

Blum Center Innovation Director Lina Nilsson Named Top Innovator Under 35

Dr. Lina Nilsson, Innovation Director at the Blum Center for Developing Economies, has been named one of this year's Innovators Under 35 by the MIT Technology Review. For more than a decade, the global media company has recognized a list of exceptionally talented technologists whose work has great potential to transform the world.

"We're proud of our selections and the variety of achievements they celebrate, and we're proud to add Lina to this prestigious list," says MIT Technology Review's editor in chief and publisher Jason Pontin. "Over the years, we've had success in choosing women and men whose innovations and companies have been profoundly influential on the direction of human affairs. Previous winners include Larry Page and Sergey Brin, the cofounders of Google; Mark Zuckerberg, the cofounder of Facebook; Jonathan Ive, the chief designer of Apple; and David Karp, the creator of Tumblr."

Dr. Nilsson is being recognized for her work at the Blum Center as well as Tekla Labs, which works to enable scientists in the developing world to construct their own high-quality lab equipment using readily available, off-the-shelf items. Her selection highlights UC Berkeley's strength in cultivating not only researchers and entrepreneurs, but also ambitious social innovators working across disciplines to meet global challenges head-on. One of 10 women on this year's list, Dr. Nilsson also illustrates the growing influence of women in the fields of technology and innovation.

"Lina is an extraordinarily talented researcher. Her work combines the best of



Photo Credit: Kore Chan

innovative technology and a commitment to the alleviation of poverty in a new construct of development engineering. She is a groundbreaking thinker who truly embodies the Blum Center's spirit of innovation and social engagement," said Shankar Sastry, Dean of the College of Engineering and Faculty Director of the Blum Center. "We are delighted that she has been recognized for her pioneering achievements."

A biomedical engineer by training, Dr. Nilsson believes that global challenges in health, environment, and development require grassroots contributions from the entire global scientific community. While completing her MSc at the University of Washington, Dr. Nilsson received a Bonderman Fellowship to travel throughout resource-scarce areas in Asia and South America. She visited labs and met

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with scientists whose research was significantly hindered by a lack of standard lab equipment. Subsequently, she founded Tekla Labs as a platform for "thinking creatively about ways to sustainably improve access to equipment and other physical infrastructure" so that "more researchers around the globe will have access to the tools they need to act on their insights and transformative ideas."

Dr. Nilsson and this year's other honorees are featured online at TechnologyReview.com and in the September/October print magazine. They appeared in person at the EmTech MIT conference from October 9-11 in Cambridge, MA.

IdeaLabs Reach Across Disciplines to Solve Global Problems

IdeaLabs, a component of the Big Ideas@Berkeley program, are student-led hubs for discussion and idea-sharing around issues that are important to students—anything from climate change and health to safe water, nanotechnology, or household energy. The groups are multi-disciplinary gatherings of undergraduate and graduate students designed to bring out a range of viewpoints, ideas, and strategies.

Each IdeaLab is unique, reflecting the goals and passions of the students behind it. The groups host regular discussions and events where students can gain new perspectives, share ideas, and work together with peers they might never meet in a classroom—engineers, aspiring entrepreneurs, and science buffs talk over a common interest with anthropologists, health experts, and public policy majors.

What we've found at Berkeley about how to get people to work together is that you define some kind of very big problem that needs to be solved, and attack it from a range of viewpoints.

Estrella Sainburg, student Director of the Berkeley Water Group IdeaLab, said the most rewarding part of leading the IdeaLab was hearing a new member's excitement at finding a place on campus where other students shared her passion for water issues.

IdeaLabs are more than just discussion groups, however—they are geared toward connecting students who can together explore real solutions to critical challenges. The Visualizing Urban Data IdeaLab held a hackathon to explore data around the BART strike, including BART employees' salaries, traffic, and ridership. "It was a challenge to work on an event transpiring in real time," said VUD IdeaLab Director Lewis Lehe. The resulting projects have spurred online discussions and attracted attention from students across disciplines. "Coders want to see our visualizations. Planners and civil engineers want to experience urban spaces in a fresh way," Lehe shared.

"We're excited to see the ideas and projects that these IdeaLabs



In October, students in the Visualizing Urban Data IdeaLab hosted hackathons with programming hobbyists in the Bay Area. They developed visualization tools to help policymakers the public make sense of salary, traffic, and ridership data related to the BART strike.

continue to produce," said Phillip Denny, Manager of the Big Ideas@Berkeley program at the Blum Center for Developing Economies. "You can find real innovation at the intersection of so many different perspectives. The interdisciplinary Big Ideas@Berkeley projects we see every year are a testament to that."

IdeaLabs have shown the benefits of bringing together diverse groups of students. Zoe Chafe, the student Director of the Climate Change and Health IdeaLab, described a visiting researcher's recent presentation on the health "co-benefits" of climate change mitigation strategies in China. At the end of her presentation, a public health student asked about her health methodologies. Participants from the China Energy Group at Lawrence Berkeley National Lab asked about her collaborations with institutions in China. Other students wanted to know more about the economic valuation she used when presenting trade-offs. "This is exactly the type of intellectual exchange we are hoping to support: an open forum where there are no stupid questions and everyone is encouraged to share their knowledge," said Chafe.

IdeaLabs operate under the umbrella of the Big Ideas program. All IdeaLabs invite new undergraduate and graduate student members from across campus.

To learn more, visit bigideas.berkeley.edu/idealabs

Blum Center's Laura Stachel Named One of Top 10 CNN Heroes of 2013

Dr. Laura Stachel (MD, MPH), a researcher with the UC Berkeley Blum Center for Developing Economies, was named one of CNN's Top 10 Heroes of 2013 for her work to bring life-saving "solar suitcases" to hospitals and clinics in developing countries.



CNN's Top 10 Heroes of 2013 recognizes everyday people who are changing the world. Each of the Top 10 CNN Heroes receives a \$50,000 grant. Online voting for the "CNN Hero of the Year" ran from October 10 to November 17.

While on a graduate student research trip to rural Nigeria, Stachel, a board-certified obstetrician-gynecologist, was shocked to observe obstetric care in a Nigerian hospital with unreliable electricity. She watched as nurses struggled to deliver babies by kerosene lantern, surgeons worked in near darkness, and critically ill mothers were turned away at night. These conditions put mothers' and babies' lives at risk, contributing to the 300,000 maternal deaths estimated each year globally—99% of which occur in the developing world.

Stachel saw a challenge and an opportunity to help. With funding from Big Ideas@Berkeley and the Blum Center, she and her husband, Hal Aronson, developed solar electric systems for the Nigerian hospital. With stable lighting, mobile communication, and a blood bank refrigerator, the maternal deaths at the hospital decreased. Stachel and Aronson next developed a "solar suitcase"—a portable, compact version of the hospital solar electric system—that could scale to rural hospitals and clinics. Together, they founded We Care Solar with the goal of providing simple, reliable light and power sources to healthcare facilities in developing countries.

Since 2009, more than 400 "solar suitcases" have served mothers



Stachel and We Care Solar have provided over 400 solar suitcases to date to clinics and hospitals in developing regions. With your help, they can distribute thousands more.

and babies in over 20 countries. The Blum Center and its USAID-funded Development Impact Lab (DIL) are supporting on-going efforts to scale the initiative. The user-friendly, mobile and nearly maintenance-free suitcases, which cost around \$1,500 and take only an hour to install, have proved an important innovation in the fight against maternal mortality worldwide. Stachel's goal is to light up 10,000 clinics in the next five years, serving 2 million mothers and babies.

"We are thrilled that Laura has received this recognition and believe she deserves to be CNN's Hero of the Year," said Shankar Sastry, Blum Center Faculty Director and Dean of the UC Berkeley College of Engineering. "Her work has saved the lives of many women and newborns and shows the power of engineering for development, which is the hallmark of our new initiative with USAID, DIL."

To learn more, visit wecaresolar.org


Twitter and YouTube Bring Poverty Debates to Life Inside and Outside the Classroom

>> BY JAMES ZHAO

Dr. Ananya Roy's animated voice resonates throughout Wheeler Auditorium as the projector displays a constant stream of tweets from students. A hand is raised on the left side of the lecture hall, then another on the right. Roy hastily walks around, making sure voices are heard. These are the sights and sounds of Roy's class of 700 students on "Global Poverty: Challenges and Hopes in the New Millennium," a core course in the Global Poverty and Practice Minor.

Inside The Classroom

These are not the typical lectures your parents remember from their college days. On select days, students in GPP 115 are invited to react to readings, videos, and provocative questions over Twitter, labeling their comments with #GlobalPOV. "Tweeting allows students to participate in the public dialogue around poverty issues—something that classroom discussions don't usually allow them to do," said Roy, a Professor of City and Regional Planning, Distinguished Chair in Global Poverty and Practice, and the Education Director for the Blum Center of Developing Economies. As a matter of fact, earlier this fall, class tweets caught the attention of economist Jeffrey Sachs, who sent back words of encouragement to Roy's students.

 "If the point is gender empowerment why are all the chairmen and CEOs of the Grameen Bank MEN?"

-@madisongordon24

Twitter also allows students to express honest and controversial opinions with some degree of anonymity in a class that deals directly with poverty, race, and gender. "Personally, I'm terrified of talking up in a class. 700 is a lot of people," said Alex Berryhill, a student in Roy's class. "Through Twitter, students who are not as comfortable with speaking out in class can simply tweet what they would have said anyways."

Roy strategically schedules tweeting sessions on days when she believes a particular topic will generate a lot of debate. As the tweets come pouring in, it's clear that students find real freedom of expression in this space. "If the point is gender empowerment why are all the chairmen and CEOs of the Grameen Bank MEN?" demands @madisongordon24. "Why is it that Starbucks is thriving yet the part of Ethiopia where they get their beans from is in famine?" asks @ivn_lo.



"Why is it that Starbucks is thriving yet the part of Ethiopia where they get their beans from is in famine?"

-@ivn_lo

Outside The Classroom

With the help of artist Abby Vanmuijen, one of Roy's former students who had filled her class notebook with drawings of the discussion topics, Roy has launched the #GlobalPOV Project and brought her lectures to life in thought-provoking live-action sketch videos that are posted on YouTube. Each of the videos begins with a question focused on a social or political issue: "Will hope end poverty?" "Who profits from poverty?" "Can we shop to end poverty?" And the latest: "Who is Dependent on Welfare?"



Photo Credit: GlobalPOV Video: Who is Dependent on Poverty

Roy is now screening these videos in class as a way to connect class readings with real-world controversies and to engage the Millennial Generation, who are used to consuming information this way. The #GlobalPOV Project videos are more than just supplementary material to the class, however; available online for anyone to view, they engage viewers around the world on real, pressing, and controversial issues. The videos invite viewers to join the conversation and help democratize discussions of poverty and inequality. As Matt Wade, one of Roy's Graduate Student Instructors, puts it, "[#GlobalPOV provides] a moment to speak directly to power, an opportunity of becoming-public, not heretofore available to students and people outside of the circles of development expertise."

#GlobalPOV allows students and engaged citizens around the world to join public debates around poverty and inequality. Roy hopes that in the future, new technology will allow more reflective interaction with a large group of students. For now, she will continue pioneering the use of social media in traditional classroom settings to explore how far she can take it.

Donor Profile: Melissa Stark

Year after year, Melissa Stark and her family have donated to the Blum Center's Global Poverty and Practice Minor Fellowship Fund to sponsor students completing their practice experience in the Philippines. Below, Melissa shares what it means to her family to support students studying and engaging with issues of global poverty.

I am a supporter of Berkeley's Global Poverty & Practice Minor because I believe it is a powerful tool in shaping the character of the next generation of leaders. Giving our future doctors, lawyers, engineers, and business leaders the opportunity to apply their talents in a development environment will create a lasting impact on the type of leaders they will be.

The 5 GPP students our family has sponsored over the last few years have built houses, worked in shelters and clinics and even taught dance to children in the Philippines. I was born in the Philippines but moved to the US when I was 5. My 2 boys, William (11) and Luke (7), have never been to the Philippines. Our sponsorship of the Blum students has helped me explain to Will and Luke about their heritage and how difficult life is for most of the people in the Philippines. My boys' nanny is Filipino, and two of the students worked with Gawad Kalinga, a charity (by coincidence) that helped their nanny's sister with housing. When Will and Luke make their first trip to the Philippines in June, it will be so much more meaningful.

We have gotten so much out of sponsoring the students and look forward to it every year. I am still hoping for students who want to work on water, infrastructure or energy projects in the Philippines



Photo Credit: Melissa Stark

The Starks' support for undergraduates in the GPP Minor has helped their sons, pictured here with their father, Talbot, explore their Filipino heritage. The family has enjoyed following sponsored students' practice experiences as they explore the country and engage with issues of poverty.

as I am a Managing Director in Accenture's Energy practice, but any projects that our Berkeley students choose to do will have a significant impact.

My parents, both engineers, moved us to the US when I was 5. I think that is a challenge of many developing countries- i.e. its most talented people immigrate to developed countries. The Global Poverty & Practice Minor is a great way to connect talent and future leaders to developing countries; in the long run, that can be more valuable than financial aid. I would be very proud if one day Will or Luke became Blum Center students.

Visit blumcenter.berkeley.edu/getinvolved/donate to learn more

Donor Impact: Student Practice Experiences



LIGAYA ESTOQUE

INTERGRATIVE BIOLOGY

With support from Melissa and her family, student Ligaya Estoque worked at a health clinic in the outskirts of Tacloban City, Philippines, in Summer 2012. Through the non-profit Visayans (VfV), she was able to shadow nurses and doctors, assist with consultations, and performed physicals and basic checkups.



SAMANTHA DIZON

MEDIA STUDIES/SOCIOLOGY

In Summer 2013, student Samantha Dizon received support from the Starks to work with Big or Bigger in Manila, Philippines. She implemented a performing arts program at elementary schools that helped build literacy, improve motor skills, promote health awareness, develop artistic talents, and instill self esteem and determination.

Big Ideas Gets Bigger and Better in its Eighth Year

Big Ideas@Berkeley gives students the opportunity to channel their passion for social change into creative and pragmatic solutions. In addition to offering new categories, more workshops, and a broader pool of professional mentors, the 2013-14 contest offers a chance for applicants to compete with students across California and around the country. Find full contest details at bigideas.berkeley.edu.

As past participants know, Big Ideas is more than a contest; it's an entire ecosystem designed to empower students. "Winning a Big Ideas prize is definitely a different experience than success in other areas of life at a university," said Nicholas De Raad, a member of the GoodWheels team that took 2nd Place in the "Scaling Up" category in 2013. "Unlike success in academic or internships, for this competition, the initiative and the idea that a team works on is developed out of personal interest to further a social cause."

Over the course of a school year, the contest provides funding, encouragement, and



Big Ideas is designed to support students from all parts of campus; This year's competition had 577 students apply in 9 categories.

advice to Berkeley students. In addition to writing and budget workshops, applicants have the opportunity to be matched with mentors from social enterprises, industry, and non-profits who are eager to help students develop their ideas.

"I can now say I have written a successful grant, can write a budget, create a proposal, plan a two year timeline, identify potential future plans, and anticipate different types of training that will be needed," said Adena

Ishii, whose project Berkeley City College Service Community tied GoodWheels for 2nd in 2013. "These are skills that most people have to learn after they've left school, and I've been given the opportunity to practice them now."

Applicants have access to drop-in advising sessions and all finalists are given the opportunity to work with professional mentors for eight weeks beginning in January.

QUICK LOOK: THE OPEN DATA CATEGORY



Dr. Raj Shah, Administrator for the US Agency for International Development, has described open data as "a remarkable new tool... to help end extreme poverty and ensure dignity and opportunity for people around the world." The Open Data category, sponsored by AidData and the College of William & Mary in collaboration with UC Berkeley, is the newest Big Ideas contest category.

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