciplinary capstone entrepreneurship class has resulted in the creation of an immersive entrepreneurship course that integrates both skills and action. Unlike typical courses that focus on business techniques and knowledge, the course focuses on the underlying behavior of entrepreneurship. Through student journal reflections, students have identified and articulated solutions to major barriers that often inhibit students from transferring entrepreneurial knowledge into entrepreneurial action.

Changing Campus Culture of Innovation and Entrepreneurial Thinking: Ripple effect of students-change-makers
Ilya Avdeev, University of Wisconsin-Milwaukee

What you'll take away from this presentation: a case study and general principles of the Ripple Effect, a methodology to change campus culture.

In this talk we will discuss a mechanism for creating major change on campus by mobilizing key faculty and students across campus towards collaboration, interdisciplinarity, and entrepreneurial thinking. It can be compared to ripple effect in water. Student innovators, like droplets, disturb calm waters that surround them. Through classwork engagement as well as extracurricular programs more students feel the effect and create ripples. With time, these circles expand from a core group of friends around a highly motivated student to classmates and even faculty. Ripples from other students interfere with each other creating interesting patterns and new pathways for collaboration and interaction. We will talk in detail about a case study of a student biotechnology venture.

...continued

Student Perspectives
Salon O
4:00 pm – 5:15 pm

Papers

Student Perspectives of Sponsored Projects: Faculty best practices for preparing students
Michael Caston, Metropolitan State University of Denver

What you'll take away from this presentation: best practices to prepare students who will be engaged in a collaborative sponsored project with real world industry.

Much research has been published that discusses the benefits and challenges that exist when university programs engage students in a sponsored project with industry. From the teacher's perspective, the consensus is that the educational benefits far outweigh the challenges faced when working on these projects, but have we considered the student's perspective? Do students value projects with outside entities, and are they prepared for them? To better understand how educators can more adequately equip students, feedback was obtained from students who recently participated in a sponsored project. The feedback was quantified, analyzed and reflected upon. From the results, a set of best practices were developed to help best prepare students who will be engaged in a collaborative sponsored project with real world industry in an educational setting.

FRIDAY 5:15 pm – 6:45 pm

Poster session
Mezzanine foyer on the 1st floor

Featuring 40+ posters on a range of topics related to entrepreneurship. A great place to network and learn about new projects!

Monument

Creating Impact in Engineering Education Meet-up

Join us for this meetup! Participants, particularly those from the Epicenter, Kern and APLU (ICE and CICEP) networks will discuss topics related to institutional change in engineering. The format will include Ignite presentations and an Open Space dialogue with attendees. You will have an opportunity to join informal table talk with peers interested in promoting institutional change related to innovation and entrepreneurship, including topics such as university leadership, academic culture, university-led innovation and entrepreneurship activities, student-led innovation and entrepreneurship activities and external innovation and entrepreneurship collaborations. Bring your best practices and ideas to share in a relaxing atmosphere! Cash bar and snacks available during the session.

PRESENTERS
Janet Daisley
Jim Woodell
Leticia Britos Cavagnaro
Jared Avery

FRIDAY 7:00 pm

Dinner on your own

Full schedule is available on your mobile device at *venturewell.org/open/schedule*

SATURDAY 6:55 am – 7:45 am

Hotel lobby

Optional fun run/walk

Get out of the hotel and explore the city on foot! Join us for either a fast-paced walk down to the Mall and back or a 1-2 mile run. Both the walk and the run will be led by VentureWell staff; no need to sign up, just show up in the lobby in good shoes at 6:55 am; we will leave promptly at 7 am. Both groups will get a cool-down and stretch and will return to the hotel at approximately 7:45 am. You'll have plenty of time for a shower and breakfast before the first conference session.

SATURDAY 8:00 am – 9:00 am

Breakfast on your own

SATURDAY 8:30 am – 5 pm

Registration
Registration desk

SATURDAY 9:00 am – 10:15 am

Student Perspectives
Salon P
9:00 am – 10:15 am

Panel

What I Wish I'd Learned About Entrepreneurship in My Program: A session by students for students (and faculty)

Dorn Carranza, VentureWell
VentureWell E-Teams
VentureWell Open Minds teams
University Innovation Fellows
Student attendees

What you'll take away from this session: practical advice and suggestions for navigating your current university environment, creating institutional change and finding what you need from alternative sources.

No matter what your course of study or career plans, knowing the fundamentals of entrepreneurship can help you succeed. Some programs, however, have been slow to embrace these teachings as part of the curriculum.

Join an informal fishbowl conversation with VentureWell E-Teams, University Innovation Fellows and other students about what they learned and what they wish they'd learned about entrepreneurship at their universities.

Does your university offer lots of entrepreneurship courses or resources? Come tell us what they are and how they've helped you. Are you on a campus that's just beginning to jump on the entrepreneurship bandwagon? Come talk about what you wish you'd learned and hear practical advice and suggestions for navigating your current university environment, lobbying for change and finding what you need from alternative sources.

All students and faculty are encouraged to attend this opportunity to more actively participate in the conference and perhaps influence your university's entrepreneurial ecosystem!

Lean LaunchPad
Monument
9:00 am – 10:15 am

Workshop

Lean LaunchPad for Undergrads: Implementations and strategies

Mary Besterfield-Sacre, University of Pittsburgh
Grant Warner, Howard University
Patricia Sullivan and Ed Pines, New Mexico State University
Yash Risbud, Cooper Union
Mary Raber, Michigan Technological University

What you'll take away from this session: detailed information on how to implement the Lean LaunchPad approach on campus.

Join five Pathways to Innovation program teams to learn how they implemented Lean LaunchPad (LLP) for undergraduate students on their campus. Implementations and strategies include 1) collaborating with a local I-Corps nodes to design and run a program for freshman; 2) integrating different facets of LLP across the engineering and design curriculum; 3) adopting the "get out of the building" approach in a rural area; 4) working with students to generate interest in the LLP course; and 5) utilizing LLP to promote transfer student recruitment and retention. The session will begin with an overview of the different implementations, followed by small group discussions that will foster a deep dive into the different approaches.

Open Meetup
Archives
9:00 am – 10:15 am

Group discussion

Is Our Best-of-Class Training Global Enough? How Might We Contextualize Entrepreneurship Training for Developing Economies?

Courtney O'Brien, Global Knowledge Initiative

What you'll take away from this session: ways to better train students to be successful entrepreneurs in low-resource settings.

Bringing an innovation to market, structuring a business model, and understanding viability are highly contextual tasks. While there are plenty of sources of introductory-level information on entrepreneurship through MOOCs, books, and websites, both the content and method of delivery are primarily oriented toward advanced, industrialized economies. We know that entrepreneurship is key to increasing incomes and employment opportunities whether one is innovating in health technologies in California or water harvesting in Tanzania. So how do we bridge this divide?

In a facilitated and participatory discussion, representatives from Global Knowledge Initiative (GKI) and attendees will use a design tool called "Challenge Mapping" to share insight and explore the following questions:

- Why as a community do we want to contextualize entrepreneurship trainings?
- What's stopping us from contextualizing our trainings?
- What do we need to know about the context in which we will train? About our students?
- Which key pieces must be changed to deliver impact?
- What opportunities exist for collaboration?

At the end of the Open Meetup, GKI and participants will have identified and selected key opportunities for contextualizing entrepreneurship training for low-resource settings. GKI will share the outputs of the Open Meetup with attendees after the conclusion of the event and will look forward to seeding collaborative efforts.

Program Models
Congress
9:00 am – 10:15 am

Workshop

What Happens at Lehigh, Stays at Lehigh: How to design a program that will work for YOUR students at YOUR institution
Lisa Getzler-Linn and Christopher Kauzmann, Lehigh University

What you'll take away from this session: help with prototyping a student experience appropriate for your school in its specific context.

Accelerator? Venture fund? Incubator? Co-working space? Every school has a different culture: needs, requirements, politics, specialties, types of student. If experiential/real startup programming is in the works for your entrepreneurship program, make sure it's a good fit. Having run a student accelerator, an incubator, two co-working spaces and a series of competitions, the Baker Institute team at Lehigh University has learned that what works really well at one school doesn't necessarily work in a different context. The needs of your students can best be met when you know what questions to ask and have a context-specific plan for meeting their needs while working within the organizational structure of your institution.

Design
Salon O
9:00 am – 10:15 am

Papers

Design Behaviors in New Coursework
Wayne Li, Georgia Institute of Technology

What you'll take away from this presentation: details on a new design-focused entrepreneurship program.

The presenter, a former IDEO consultant who graduated from Stanford's Design Program, developed the Innovation & Design Collaborative program at Georgia Tech based on five key skills that complement both Neumeier (Meta Skills) and the steps in the d.school design thinking methodology. The program includes new coursework at Georgia Tech that utilizes diversity, creativity, and empathy to make students more innovative in their entrepreneurial endeavors. This topic will consider two new courses (GT2803: Your Idea, Your Invention; ID3320: User Centered Design Methods) being offered.

What Art Offers: How to unlock talent through hands-on courses
John Duhring, Cogswell Polytechnical College

What you'll take away from this presentation: lessons on how hands-on design can inform the work of student entrepreneurs.

Design thinking is not just for designers! Recent revelations that Apple and others are looking for an appreciation of design in their workforce calls for innovation programs to strengthen their approach. This presentation offers lessons gained from decades training engineers and artists who work on mobile apps, animated films and videogames. Cogswell College provides classes and experiences in sketching, drawing, painting and sculpture as critical foundational elements for professional careers.

Design Thinking and Co-Creation at the Base of the Pyramid: The Social Innovation Design Lab course at the University of Southern California
Abby Fifer Mandell, University of Southern California
Scott Fairbanks, Ashoka

What you'll take away from this presentation: details on a course that uses design thinking to create products for the poor.

Funded by a VentureWell Course and Program grant and now in its third year, undergraduate students in BAEP 471: Social Innovation Design Lab at USC use design thinking to co-create products that respond to problems caused by poverty in the Central Valley of California. Transdisciplinary teams work with families in South Kern County, CA to ideate and iterate market-based opportunities and innovative solutions to impact the lives of customers in rural, impoverished communities worldwide.

Biomedical Engineering
Salon N
9:00 am – 10:15 am

Papers

Innovation in Action: Bringing entrepreneurship to public health
Matt Gibson, University of Michigan, Ann Arbor
Ann Verhey-Henke, University of Michigan School of Public Health

What you'll take away from this presentation: details on a public-health-focused student startup competition.

An increasingly common theme among students is a desire to "make a difference." In 2013, the University of Michigan's School of Public Health (U-M SPH) partnered with the U-M Center for Entrepreneurship to launch a new campus-wide student competition called Innovation in Action: Solutions to Public Health Challenges (IIA Challenge). The IIA Challenge provided hands-on entrepreneurial training to students, particularly professional graduate students, with the goal of inspiring innovative approaches to improving public health and developing solutions that directly impact the world. Teams are trained in startup skills that aid idea development, from design thinking to customer discovery to prototyping to pitching. In our inaugural year, this five-month challenge uncovered a growing demand from students around campus who want to solve public health issues through startup businesses. In this work we examine critical factors that enable students to progress from passive observers to passionate innovators.

Developing a Medical Device Design Competition that Enables Student Success During and After the Competition
Gregory Gardner, Ashley Langell, Patrick Loftus and Craig Elder, University of Utah

What you'll take away from this presentation: ways to help student teams continue to have success after participating in a campus competition.

One of the greatest challenges facing Bench-to-Bedside, a student-run medical device design competition at the University of Utah, is providing students the tools, guidance, and resources to further develop their projects and obtain additional funding after completing the competition. Upon completing the competition, teams often ask, "What do I do now?" With this in mind, we have worked with other student-led entrepreneurial competitions and structured Bench-to-Bedside so that when teams complete the competition they are set up to directly enter and succeed in other entrepreneurial competitions, thereby gaining additional funding. Additionally, we have developed milestone-based funding to ensure that teams are able to refine their prototypes according to realistic, incremental goals. In the first year of milestone-based incentives, Bench-to-Bedside helped five student teams achieve success in subsequent collegiate and international entrepreneurial competitions and in patenting their devices.

Spinning Out Champions and Winners: A curricular approach to empower entrepreneurs
Raja Schaar and James Rains, Georgia Institute of Technology

What you'll take away from this presentation: details on a course that prepares BME students to succeed in competitions.

Over the past five years The Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University has experienced a significant transformation into a culture of innovation and entrepreneurship at the undergraduate level. In 2009 Georgia Tech inaugurated the InVenture Prize Competition, a campus-wide televised innovation competition that celebrates invention and entrepreneurship among all students and recent graduates. Since the competition was inaugurated, BME teams have had a strong showing as competition finalists and winners, taking first or second place for the past four years. Several of these teams have launched funded start-ups before their senior year. This entrepreneurial success is in large part due to Georgia Tech's sophomore level BME design course. In this paper we will highlight the student perspectives as well as pedagogical strategies of the sophomore design course that prepare BME students to compete on the campus and industry stage.

Maker Spaces
Supreme Court
9:00 am – 10:15 am

Panel

Best Practices for Academic Maker Spaces
Vincent Wilczynski, Yale University
Isabella Musachio, TechShop
Ethan Danahy, Tufts University
Kate Canales, Southern Methodist University
Michael Lehman, Lehigh University
Elizabeth Gerber, Northwestern University

What you'll take away from this session: an approach to discussing, recording and sharing best practices within the academic maker space community to accelerate the effectiveness of these facilities nationally.

The arrival of Academic Maker Spaces on college and university campuses is no longer a new phenomenon as more institutions create these centers for learning, creating and sharing. This panel session will record and share best practices within the academic maker space community. The range of topics will include the physical design and outfitting of such spaces as well as the operation, programs, access, scope, training and safety aspects of academic maker spaces. We will catalog best practices in a format that will educate the growing number of university programs that are now supporting maker spaces on campus.

SATURDAY 10:15 am – 11:00 am

Liberty Ballroom

Open Mini presentations

Join us in the ballroom for a series of high-energy Ignite-style presentations from faculty discussing a variety of issues in entrepreneurship education.

Presenters:
Janet Daisley, VentureWell (facilitator)
MJ D'Elia, University of Guelph
Magdalini Lagoudas, Texas A&M University
Marc de Vinck, Lehigh University
Joseph Tranquillo, Bucknell University

SATURDAY 11:00 am – 12:15 pm

Competitions
Monument
11 am – 12:15 pm

Workshop

Weekly Innovation Challenge: An effective means of engaging students
Sridhar Condoor and Nicole Rosskopf, Saint Louis University

What you'll take away from this session: strategies to integrate Weekly Innovation Challenges into your curricular or extracurricular activity portfolio.

The goal of the Weekly Innovation Challenge (WIC) program is to promote the entrepreneurial mindset through multiple exposures to innovation challenges in a competitive, multidisciplinary, team-based, creative environment where the students take on one challenge at a time and one team is chosen as the winner. The participants tackle a novel situation under intense, competitive time pressure while networking with other students outside their disciplines and, most importantly, fine-tuning their entrepreneurial skills. In this workshop, we will demonstrate the three types of challenges, help you craft a strategy to integrate the WIC program at your institution, and discuss potential benefits.

Open Meetup
Archives
11 am – 12:15 pm

Group discussion

What Are the Characteristics of Maker Spaces? How Do We Build a Community of Maker Space Experts?
Brian O'Connell and Ethan Danahy, Tufts University

What you'll take away from this session: perspective from an in-depth conversation on maker spaces.

The goal of this session is to talk about the common attributes of maker spaces, share experiences, better understand what's already out there, discuss methods of assessment and work together to build a virtual community of experts and novices across many such spaces.

Program Models
Salon P
11 am – 12:15 pm

Panel

Educating Engineers to Meet Grand Challenges: Community and consortium building
Kurt Thoroughman and Dedric Carter, Washington University in St. Louis
Adam K. Fontecchio, Drexel University; Mary Wilcox, Arizona State University

What you'll take away from this session: perspective, discussion, and framework toward fostering holistic engineering education.

In spring 2014 many educators, students, administrators, and leaders of national and global organizations met at the National Academy of Engineering to consider better integration of technical competency and real-world relevance. We adjourned, committed to re-energizing holistic education, both at each school and as a collaborative community. We are heartened by the event, but this and many other initiatives, historically and currently, find coordination and connection across schools difficult to achieve.

Panelists will provide their perspectives on pitfalls, opportunities, and solutions to cross-campus community building. Each panelist will provide a unique vantage point, as individuals and as seasoned leaders across several fields. Attendees will identify barriers to progress and consider change to overcome those barriers. This will take place in frank discussion, in person and in real-time reflection online. We aim to build a framework for action to achieve early and measurable success, sustainable growth, and lasting benefit toward graduating the most worldly, most effective engineers.

Program Models
Supreme Court
11 am – 12:15 pm

Panel

KEEN: A decade of working to instill the entrepreneurial mindset
Don Carpenter, Lawrence Technological University; Grant Hoffman, Rose-Hulman Institute of Technology; John-David Yoder, Ohio Northern University; Massoud Tavakoli, Kettering University; Elizabeth Kisenwether, Pennsylvania State University; Kenneth Bloemer, University of Dayton; Nassif E. Rayess, University of Detroit Mercy

What you'll take away from this session: ideas for faculty development, curriculum modification, extracurricular activities, pedagogy, lessons learned, and a better understanding of KEEN.

In 2005, the Kern Family Foundation launched the KEEN (Kern Entrepreneurial Engineering Network) program, focused on instilling the entrepreneurial mindset in engineering undergraduates. A decade later, the KEEN program continues to focus on the entrepreneurial mindset as thought processes and on-campus implementation continues to evolve and new leaders emerge. Panelists will discuss the impact of KEEN on various campuses involved in the first cohort of schools. Discussion topics will include overall impact, faculty development efforts, curricular, and extracurricular efforts. Panelists will discuss lessons learned, resources available to non-KEEN schools, and goals for future. Speakers will include an original KEEN advisor and representatives of the University of Dayton, University of Detroit Mercy, Kettering University, Lawrence Technological University, Ohio Northern University, and the Rose-Hulman Institute of Technology.

Resources
Congress
11 am – 12:15 pm

Panel

VentureWell Grants and Resources
Rachel Agoglia and Janet Daisley, VentureWell
Marlena Love, Lemelson-MIT Program

What you'll take away from this session: information on how to fully leverage VentureWell grants, training and other resources for success on your campus and beyond.

This session will provide an update on current and future VentureWell programs, including funding and training for student teams as well as support for faculty educators to create or expand courses and extracurricular programs. We'll discuss how VentureWell supports technology invention, innovation, entrepreneurship and helps produce impact. We'll give you an overview of the competitions we run and our venture development resources for student teams.

Creativity
Salon O
11 am – 12:15 pm

Papers

Building Creative Confidence (and Why That Matters for Engineers)
Kate Canales, Southern Methodist University

What you'll take away from this presentation: in-class activities to grow engineering students' creative capacity.

If we consider creativity as a force that pushes us past the status quo in any field, the most successful engineers lean heavily on their creative capacity. Yet engineering education all too often forgets that engineering is about invention. In fact, the Latin root of the word engineering is ingenium or "cleverness." This presentation will focus on the content of an elective course at SMU's Lyle School of Engineering that endeavors to remind students of their own cleverness. The course draws from research in the social sciences to support exercises and assignments that help students reflect on and improve characteristics like vulnerability, gratitude, and empathy, all of which contribute to creative confidence. We will give an overview of the course but focus on in-class exercises to try with your own students.

A Visual, Intuitive and Engaging Approach to Teaching and Learning STEM
Daniel Raviv, Florida Atlantic University

What you'll take away from this presentation: relatable ways to teach STEM.

This paper plays on the growing trends of visual media usage to create a series of intuitive analogies that can help students who are taking STEM courses to acquaint themselves with difficult concepts. In short, it tries to incite the "Aha!" moment. This is done in an attempt to cater to students' changing styles of learning by creating a non-intimidating presentation of concepts in STEM, most of which relates to familiar daily-life experiences and situations. To create a more engaging environment, we will present hands-on and computer-based games, brain teasers, fun facts and activities designed to reinforce ideas in intuitive ways.

10 Hands-on Exercises to Spark Student Creativity and Innovation
Charles Wood, University of Tulsa

What you'll take away from this presentation: ten creativity-boosting exercises and tools to use in the classroom.

Session attendees will learn ten practical exercises and creativity-boosting tools that have been demonstrated and used in classroom and professional settings around the country. The session will challenge attendees' thinking while adding a dose of fun!

open[2015] FRIDAY, MARCH 20 SATURDAY, MARCH 21

Global
Salon N
11 am – 12:15 pm

Papers

From West Coast to Gold Coast: Teaching a capstone entrepreneurship course in Ghana based on Lean LaunchPad
Todd Warren, Northwestern University
Sena Agyepong, Ashesi University College

What you'll take away from this presentation: lessons learned on implementing a Lean LaunchPad-based course in Ghana.

The authors taught a course based on the Lean Launchpad course/method at Ashesi University in Ghana as a capstone undergraduate course. We will discuss: the approach taken in adopting the course to the unique culture and pedagogy of Ashesi as well as some projects that came out of the course, with the students' perspectives on creating them.

Entrepreneurial Development Programs for Graduates: Case study of United States International University-Africa
Kefah Njenga, United States International University-Africa

What you'll take away from this presentation: details on a Kenyan social entrepreneurship program.

In the last few decades there has been increased interest among policymakers and academics in entrepreneurship education. In Kenya, the United States International University-Africa (USIU-A), one of the major private universities, is at the forefront in offering programs in or related to entrepreneurship. These include courses and programs offered at both the undergraduate and graduate levels. This paper highlights the achievements of one of these programs, the Global Social Sustainable Entrepreneurship Program, which aims to train undergraduates with necessary business and entrepreneurial skills while studying at the university.

Manufacturing Challenges and Strategies for Development Technologies
Rachel Dzombak, University of California-Berkeley

What you'll take away from this presentation: a practical understanding of which product manufacturing options exist and benefits and costs associated with each.

Many academics take a technocentric approach to development. It is easy to believe in the nascent stages of a project that strong design and a low price point will yield widespread impact. However, technology design is only one aspect of a venture. Throughout the development-engineering sector, there is lack of emphasis on implementation strategy, rendering innovators incapable of transitioning their products and ventures from the confines of academia to the real world. Manufacturing products at scale proves to be a major challenge in bringing products to market. Often it is difficult to know which manufacturing options are available and most appropriate for a given venture. Should designs change so manufacturing can occur locally? Should manufacturing happen in the US or China or the country of sale? Should you prioritize inexpensive products over low environmental costs? This paper will compare manufacturing options and the relative costs and benefits of each.

SATURDAY 12:15 pm – 2:00 pm

Luncheon
Liberty Ballroom

VentureWell alumni panel moderated by NPR science correspondent Joe Palca

Joe Palca, NPR
Manmeet Singh, Stem Cell Partners
Luke Pinkerton, Helix Steel
Sam White, Promethean Power
Tricia Compas-Markman, DayOne Response

A panel of some of our most successful student inventors telling their stories, sharing experiences and lessons learned. The panel will be moderated by award-winning NPR science correspondent Joe Palca.

Joe Palca is a science correspondent for NPR. Since joining NPR in 1992, Palca has covered a range of science topics — everything from biomedical research to astronomy. Palca began his journalism career in television in 1982, working as a health producer for the CBS affiliate in Washington, DC. In 1986, he left television for a seven-year stint as a print journalist, first as the Washington news editor for *Nature*, and then as a senior correspondent for *Science Magazine*.In October 2009, Palca took a six-month leave from NPR to become science writer in residence at the Huntington Library and The Huntington Library, Art Collections, and Botanical Gardens. Palca has won numerous awards, including the National Academies Communications Award, the Science-in-Society Award of the National Association of Science Writers, the American Chemical Society James T. Grady-James H. Stack Award for Interpreting Chemistry for the Public, the American Association for the Advancement of Science Journalism Prize, and the Victor Cohn Prize for Excellence in Medical Writing. With Flora Lichtman, Palca is the co-author of *Annoying: The Science of What Bugs Us* (Wiley, 2011). He comes to journalism from a science background, having received a Ph.D. in psychology from the University of California at Santa Cruz where he worked on human sleep physiology.

SATURDAY 2:00 pm – 3:15 pm

Design
Salon P
2:00 pm – 3:15 pm

Panel

Design Thinking for Engineers: Applying the creative process to complex technical problems
Andrea Wollensak, Connecticut College
Penny Herscovitch, Art Center College of Design
Robert Allen, Johns Hopkins University
Kate Canales, Southern Methodist University
Vincent Purcell, Maryland Institute College of Art
Vincent Wilczynski, Yale University

What you'll take away from this session: a handout and a willingness to continue the conversation on creating a shared language between engineers and designers.

Designers and engineers are both challenged by complex problems that often require elegant and insightful solutions. Their respective disciplinary training has historically featured distinctly different vocabularies, frames of reference, measures of success and tools. Many contemporary solutions require not only a well-developed aesthetic identity; they require a well-ordered process of design thinking that comprehensively investigates and unifies the inspiration, ideation and implementation of the solution.

Open Meetup
Archives
2:00 pm – 3:15 pm

Group discussion

Best Practices for Managing Student Teams
Howard Davis, Washington State University
Ross Malaga, Montclair State University
Krista Liguori, Molly Eckman and Khanjan Mehta, Pennsylvania State University

What you'll take away from this session: lessons learned from an active discussion of issues related to teaching interdisciplinary teams.

A major shift has occurred on university campuses where entrepreneurship programs are now embracing students from all disciplines to form startup teams. Such interdisciplinary teamwork is fraught with issues stemming from differing academic traditions, vocabularies, communication, work habits, and even different philosophies of entrepreneurship. This interactive discussion will explore best practices when working with interdisciplinary teams. The format of the conversation will use small group discussions around topics chosen by the audience. Come ready to contribute!

Global
Supreme Court
2:00 pm – 3:15 pm

Panel

Global Innovation Hubs
Laura Sampath, VentureWell
Kefah Njenga, United States International University-Africa
Dena Levitz, 1776
Isabel Castillo, NESsT

What you'll take away from this session: insight on specific global innovation hubs and how to strengthen them further.

The innovation and entrepreneurship (I&E) movement spans many geographies and sectors, and is growing at a rapid pace. With a growing affinity toward entrepreneurship, the global startup ecosystem has never been stronger. These innovation hubs are being fueled by the R&D support from governments in emerging economies; the private sector is joining in; and the contribution from universities continues to drive exciting developments.

During this session participants will hear from change agents who are at the center of these global hubs of innovation. They will be addressing several questions, including: what makes for a successful entrepreneurial ecosystem? What gaps remain? What opportunities are there for increasing technology-based innovations that positively benefit people living in poverty around the world?

Program Models
Monument
2:00 pm – 3:15 pm

Panel

Technology Commercialization: Tech transfer and beyond
Thomas O'Donnell, University of Massachusetts, Lowell
Benjamin Glenn, Shay Glenn LLP
James Spencer, Rensselaer Polytechnic Institute
Abigail Barrow, Massachusetts Technology Transfer Center

What you'll take away from this session: insight from various perspectives on how to create a successful technology commercialization program on campus.

Successful commercialization of technology generated in university research labs requires more than intellectual property and a licensing office. Institutions need to build an ecosystem around their technology commercialization program, with coaching, mentoring, funding, education, connections and more. In this session, we will describe the entrepreneurial ecosystems that support the broader tech transfer process at the University of Massachusetts Lowell, Rensselaer Polytechnic Institute and the Massachusetts Technology Transfer Center. In addition, we will hear perspectives from a Silicon Valley IP lawyer with experience supporting the tech transfer process with many different institutions including Stanford, Rice and Lawrence Livermore Labs.

Program Models
Congress
2:00 pm – 3:15 pm

Panel

Pathways Partners: Entrepreneurial change across campuses
Steven Tello, University of Massachusetts, Lowell
Brendan O'Toole, University of Nevada, Las Vegas
Ilya Avdeev, University of Wisconsin-Milwaukee
Thomas Katona, California Polytechnic State University, San Luis Obispo

What you'll take away from this session: an in-depth understanding of the Pathways to Innovation program.

The Pathways to Innovation program is specifically focused on helping college and university engineering programs integrate entrepreneurship into their programs and institutions. This cafe-style panel will provide an opportunity for conference participants to learn from and talk with a cohort of Pathways teams, including teams from Cal Poly, UNLV, UMass Lowell and UW Milwaukee. Each panelist will present a brief introduction to his or her respective institution, and also present one of the major changes/areas of entrepreneurial growth/strategies their campus has embarked upon since joining the Pathways program. We will then break up into interest tables where participants can have a more in-depth discussion with faculty from each institution. The panelists will rotate among tables so participants will have an opportunity to talk with representatives from each institution.

Accelerators
Salon O
2:00 pm – 3:15 pm

Papers

Tech Launch Arizona Ambassadors Student Commercialization Initiative
Dominique Villela, William Kovacs, and John Jackson, University of Arizona

What you'll take away from this presentation: an example of how a student-facilitated accelerator program can impact the university, the community, and the student experience.

Tech Launch Arizona (TLA) Ambassadors is a student-led commercialization initiative at the University of Arizona supported by Tech Launch Arizona. TLA Ambassadors is a unique university commercialization effort for three reasons: first, TLA Ambassadors connects institutional goals and values to students, providing continuity across faculty and student populations within commercialization; second, TLA Ambassadors focus on and serve student interests; third, TLA Ambassadors is tapping a changing population of students to impact the local economy through talent retention, thought innovation, and commercialization efforts, whether commercializing an idea and founding a business or interning within the commercialization space and taking a job locally.

Bayou Startup Showcase: A model for collaboration between university accelerators
Hesam Panahi, University of Houston
Kerri Smith, Rice University

What you'll take away from this presentation: examples of ways two local university accelerators can work together.

RED Labs and OwlSpark are university accelerators at University of Houston and Rice University, respectively. In the second year of their programs, the accelerators established a partnership in an effort to improve learning outcomes of their participants and increase engagement with Houston's ecosystem of entrepreneurs, mentors, business experts, and investors. The collaboration featured joint curricular sessions, mentor engagements, community involvement, pitch preparation, and a culminating pitch day called the Bayou Startup Showcase. Attended by over 400 attendees, the showcase allowed the startup teams from both accelerators to display their businesses to the greater Houston community. In recognition of the collaboration, the City of Houston officially proclaimed August 14th, 2014 as Houston Entrepreneurship Day.

...continued

Accelerators
Salon O
2:00 pm – 3:15 pm

Papers

Linking Students to Startups: The Collat School of Business Innovation Lab
Douglas Ayers, University of Alabama at Birmingham

What you'll take away from this presentation: ways to engage students via a student-run lab within an incubator.

We will discuss the creation, operation and early results of a student-run Innovation Lab housed at a local incubator, Innovation Depot. The Lab is designed to provide physical space and expertise for potential new startups and existing startups requiring assistance. The goal is direct student interaction with the startup companies and for the Lab to serve as an accelerator for startups that are not ready for full launch. Student involvement is in the form of consulting teams (interdisciplinary), class projects and student startups.

Program Models
Salon N
2:00 pm – 3:15 pm

Papers

Strategic Integration of Intellectual Property throughout a Technical Entrepreneurship Master's Program
Michael Lehman, Lehigh University

What you'll take away from this presentation: lessons learned on teaching student IP protection from a graduate program in technical entrepreneurship.

Consideration of intellectual property significantly impacts the process of designing a new product and associated business model. All too often, entrepreneurs play "catch up" with important IP issues, rushing to file a provisional application for a patent, revisiting trademark strategies after another business secures a desired mark, or back-tracking on processes for protecting trade secrets. Placing delivery of IP content at the forefront of an academic program, while reinforcing the application of knowledge throughout, can mitigate these time-sensitive challenges. Since its creation, the Master's of Engineering in Technical Entrepreneurship at Lehigh University has strategically integrated IP theory and practice into its curriculum. From a dedicated IP course to assessed deliverables in four project courses, students emerge with the knowledge and tools to integrate IP into their entrepreneurial careers.

Assessing a New Venture Lab Class at SJSU
Anuradha Basu, San Jose State University

What you'll take away from this presentation: an understanding of the benefits and challenges of using Lean LaunchPad in entrepreneurship education.

This paper will evaluate our experience of introducing a new Venture Lab class at San Jose State University. The course draws on the Lean LaunchPad methodology, requiring students to apply the knowledge gained from their academic courses to developing their own businesses. The paper will evaluate the extent to which the course fulfilled its objectives of enabling students to determine the attractiveness and viability of their new venture ideas, to gain an understanding of the key development processes in the overall startup process, to gain experience in pursuing these processes simultaneously, and finish the course with an action plan for pursuing their business ideas after the course was completed. It aims to advance the field of entrepreneurship education by evaluating how students dealt with the ambiguities involved in applying theory to practice and the challenges and value of experiential learning.

...continued

Program Models
Salon N
2:00 pm – 3:15 pm

Papers

Building a Scalable Entrepreneurship Ecosystem Based on the Lean LaunchPad: From science and healthcare to social ventures and corporate innovation
Andre Marquis, University of California-Berkeley

What you'll take away from this presentation: an example of a Lean LaunchPad-based entrepreneurship curriculum.

At UC Berkeley, we have scaled our Lean LaunchPad-based entrepreneurship ecosystem from Steve Blank training ten teams/year in his class to over 150 teams/year across our classes and programs locally and out across dozens of countries around the world. The goal of this presentation is to discuss best practices and strategies in refining and scaling Lean LaunchPad education as well as sharing our knowhow and the materials, systems and online platforms we have used to grow our startup ecosystem efficiently, measure impact and engage companies and mentors at scale. Even our Startup Competition is now an accelerator for teams that are a "go" from a Lean LaunchPad program. With our partners including USSF and Stanford, we have helped develop specialized curricula for science & engineering (with NSF), healthcare (with NIH), energy and social ventures and will have those materials to share.

BREAK 3:15 pm – 3:45 pm

SATURDAY 3:45 pm – 5:00 pm

Open Meetup
Archives
3:45 pm - 5:00 pm

Group discussion

How Can We Use Lean Startup Methodologies to Guide Technology Transfer?
Max Green, University of Texas

What you'll take away from this session: tips on how to use Lean Startup principles to accelerate the success rates of university-based science and technology ventures.

Technology commercialization activities are fraught with guesses and assumptions on the viability of early-stage scientific innovations and how they create value for specific customer segments. There can be a substantive disconnect between what research teams believe is the market need and what the actual product-market fit is for their technology. Together as a group we will explore mechanisms to leverage Lean Startup methodologies, particularly the Customer Development process, to position university teams to make critical strategy decisions that effect commercialization outcomes of early stage technologies. We will discuss how the search for an appropriate business model can highlight differentiation in particular pathways to commercialization and how to best inform our decisions by collecting data.

Program Models
Salon P
3:45 pm - 5:00 pm

Panel

Innovative Universities: Culture and ecosystems
Thomas O'Donnell and Steven Tello, University of Massachusetts, Lowell
James Spencer, Rensselaer Polytechnic Institute
Judith Cone, University of North Carolina; Kerri Smith, Rice University

What you'll take away from this session: insight on the ecosystems and cultures required for innovation and entrepreneurship to thrive on campus.

For innovation and entrepreneurship to thrive on campus, universities must create nurturing ecosystems (funding, mentors, education, partners, etc.) and supportive cultures (values, systems and rewards) for students, faculty and staff. This portfolio of partnerships, courses and program activities must provide a consistent and integrated experience that crosses disciplines and cultural boundaries. In this session, campus leaders will share best practices and lessons learned in creating the integrated ecosystems and supportive cultures required for innovation and entrepreneurship to thrive on campus.

Tools
Monument
3:45 pm - 5:00 pm

Workshop

Measuring Engineering Innovativeness in Student and Practicing Engineers
Daniel Ferguson and Senay Purzer, Purdue University
Kathryn Jablokow, Pennsylvania State University

What you'll take away from this presentation: a deeper understanding of the concept of engineering innovativeness and how to measure the phenomena for program assessment.

The purpose of this workshop is to introduce Open attendees to the concept of engineering innovativeness, experiment with a test version of the instrument to assess their own innovativeness, and discuss its possible use in assessing the innovativeness or changes in innovativeness of engineers as individuals, in groups or companies or in different cultures or contexts. We will ask and answer the following:

1. What is engineering innovativeness and why is measuring the phenomena important?
2. How has this measurement instrument been developed and who has been involved and supported the research and development process?
3. How do you collect, interpret and understand the results?
4. When will the measurement instrument/benchmark database be available outside the research and development group and how will it be shared/administered?

Global
Congress
3:45 pm - 5:00 pm

Panel

Harder Than You Think: Surprises in starting a social venture abroad
John Gershenson, Michigan Technological University
Sam White, Promethean Power
Khanjan Mehta, Pennsylvania State University

What you'll take away from this session: lessons learned on global entrepreneurship.

This panel will focus on the many surprises in starting a social venture abroad, including customs, visas, hiring and more. Panelists will talk in detail about what really surprised them from a logistics standpoint and otherwise when attempting to start a company overseas.

Creativity
Supreme Court
3:45 pm - 5:00 pm

Workshop

Creativity Re-imagined: A hands-on deep dive
Ian Kerr and Dennis Bone, Montclair State University

What you'll take away from this session: a new model of creativity you can bring back to your classroom.

This workshop will focus on a new model that offers an entirely new approach to working with and managing disruptive forms of creativity. While most innovation models focus on solving known problems via minor changes to existing products, this model teaches one how to invent new problems that are worth having, then develop new paradigms of action, and finally produce catalytic tools to make a world worth having. The workshop will take participants through this creative process: they will collaboratively make something innovative in real time and they will leave with tools, concepts, skills and motivation to creatively transform the uncertainties and opportunities they might face. It is designed to help entrepreneurs pivot and overcome obstacles while building a robust and paradigm-transforming business model.

Program Models
Salon O
3:45 pm - 5:00 pm

Papers

Lightning in a Bottle: Improving success outcomes for student-generated startups
Susan Moring, Jeff Moore and Alyssa Boutelle, University of Oklahoma

What you'll take away from this presentation: methodologies to increase the chance of success of student startup teams in your entrepreneurship program.

Since 2006, the Center for the Creation of Economic Wealth (CCEW) at the University of Oklahoma has supervised over 80 student entrepreneurial projects developed during semester internships. In the past year we have incubated, mentored, and launched three successfully funded student startups. By analyzing commonalities between our most successful startups, we'll offer conference attendees tactical, actionable takeaways for their respective programs. A few of these key takeaways include: set base parameters and use structured brainstorming to ideate new products; build interdisciplinary teams so startups are equipped with team members capable of developing functional prototypes and analyzing wider market demands; and continuously iterate products using user-centered design approaches to better position teams for commercialization. These takeaways will help set student teams up for success from their earliest stages.

Disciplined Entrepreneurship: An alternative to Lean LaunchPad?
Kramer Winingham, New Mexico State University

What you'll take away from this presentation: an introduction to Disciplined Entrepreneurship, an alternative model to Lean LaunchPad.

Lean LaunchPad has commanded a strong following among entrepreneurial educators; however, is it the best methodology for new entrepreneurs? MIT's Disciplined Entrepreneurship model offers an interesting alternative, with a more formal structure and a well-defined progression. For those new to entrepreneurship, the added structure can provide welcome guidance. This paper discusses the experience of Studio G, New Mexico State University's student incubator, implementing a Lean LaunchPad program model and transitioning to a new curriculum based on Disciplined Entrepreneurship. The paper highlights the pros and cons of each methodology and the experience of student entrepreneurs involved in both programs.

Extending Multidisciplinary Innovation Education at the Undergraduate Level: A new model to consider
Jeff Citty and Jamie Kraft, University of Florida

What you'll take away from this presentation: an example of an undergraduate entrepreneurship program.

The need for the United States to develop a highly adaptable, innovation-ready workforce continues to rise. Employers don't feel confident college graduates have 21st century skills such as critical thinking, problem solving, and oral and written communication. To meet this problem, a large public research institution in the southeast developed a multidisciplinary model for innovation education at the undergraduate level. This model utilizes a spring/summer enrollment pattern that includes an Innovation minor interwoven throughout thirty majors. The curriculum includes courses in creativity, entrepreneurship, leadership, ethics and a senior project that was beta tested utilizing a VentureWell grant. After two years of running this model, 300 students enrolled the first year and 346 in the second year. This non-traditional model is showing healthy signs and could be replicated at most similar type and size institutions.

Assessment
Salon N
3:45 pm - 5:00 pm

Papers

Assessing the Change in Student Mindset in Entrepreneurial Education
Scott Walker, Virginia Polytechnic Institute and State University

What you'll take away from this presentation: an example of how to measure outcomes in a Lean LaunchPad-based course.

Assessing student outcomes as a result of entrepreneurial education has been ongoing for a number of years. There are debates about which method of measurement is best for determining student outcomes and very little discussion to date regarding student outcomes specific to the Lean Startup method and Ries' principles for teaching entrepreneurship. At Virginia Tech, our engineering education department has been using the Business Model Canvas and the methods developed by Alexander Osterwalder and pioneered by Steve Blank to teach our class on entrepreneurship. Through this presentation, we will show how we are measuring student outcomes and what that assessment has revealed about attainment of identified outcomes. We will also discuss the next steps we intend on pursuing as we continue to educate students interested in entrepreneurial endeavors.

Assessing Teamwork in Entrepreneurship Classes
Sadan Kulturel-Konak and Abdullah Konak, Pennsylvania State University Berks

What you'll take away from this presentation: a new tool for peer evaluation and assessment.

Teamwork- and problem-based learning play major roles in our entrepreneurship classes, but assessing teamwork and conducting peer- and self-assessment multiple times in a semester can be a challenging task. One of the challenges of peer evaluation is the labor-intensive nature of data collection and analysis. A web-based application, Peer Evaluation and Assessment Resource (PEAR), intends to streamline the process of peer evaluations. PEAR was developed based on the Model of Domain Learning (MDL), which explains how students master a subject matter through complex interactions among and shifts in their knowledge, interest level, and strategic processing abilities. We illustrate the workflow of PEAR and how the MDL is integrated into the peer assessment process. Furthermore, the advantages of the MDL-based assessment framework will be discussed compared to a traditional assessment model.

How Would Students Use Money for Entrepreneurial Endeavors? A Learning Activity
Phil Reeves, Pennsylvania State University

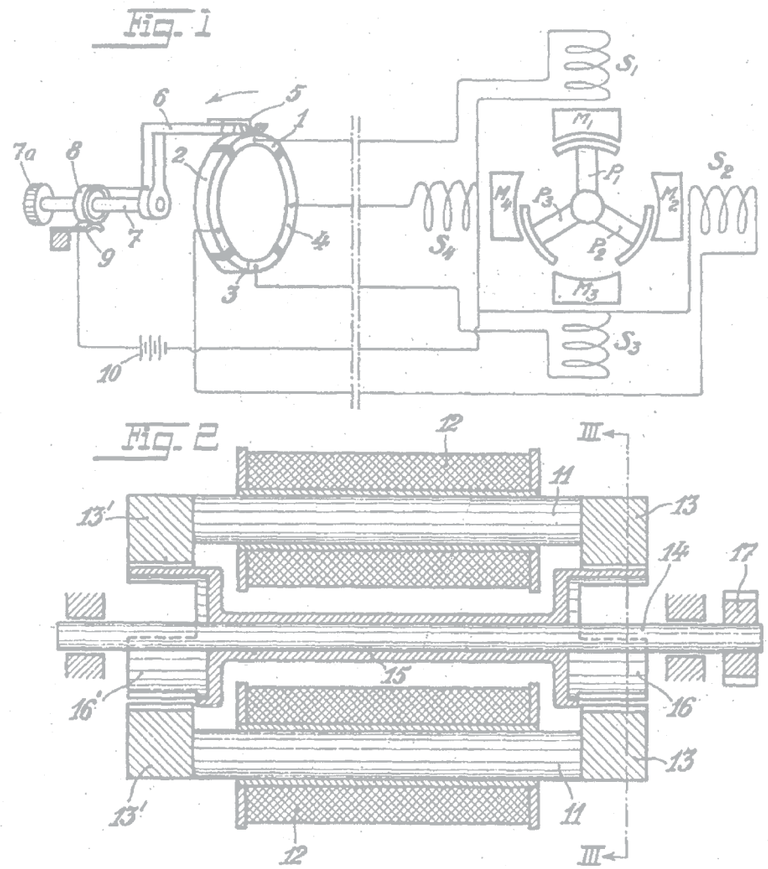
What you'll take away from this presentation: insight into how students intend to apply their recently acquired knowledge in the real world.

Students enrolled in entrepreneurially focused classes answered the following question at the beginning and end of their classes: "If a wealthy investor provided you with $50,000 to engage in entrepreneurial activities, how would you use the money? Please explain how you would allocate the money with explanations so that the investor will be confident in his/her decision to provide you with start-up funding." We will present the analysis of the responses to determine how the courses influenced the strategies and choices students made. The results will provide insight into how students' perception of entrepreneurial endeavors change. Individuals who attend this presentation will walk away with another assessment tool for evaluating student progress in entrepreneurial focused courses and will gain insight into how students intend to apply their recently acquired knowledge in the real world.

SATURDAY 6:30 pm – 9:30 pm

Open Minds @ the Smithsonian's National Museum of American History

Cap off the conference in style by attending Open Minds, a favorite event of VentureWell conference attendees. Open Minds is an exhibition of innovations from our best student teams. It's a great opportunity to see entrepreneurship education in action. Twelve teams will be on hand to demonstrate their products, showcase their ventures and practice their pitches to conference attendees, VIPs and guests.



Full schedule at *venturewell.org/open/schedule*

OPEN 2015 POSTER PRESENTATIONS

The Enhancing University Research and Entrepreneurial Capacity (EURECA) Program: New Models of Scientific and Technical Cooperation Between Russian and American Universities
Oxana Anistratenko, The U.S. and Russia Foundation

Mobius SLIM: Social Learning Idea Market // Mobius SLIP: Social Learning Solution for Creativity and Critical Thinking
Dmytro Babik, University of North Carolina at Greensboro

Course Combining Design and Contemporary Issues
John Callister, Cornell University

Opening New Doors: Unique Innovation Partners Unite
Tallie Casucci, University of Utah

Consumer-based Bioengineering Capstone Design Course
Jennifer Currey, Union College

Innovation and Entrepreneurship in Physics
Duncan Carlsmith, University of Wisconsin-Madison

Implementation of Entrepreneurship Education in Engineering Course Program
Seungdeog Choi, University of Akron

The Liberal Arts and an Entrepreneurial Mindset: Lessons from the Front Lines at Ursinus College
Carol Cirka, Ursinus College

Interdisciplinary First-year Design Projects Sourced from Entrepreneurs and Startup Companies
Emma DeCosta, Northwestern University

Understanding the Impact of Interdisciplinary Faculty Fellowship Programs in University-wide Entrepreneurial Initiatives
Jake Duke, Oklahoma State University

Publishing Engineering Entrepreneurship Research
Dan Ferguson, Purdue University

Faculty Beliefs About Entrepreneurship and Entrepreneurial Mindset
D. Jake Follmer, Pennsylvania State University

Getting Out of the Building Backwards: The Pathway from Business Plan Competition to a Lean Launch
Maurice Haff, University of Central Oklahoma

Student Entrepreneur Path to Success
Christopher Hickey, Clark Atlanta University

Managing University Start-ups using Sales Force Automation Techniques
Eric Hill, Mississippi State University

Airy Arm
Elizabeth Jackson, Rochester Institute of Technology

Fostering Entrepreneurial Community On and Off Campus
Mistie Josephson, Washington State University

Poverty-alleviation, Prosperity-building, and Planet-sustaining (3P) Innovations Program
William Kisaalita, University of Georgia

Improving the Quality and Number of Intellectual Property Patents Filed by Student Entrepreneurs
Patrick Loftus, University of Utah

Systems Thinkers: A Critical Competency for Graphic Design
Peter Lusch, Pennsylvania State University

The Elevator Pitch Competition Reimagined
Michael McCollough, Berna Devezer and George Tanner, University of Idaho

Philly's URB'N Diary
Dawn McDougall, Drexel University

Frame Changers
Khanjan Mehta, Pennsylvania State University

Teaching Social Entrepreneurship Through Participatory Design Thinking
Sara Minard, Northeastern University

Measuring Success in University Incubators: More Than Just the Numbers
Rachel Mui, Oklahoma State University

Student Engagement and Development at AidData
Ashley Napier, AidData

Entrepreneurship in Small Doses
Mansoor Nasir, Lawrence Technological University

continued...

OPEN 2015 POSTER PRESENTATIONS

The Moderating Role of National Culture on the Effect of Enterprise Innovative Environment and Performance: An Emerging Marketing Perspective—Kenya
Joseph Ngugi, United States International University

Stem to Steam Projects for Innovative Urban Sustainable Living
Diana Nicholas and Shivanthi Anandan, Drexel University

Applying Design Thinking for Entrepreneurship in Low-resource Settings
Adithya Pasupuleti, Innovation 101

The DEN (Design and Entrepreneurship Network): A Multidisciplinary Program to Develop and Apply Entrepreneurship Experiences for BME Students
Breanne Przestrzelski, Clemson University

InVenture Challenge @ Georgia High Schools
Chris Reaves, Georgia Institute of Technology

The Continual Evolution of the Assessment of the ENTI Minor
Philip Reeves, Sarah E. Zappe, Elizabeth Kisenwether and D. Jake Follmer, Pennsylvania State University

Spatial Experience and Social Behavior in Collaborative Workspaces
Bonnie Sanborn, Cornell University

Social Entrepreneurship for e-NABLE: Designing and Distributing 3D Printed Prostheses
Emily Sanseverino, Rochester Institute of Technology

e-channel: An Innovation Dissemination Venue
Jean Shipman, University of Utah

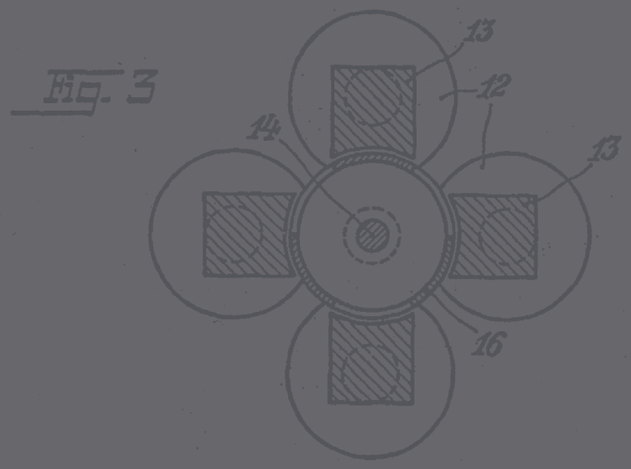
Collaborative Courses on Developing Technologies and Sustainable Business Models for Ventures Focused on Improving Lives of Rural Nicaraguans
Pritpal Singh, Villanova University

How to Fail Smart
Elisabeth Sooklal, Startup Shell

The International Rammed Earth Housing Project
Valmiki Sooklal, Southern Polytechnic State University

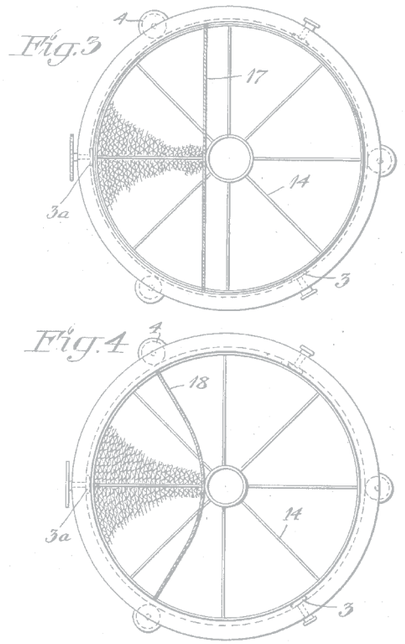
Initial Analysis of Social Impact Projects at MIT
Sher Vogel, Massachusetts Institute of Technology

University of Wisconsin-Extension Enhancing Entrepreneurship through Lean Startup Virtual Cohorts
Idella Yamben, University of Wisconsin



VISIT OPEN 2015 AT VENTUREWELL.ORG/OPEN

open [2015]

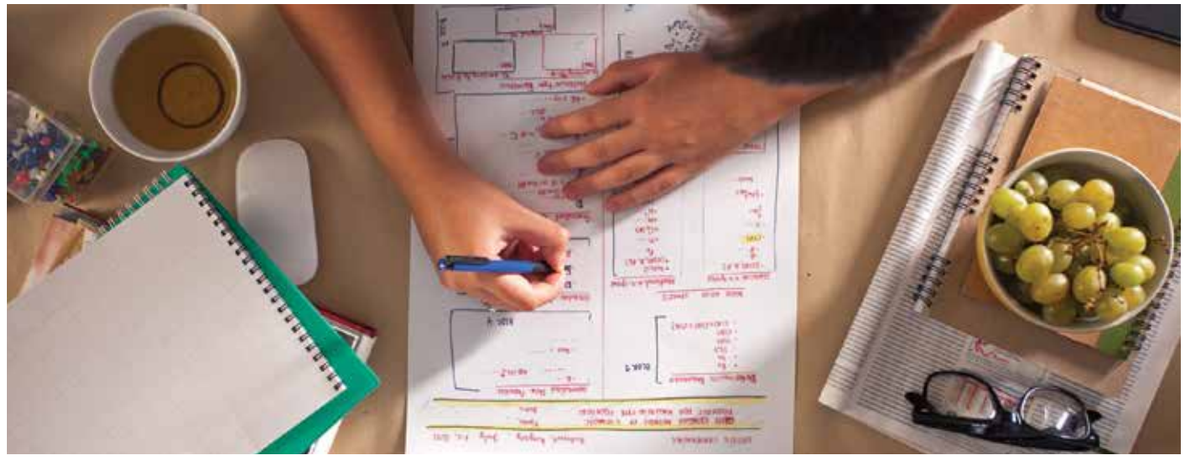


For presenter bios, conference papers and more, visit venturewell.org/open. You can also see who's attending this year's conference by heading to venturewell.org/open/connect and connecting via LinkedIn.

VENTUREWELL.ORG/OPEN

[venturewell.org] [follow us on Twitter @venturewell] [like us on Facebook facebook.com/VentureWell]
[use hashtag #vwopen for conference tweets]

VENTUREWELL
idea to impact



VentureWell is a higher education network that cultivates revolutionary ideas and promising inventions.

For nearly twenty years, we've been on a mission to launch new ventures from an emerging generation of young inventors driven to improve life for people and the planet.

Our programs and faculty partners are often the first to validate, support and guide a powerful idea, enabling student entrepreneurs to advance their technological discoveries to consumers who need them.

Get involved:

Visit venturewell.org
Read our blog, Inside Impact, venturewell.org/blog
Meet our innovators, venturewell.org/success-stories

facebook.com/VentureWell
@venturewell

100 Venture Way
Hadley MA 01035
413 587 2172
venturewell.org

VENTUREWELL™
idea to impact

2014 - 15
E-TEAM PROGRAM

STAGE 1	STAGE 2	STAGE 3
$5,000 funding	$20,000 funding	$50,000 funding
50 teams	20 teams	2-3 teams

Out of the Classroom. Into the Market.

Our E-Team Program gives college students the chance to move new tech ideas out of the lab and classroom and into the marketplace. The three-stage program provides grant funding, experiential workshops, veteran coaching, and a potential investment opportunity to help teams manifest their projects' full commercial potential.

- Stage 1 provides funding of $5,000 to attend a three-day workshop on how to better articulate the opportunity for the innovation in the marketplace. Remaining funds may be used to support further development of the project/product.
- Stage 2 provides additional funding of up to $20,000. In a second workshop, teams develop their business model hypotheses and plans to test them. Six monthly coaching sessions follow, helping keep teams moving forward.
- Stage 3 focuses on helping eligible Stage 2 teams develop a "lens of the investor" perspective and culminates in a venture forum presentation to potential investors. VentureWell invests up to $50,000 in two to three Stage 3 teams per year.

We define an "E-Team" as a multidisciplinary group of students, faculty, and mentors working together to bring an invention to market.

Deadline: May 8, 2015
Visit http://venturewell.org/student-grants/ to learn more.

VENTUREWELL™
idea to impact

epicenter
National Center for Engineering Pathways to Innovation

produced in collaboration with Epicenter

"It's time to pivot our way of teaching entrepreneurship."

The Lean LaunchPad Educators Seminar is designed for faculty who want to learn how to integrate Lean Startup principles into their curriculum.

Transform your classroom into an active entrepreneurial environment and help your students learn to design, test, iterate, pivot and innovate.

In this seminar, you will learn techniques for building an experiential curriculum that you can adapt and put to immediate use in your classroom.

ABOUT THE LEAN LAUNCHPAD

Developed by Steve Blank, the Lean LaunchPad is a new pedagogical framework for entrepreneurship education. The approach helps students learn by doing through the framework of the Lean Startup: business model design, customer development and agile engineering.

Start the Lean LaunchPad Revolution on your campus!
See website for autumn dates.
venturewell.org/lean-launchpad

teaching innovation

Innovation is a skill that can and should be taught in universities. With our faculty grants of up to $50,000, VentureWell challenges faculty to pioneer new ways to engage their students in the entrepreneurial process.

Faculty Grants from VentureWell support the creation of new courses and programs in which students develop ideas and gain the skills to bring them to market.

VENTUREWELL™
idea to impact

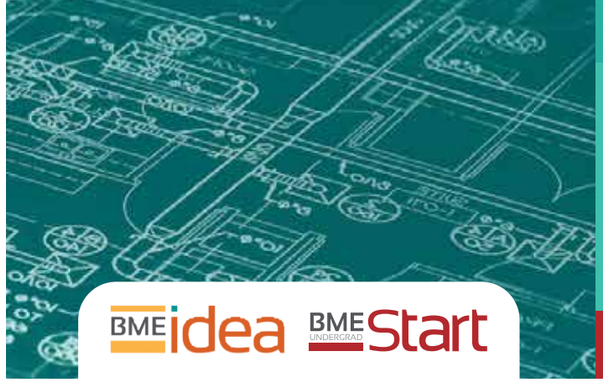
Learn more at venturewell.org/facultygrants

Next Faculty Grant Proposal Deadline: May 8, 2015

Contact Senior Program Officer Jennifer Keller Jackson if you'd like to vet your ideas: **facultygrants@venturewell.org**

VENTUREWELL™
idea to impact

The world needs more effective, functional, and affordable technology solutions to clinical medical problems. With BMEidea and BMEStart, the nation's leading competitions for biomedical and bioengineering students, we challenge students to pioneer a health-related technology that addresses a real clinical need.



BMEidea BMEStart UNDERGRAD

get funding for the next big idea: yours.

Our national BMEidea and BMEStart competitions offer collegiate biomedical entrepreneurs the chance to win up to $10,000 and receive critical early-stage validation of their ideas.

Who may apply:
BMEidea: Graduate and undergraduate students
BMEStart: Undergraduate students

Deadlines: **BMEidea: April 4, 2015; BMEStart: May 22, 2015**

EPICENTER

empower undergraduate engineering students to bring their ideas to life

Epicenter is thrilled to be part of VentureWell's Open conference for the fourth year. Learn more about the activities of our national community and find out how to join the movement at these sessions hosted by Epicenter team members and program participants.

THURSDAY

Ideas at Play: The Gaming of Innovation and Entrepreneurship Education

FRIDAY

Best Practices Related to Student-Generated IP
University Innovation Fellows Presentations
Doing Something with Nothing and Nothing with Something
Trans-Disciplinary Game-Based Learning, Teaching and Tools
Igniting the Academic Maker Space: Programming That Brings a Maker Space to Life
I Don't Have Time for This Entrepreneurship Thing, I Have to Get to My Waitressing Job!
Aggies Invent: 48-Hour Innovation Challenges
TTU EagleWorks: One Approach to an Innovation and Entrepreneurship Student Competition
Creating Impact in Engineering Education Meet-Up

SATURDAY

Lean LaunchPad for Undergrads: Implementations and Strategies
Building Creative Confidence (and Why That Matters for Engineers)
Pathways Partners: Entrepreneurial Change Across Campuses
Design Thinking for Engineers: Applying the Creative Process to Complex Technical Problems
Best Practices for Managing Student Teams
Innovative Universities: Culture and Ecosystems

SUNDAY

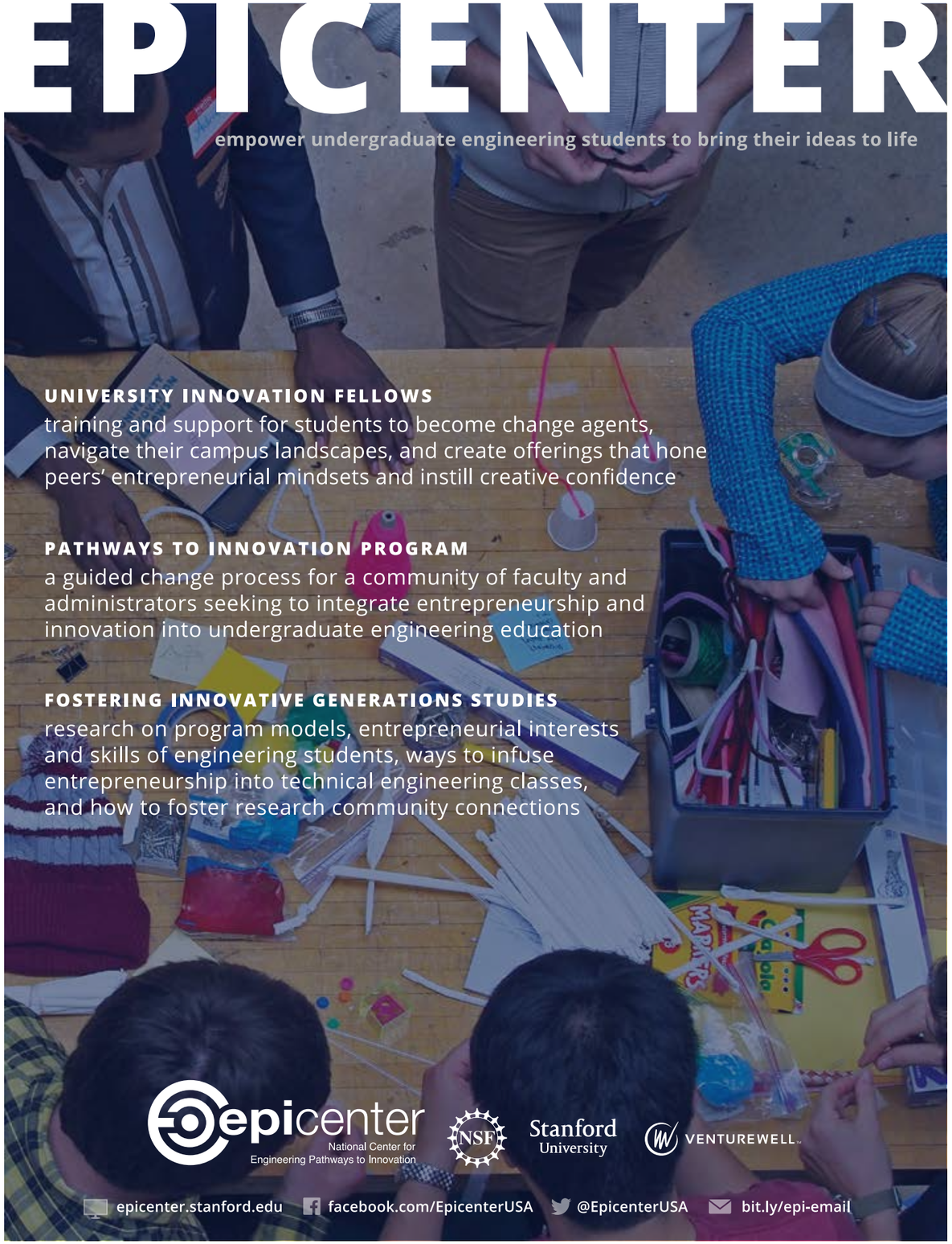
Maker Spaces Reinvented

epicenter National Center for Engineering Pathways to Innovation · NSF · Stanford University · VENTUREWELL

epicenter.stanford.edu · facebook.com/EpicenterUSA · @EpicenterUSA · bit.ly/epi-email

EPICENTER

empower undergraduate engineering students to bring their ideas to life



UNIVERSITY INNOVATION FELLOWS
training and support for students to become change agents, navigate their campus landscapes, and create offerings that hone peers' entrepreneurial mindsets and instill creative confidence

PATHWAYS TO INNOVATION PROGRAM
a guided change process for a community of faculty and administrators seeking to integrate entrepreneurship and innovation into undergraduate engineering education

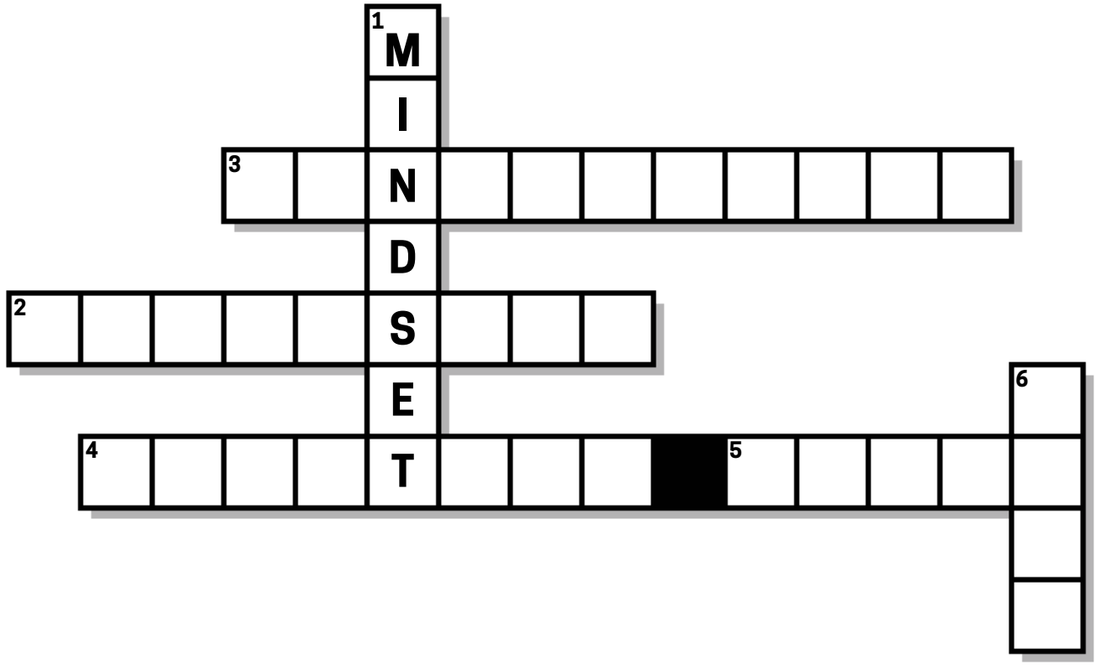
FOSTERING INNOVATIVE GENERATIONS STUDIES
research on program models, entrepreneurial interests and skills of engineering students, ways to infuse entrepreneurship into technical engineering classes, and how to foster research community connections

epicenter National Center for Engineering Pathways to Innovation · NSF · Stanford University · VENTUREWELL

epicenter.stanford.edu · facebook.com/EpicenterUSA · @EpicenterUSA · bit.ly/epi-email

ENGINEERING UNLEASHED.

IT ALL STARTS WITH A MINDSET.



DOWN

1. It all starts with a _____
6. A collaborative network of colleges and professors committed to entrepreneurial engineering

ACROSS

2. Robotic rover on the red planet
3. A pair of these is needed for a circuit
4. Making, producing, causing to exist
5. Relative worth or a real bargain

KEEN
KERN ENTREPRENEURIAL ENGINEERING NETWORK

1. Mindset 2. Connections 3. Curiosity 4. Creating 5. Value 6. KEEN (www.keennetwork.org)

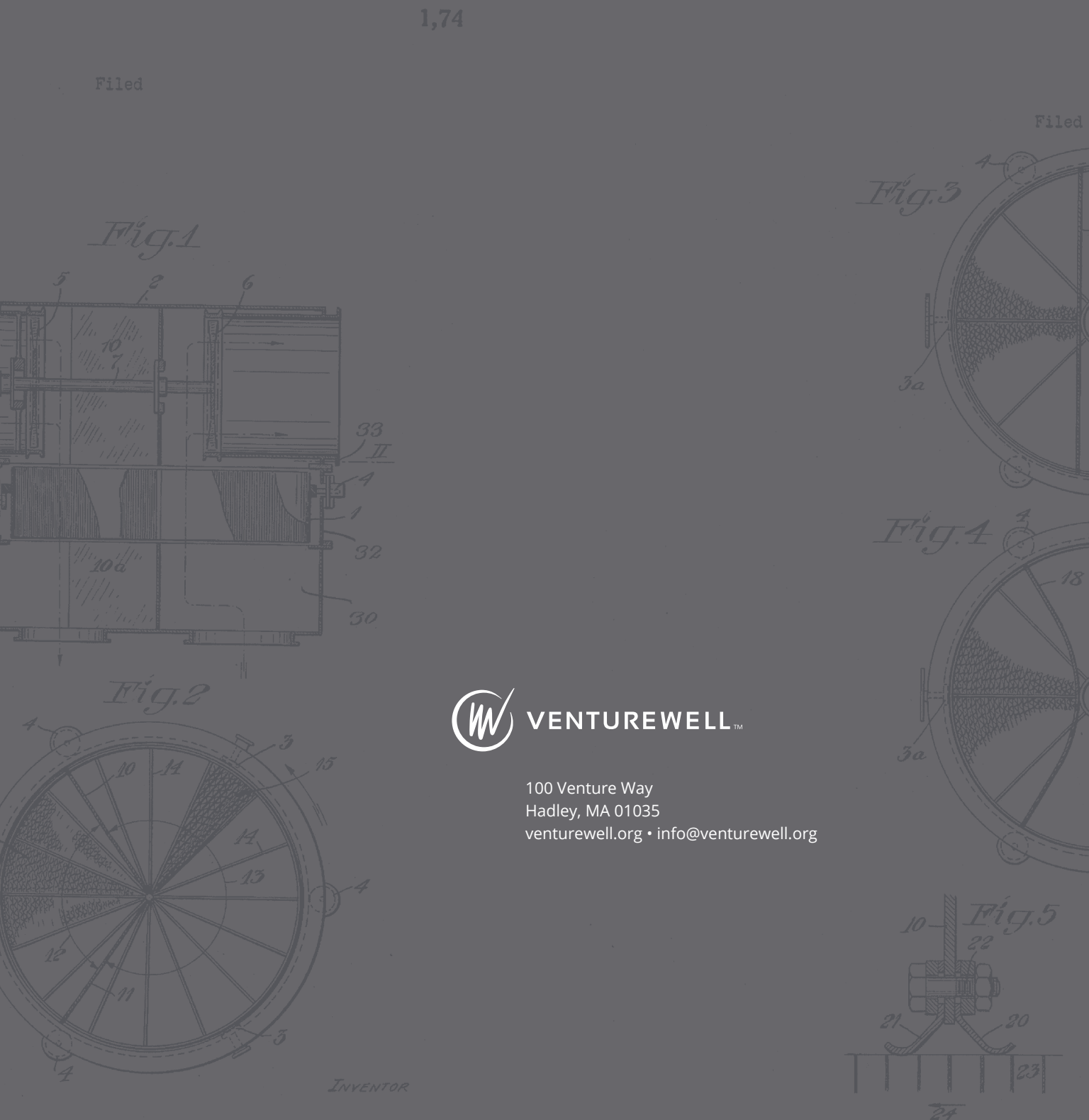
NOTES

Full schedule at *venturewell.org/open/schedule*

MARK YOUR CALENDARS FOR **open**[2016]

March 4–5, 2016
Portland, OR

Call for papers announced in June
Registration opens in September



VENTUREWELL™

100 Venture Way
Hadley, MA 01035
venturewell.org • info@venturewell.org