

# MIT Sloan

Global Issues:  
MIT Sloan  
Faculty Solutions

Innovation  
at Work:  
Climate CoLab



## LONDON CALLING

**KRISTIN FORBES & FIONA MURRAY:**

Bringing their knowledge  
to the United Kingdom



# MIT Sloan

## News and insights for the MIT Sloan community Vol. 8, No. 3

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*John C. Head III Dean*

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# Inside

View from the new seventh floor of Building E52. Built in 1938, E52 required extensive renewal and renovations in order to serve current academic needs. Work began in the summer of 2013 and is expected to be complete in 2016.

## PERSPECTIVES FROM FACULTY

### 12 Global Issues: MIT Faculty Solutions

MIT Sloan faculty are weighing in on important management topics in publications and websites around the world. Here, we include published pieces from our faculty on everything from the search for the Malaysian airliner that disappeared over the Gulf of Thailand to Bitcoin to the financial case for local manufacturing.

## INNOVATION AT WORK

### 22 Climate CoLab

How can we solve climate change? So far, top-down approaches haven't worked. But what if we could tackle climate change with a cross-disciplinary approach that harnesses the collective intelligence of thousands of people all over the world? Professor Thomas W. Malone explains why Climate CoLab is lending some optimism to the climate change problem.

## FEATURE STORY

### 26 London Calling

Professors Kristin Forbes and Fiona Murray will put their research and experience to work for the United Kingdom in the coming years, following in the footsteps of generations of MIT faculty members before them. Forbes was appointed to the Bank of England's Monetary Policy Committee while Murray was named to the Prime Minister's Council for Science and Technology.

## DEPARTMENTS

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**On the cover:** Faculty members Kristin Forbes and Fiona Murray are embarking on multi-year appointments in the United Kingdom.

## MIT Sloan: Making a Difference for the Better

DEAR MIT SLOAN ALUMNI AND FRIENDS,

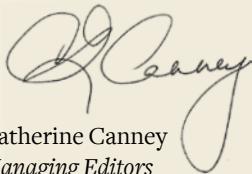
With the arrival of autumn in Cambridge, we are excited to share with you the latest issue of *MIT Sloan*. As always, we offer news of the recent happenings on campus—from information about last year's graduating class to successes in fundraising (thanks to all of you!) to celebratory photographs from the 2014 Reunion and Centennial Colloquium Weekend.

Highlighting the work of our faculty and alumni has always been an important component of *MIT Sloan*. In this issue, we hope you will enjoy reading about new appointments of Kristin Forbes and Fiona Murray in the United Kingdom (page 26), learning about Climate CoLab (page 22), getting tips on how to “Fail Better” (page 8), and hearing perspectives from our faculty on a variety of current global issues (page 12).

Perhaps the predominant theme tying this issue together is that MIT Sloan faculty, students, and alumni use their experiences to find solutions to the world's greatest challenges, working hard to make a difference for the better.

We hope this issue encourages you to get involved with some of the projects going on at the School—volunteer, come to campus for a visit, attend an event—while considering how what you learned at MIT Sloan can have an impact on your work and the world.

With best regards from Cambridge,



Catherine Canney  
Managing Editors



Kristin LeClair



## Dear Alumni and Friends of MIT Sloan,

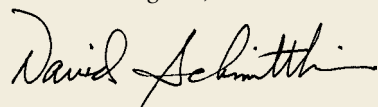
As this magazine reaches your door, our students have settled into a new semester persevering through some of the same fundamental courses that you took, as well as a host of new offerings designed to prepare the next generation of principled leaders.

The energy of the fall semester is always inspiring, and that inspiration is doubled by the momentum many of us feel after last year's meaningful celebration of Course XV's Centennial. Last year we recalled the wealth of contributions from the last 100 years; MIT Sloan faculty and alumni have done so much in the world and for the world. This year, firmly backed by the pride in all that came before, we turn our attention to capturing and characterizing the nature of the impact our community is having now and will have in the future.

In this issue of *MIT Sloan*, you will find stories of faculty leadership outside the boundaries of academia. Our feature article highlights Professors Kristin Forbes and Fiona Murray applying their insight on economics and innovation through important appointments in the United Kingdom. You can read about Professor Thomas Malone tackling climate change by harnessing collective intelligence from around the world. In their recently published book, Senior Lecturer and Global Healthcare Lab founder Anjali Sastry partners with Kara Penn, MBA '07, in presenting a systematic way to not only learn from, but proactively plan for, failure; we will provide you a glimpse into these ideas.

Finally, throughout the Class Notes section, you will find many alumni stories that highlight the importance of your sustaining support. It is only through this dedication that our community continues to thrive. It is this generosity that offers us confidence in the future and emboldens our dedication to invention. I look forward to seeing many of you this fall and next spring at our alumni event series, "Telling Our Story: The Voices of MIT Sloan Alumni," and to having the opportunity to express my gratitude in person.

Warm regards,



David Schmittlein  
John C Head III Dean





*Members of the MBA Class of 2014 gather at Convocation*

## MIT Sloan Graduates Celebrate Convocation and Commencement

On June 5, 2014, the graduating MBA class gathered for Convocation at the Citi Performing Arts Center in Boston to celebrate its achievements. The class was addressed by Joaquin E. Bacardi III, MBA '98, president and CEO of Bacardi Corporation, who received this year's MIT Sloan Dean's Award for Excellence in Leadership. He encouraged students to apply their MIT Sloan education in the world, saying, "Get in the arena. Get your hands dirty in the trenches of life."

The next day, graduates from all of MIT's programs gathered with faculty and staff on Killian Court for MIT's 148th Commencement Ceremony. President L. Rafael Reif congratulated the graduates on their achievements, welcomed them into the MIT alumni family, and challenged them to "solve the unsolvable" and to "rebuild the engine of society ... until it delivers the kind of performance we expect from ourselves at MIT."



# MIT Sloan 2014

GRADUATES BY PROGRAM

EMBA: **111**

LGO: **48**

MBA: **359**

MFin: **125**

MSMS: **35**

SDM: **31**

SF: **118**

PhD: **10**

Undergraduates: **50**

Total MIT Sloan  
Graduates: **887**

EMBA = Executive MBA  
LGO = Leaders for Global  
Operations  
MBA = Master of Business  
Administration  
MFin = Master of Finance  
MSMS = Master of Science  
in Management  
Studies

SDM = System Design  
and Management  
SF = Sloan Fellows  
Program  
PhD = Doctoral Program

seen and heard



“We need your vision to steer around obstacles, your passion to accelerate our progress toward important goals, and your wisdom to put the brakes on humanity’s most destructive forces.”

President L. Rafael Reif, in his Commencement address to 2014 graduates on June 5, 2014



“If you want to go fast, go alone. But, if you want to go far, go together.”

Jason Yum, MFin '14, quoting an African proverb in his Convocation speech to the MFin Class of 2014

MIT Sloan alumni of the last five graduating classes gather together in regions across the world as part of the Sloan 5 program managed by the Office of External Relations. Sloan 5 groups host social events, providing opportunities to connect with other MIT Sloan graduates. This year, alumni established four new groups in Taipei, Mexico City, Chicago, and Beijing, providing alumni in those areas with another way to stay in touch with the MIT Sloan community.

To find groups near you, or to volunteer to become a Sloan 5 officer in your city, visit <http://mitsloan.mit.edu/alumni/get-involved/sloan-5>.

## Sloan 5 Program

21  
CITIES

10  
COUNTRIES

65  
ALUMNI  
VOLUNTEERS



*Dean's Circle members join Dean Schmittlein in a toast.*

## Alumni Answer Annual Fund Call

Thanks to the dedicated efforts of alumni and friends throughout the 2013–14 academic year, MIT Sloan saw a record level of support for the MIT Sloan Annual Fund. 3,629 alumni contributed over \$4.2M, providing unrestricted funding for a wide variety of the School's priority initiatives.

The success represents an important milestone in a year that saw Dean David Schmittlein travel the globe to celebrate 100 years of management education at MIT. Gifts to the MIT Sloan Annual Fund allow the School to enhance international initiatives and fellowships, while supporting important initiatives including sustainability, healthcare, the digital economy, finance, and the Martin Trust Center for MIT Entrepreneurship. In a Centennial year that celebrated MIT Sloan's rich history, these gifts show a strong investment on the part of alumni in the future of MIT Sloan.

Aliza Blachman O'Keefe, SM '90, Dean's Circle Committee Chair of the MIT Sloan Alumni Board, notes, "The success of the Annual Fund this year reflects the depth of connection that MIT Sloan alumni have with the School and our commitment to its continuing mission. I am proud to give back to MIT Sloan, not only through my own philanthropic support, but also through chairing the Dean's Circle Committee. The Committee is excited to work with our global alumni community and contribute to the fundraising efforts necessary to help the School stay competitive and meet its goals."

## Student Class Gifts Reach New Heights

Student philanthropy is on the rise at MIT Sloan as 2014 Student Class Gift participation reached record levels this past spring.

Each year, graduating Sloanies give back to the School by contributing to the MIT Sloan Annual Fund through their Student Class Gift campaigns. The Class Gift emphasizes student participation rather than contribution amount, as 2014 EMBA Class Gift Co-Chair Moe Khosravy says: "No matter how much you give, making contributions as a student creates a lasting memory and a foundation for giving later in life."

This past spring, the EMBA program reached 100 percent class participation and raised a record \$433,458 in gifts and pledges. The MBA class set new records for participation and contributions with 93 percent of their class contributing \$311,164 in gifts and pledges to the MIT Sloan Annual Fund. The MSMS program finished with 77 percent class participation, and the MFin program participated at a rate of 44 percent; finally, 2014 Sloan Fellows joined the effort, with 7 percent of the class making a gift. Additionally, the EMBA Class of 2015 gave in honor of the EMBA Class of 2014. In total, the Student Class Gift raised \$773,660 in support of the MIT Sloan Annual Fund.

*Dina Kazzaz, MBA '14, announces the MBA class gift totals at Convocation*



## MIT Sloan Hosts Inaugural Alumni Board Meeting

The MIT Sloan Alumni Board held their first in-person meeting during Reunion Weekend 2014, welcoming its members to campus to begin work on their mission to expand the global visibility of the MIT Sloan School of Management through the activities of a more connected and engaged alumni community.



**Led by Co-chairs Tom and Banu Atkinson, both SM '94,** much of the initial meeting was dedicated to establishing the priorities on which the Board would focus its time. Presenters at the meeting included Dean David Schmittlein; Catherine Canney, Associate Dean for Dean's Initiatives and Brand Strategy; and Kristina Schaefer, Senior Associate Dean for External Relations and International Programs.

During the afternoon, the group divided into their respective committees. The Dean's Circle Committee, chaired by Aliza Blachman O'Keeffe, SM '90, reviewed and discussed the current state of alumni philanthropy at the School. The committee focused on ways to continue to encourage philanthropic support of the MIT Sloan Annual Fund, specifically, increased giving to and recognition within the Dean's Circle, the School's leadership giving society.

The Alumni Network Committee, chaired by Ruby Chandy, SB '82, SM '89, took time to review peer school statistics and current MIT Sloan Office of External Relations engagement efforts. They focused their efforts on MIT Sloan's alumni club program and current efforts to foster alumni engagement within the alumni network and the School.

**The Atkinsons noted that, in talking to alumni at Reunion, there is a palpable excitement for the mission and activities of the Board.**

Both committees left the meeting ready to tackle the next phase of their work, benchmarking MIT Sloan's efforts against peer schools and gathering feedback from alumni on engagement and philanthropy. In their remarks to the Board, Tom and Banu Atkinson noted that, in talking to alumni at Reunion, there is a palpable excitement for the mission and activities of the Board. Calling the day "exhilarating," they noted that this inaugural meeting sets the stage for the important work to be done.

## With Anjali Sastry, SB '86, PhD '95, and Kara Penn, MBA '07

### Authors of *Fail Better: Design Smart Mistakes and Succeed Sooner*

Learning why and how to embrace failure is an essential skill in business and innovation. But can you fail better? In their new book Senior Lecturer Anjali Sastry and alumna Kara Penn provide a framework based on their research and practical experience to maximize the lessons learned from failure.



Anjali Sastry, SB '86, PhD '95, Senior Lecturer, and Kara Penn, MBA '07

**There has been a lot of buzz around the idea that it is okay to fail—but not a lot of guidance on how to learn from these mistakes. Why was it important for you to write a book that helps people design and plan for productive failure?**

**Anjali and Kara:** Failing has acquired quite an allure. There's an explosion of articles and blog posts exhorting people to fail fast, fail forward, or fail early and often. Somehow, failure has become sexy. Learning, on the other hand, doesn't seem to get its due.

Our starting point in investigating failure's uses was the premise that the ability to learn through experience accounts for the difference between failures that are just plain dumb and those that lead to breakthrough ideas and innovations.

Failure by itself is not the goal. Harnessing it effectively is. We found a real gap on the management bookshelf: There were no guides that could help all kinds of managers and leaders to design their projects so as to minimize wasteful failures and maximize the value of the failures they could not avoid.

Our goal was to develop a replicable, practical, and implementable method for creating and

learning from failure in the context of everyday work projects. And we wanted to ground our ideas in evidence, both from the literature and from our own lives.

The method presented in the book integrates our own techniques with approaches borrowed from the scientific method, project management, systems thinking, and process improvement, along with great examples we've gleaned from professional practice to guide disciplined data collection, refinement of personal and team habits, and collective learning.

**You use several real-life examples from MIT Sloan alumni in the book to illustrate the benefits of planning for failure. Can you speak briefly about a few examples? Why was it important for you to include MIT-linked stories?**

**Kara:** MIT and MIT Sloan attract people who are willing to push beyond what's already been tried, individuals who are willing to experiment and risk failure to pursue what is possible. To inspire our readers, we thought, who better than MIT alumni? We found people at different career stages in different industries who exemplify disciplined thinking and smart experimentation. In one of her classes, Anjali had invited alumni who had succeeded in industries where projects often fail to share with her students how they handled challenges. Anjali's conversations with venture capital (VC) investor Eric Hjerpe, SM '93, led to the story we tell in the book about his personal reflection practices. Eric credits some of his success in the VC world to his deliberate habit of disciplined review which has helped him to make more thoughtful investment decisions.

“Failure by  
itself is not  
the goal.  
Harnessing it  
effectively is.”

**Anjali:** One of Kara's classmates, Elizabeth Yin, MBA '07, pursued several entrepreneurial efforts after a stint at Google. Elizabeth generously shares the stories of her successes and failures, and how she's learned from them to successfully grow LaunchBit. Her scrappy startup mentality, accessibility, and "fail-fast-and-lean" approach, coupled with her desire to learn and to help others learn from her experiences, gave us an inspiring example to highlight in the book.

Ryan Tseng, MBA '09, is another relatively recent MIT Sloan graduate who shared his startup experiences, this time with a hardware invention that he and his team worked long and hard to bring to fruition. As you'll see in the book, his conversations with Anjali—which took place over the months that he was a student in her class—help to drive home the value of the method we present.

**You are both alumnae of MIT Sloan. Kara, how did your experience as a student of Anjali's lead to working on this book together? Anjali, you talk of your time with John Sterman as your PhD advisor—how did he influence your work? How do you approach teaching at MIT Sloan?**

**Kara:** Interestingly, I met Anjali through John Sterman. When I began the MBA program at MIT Sloan in 2005, I immediately began searching for ways to widen opportunities for MBAs with social impact interests. I reached out to John and he immediately connected me to Anjali. He knew a good fit when he saw one! Anjali and I had many conversations around increasing the role of sustainability at MIT Sloan and MIT at large. She served as the faculty advisor for a special independent study I developed with a group of other Sloan MBA and PhD students (Jason Jay was one!) to further our vision and work around sustainability at MIT. She and I also developed a Sloan Innovation Period (SIP) class on fair trade and another on socially responsible investing. She was always a willing sponsor, partner, and thought leader. As the teaching assistant for her Practicing Management course, I was thrilled to have an opportunity to continue to work with Anjali on the ideas that formed the foundation of *Fail Better*.

**Anjali:** I first arrived at MIT decades ago, and every time I left I've been drawn back! Although I was an undergraduate physics major, I took all the system dynamics classes on offer, and benefited greatly from John Sterman's teaching. John helped me learn how to map and model complex systems, and his worldview has definitely inspired mine—looking at some of the biggest challenges facing us today, aiming to uncover linkages between cause



“Our goal was to develop a replicable, practical, and implementable method for creating and learning from failure in the context of everyday work projects.”

and effect, and taking a systems view. Drawn by the feedback-based approach that system dynamics encompasses, I came back to do my PhD with John, eventually working with Deborah Ancona and John Carroll, to develop my dissertation research on applying system dynamics to theories of organizational change.

No question about it, one of the best things about working at MIT is the amazing gift I get every year: the chance to develop working collaborations with students, which in Kara's case led to a long-lived partnership. I continue to use every teaching experience as collaboratively as I can, which over the years has led to all kinds of experiments! I've co-designed classes with students, advised them as entrepreneurs, and worked shoulder-to-shoulder with them in practical field projects that form the focus of the GlobalHealth Lab, which I founded in 2008. Via the class, we've now conducted 70 improvement and innovation projects in sub-Saharan Africa and South Asia, each of which puts a student team to work in partnership with the enterprise to help deliver better health care to those who most need it. (See [groundwork.mit.edu](http://groundwork.mit.edu) for more information.)

In my teaching, I'm inspired by action learning. I've been lucky to learn from colleagues across MIT and MIT Sloan, and to have the freedom to try new things. It's been great to be able to innovate not only in teaching, but also collaborate with faculty colleagues in understanding what makes our approach work. This collaboration with faculty and students at MIT Sloan helped to inform and shape the ideas you'll find in *Fail Better*.

To read an expanded Q&A, visit <http://mitsloan.mit.edu/alumni/publications/magazine>



## MIT Sustainability Summit Tackles Rising Water Levels

With half of the world population and three-quarters of all large cities located on the coast and at risk from rising water levels, how will our world landscapes change and adapt? That was the question the 2014 MIT Sustainability Summit, held May 3–4, 2014, sought to tackle.

In January 2013, 90 percent of Jakarta, Indonesia, flooded. More than 40 people were killed. Tens of thousands were displaced. The sea had done what government could not—it made people move.

Aisa Tobing, a senior advisor to Jakarta's governor, discussed the challenges of change in coastal cities: "We can do any kind of technology, but the social approach is not working." With 40 percent of the city below sea level and construction driving green space below 10 percent, Tobing and her colleagues confront a question faced by residents of every coastal city in the world: How long will we be here?

In her talk at the sold-out summit, attended by 300 people, Tobing detailed a master plan for Jakarta that includes relocating people away from rivers, reservoirs, and lakes; rehabilitating those water resources; and building dams and seawalls. The relocation effort, she said, has been particularly challenging.

Nancy Kete, a managing director at the Rockefeller Foundation, one of the country's largest and oldest philanthropic foundations, said her organization is interested in a related question: What makes a city last? The foundation commissioned an index for city resiliency to determine what must be done to ensure a city's future in the face of rising sea levels. There has been a paradigm shift, Kete said, from a disaster response strategy of "pave, pipe, pump, and prevent" to one of "living with water."

In New York City, Kete said, people were "shaken out of their complacency" when Hurricane Sandy devastated entire neighborhoods, cut power to lower Manhattan, and killed more than 40 people in 2012. She showed summit attendees a few long-term plans for New York City from Rebuild by Design, a planning and design competition—funded in part by the Rockefeller Foundation—to rebuild the New York City area in preparation

for a similar weather event. One proposal is for a dual flood protection and commercial corridor in the low-lying Red Hook neighborhood of Brooklyn. Another is to create a new barrier island around much of New York City and Long Island. As in Jakarta, the ideas are ambitious and multifaceted. And as coastal port cities, both New York and Jakarta are critical to the world economy. But the similarities end there.

Consider, for example, that the plans Kete presented for New York City all assume that storm-battered neighborhoods like the Rockaways in Queens will continue to be inhabited. But in Bangladesh, where much of the country is located in the world's largest river delta and the terrain is composed of loose soil, John E. Fernández, an associate professor in the MIT Department of Architecture, said rising waters could displace 18 million people in the next 40 years.

With the urban population located near water expected to double by the middle of the century and cities increasingly built from nonrenewable materials, Fernández is seeking to understand what types of resources are consumed and in what quantities in the world's various cities. He presented [urbmet.org](http://urbmet.org), a website developed by PhD candidates from MIT and the MIT Portugal program to map energy and resource use in 42 urban areas.

"There is a lot of work that is emerging that tells us that maybe inexpensive, agile, lower commitments to green infrastructure today is exactly what we should be doing for future generations," Fernández said. "So the super-huge expense on centralized infrastructure to meet the needs of all future generations, maybe that's exactly what we shouldn't do."

To learn more about the summit, visit <http://sustainabilitysummit.mit.edu>



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# Global Issues: MIT Faculty Solutions

Our faculty members constantly analyze today's business challenges and develop transformative solutions and insights. Collected here are perspectives from faculty members pulled from various media sources.

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MIT Sloan Executive Education Blog  
<http://executive.mit.edu/blog/>

## Maybe the search for the Malaysian Airlines plane needed a chief data officer

Stuart Madnick

Quartz, April 7, 2014

**The search for an airplane lost** on a 2,500-mile international journey requires consolidating information from many organizations, both public and private, from all over the world. It involves analyzing vast amounts of radar, sonar, and satellite data coming from many diverse sources, including military bases, air traffic controllers, naval ships, and other airplanes.

What if the authorities investigating the missing plane had been prepared to manage big data the way many corporations do? What if the investigation

had an executive-level position responsible for collecting and analyzing all of the dispersed and diverse data that were available and potentially relevant to the search?

What if a multinational chief data officer (CDO) had been in place to

manage all of the information that was available?

Companies have recognized the value of just such a position for some time. The first reported chief data officer was established in 2003 by Capital One Financial Corp. Yahoo! and Microsoft Germany were early adopters. In little over a decade, hundreds of organizations, including U.S. federal and state agencies, have created chief data officer positions, although the jobs often are given different titles. In time, the initials "CDO" may become as familiar as CEO, CFO, and CIO.

Driving the trend is the phenomenon of big data—the explosion of information made possible by the great advances that we have seen in recent years in communications, computers, and storage.

For over a decade, I have been part of a team of researchers, co-led by Richard Wang, in the MIT Information Quality program, studying the CDO position and how it has evolved. We surveyed more than 100 organizations that have hired or are considering hiring CDOs. We have prepared detailed case studies of a dozen of these organizations.

We found that CDOs fit different profiles in different organizations. CDOs can focus on internal business processes or on relations with outside stakeholders. They can deal with

**"Establishing a CDO position means adopting a new approach to data analysis."**

data from traditional sources or new and more diverse big data. And they can focus on improving existing functions in an organization or on developing new business strategies.

For example, in a credit-card company that we studied, the CDO oversaw internal teams that analyzed data about customer activities and attitudes. The company used the analysis to devise enterprise-wide policies to improve risk management and fraud detection. In another financial institution that we examined, the CDO used multiple sources of consumer-generated data to develop products for clients in the broader financial industry.

We developed a framework for understanding the possible roles a CDO can play, as well as a methodology for determining what roles are best suited to particular organizations. To guide companies interested in establishing the position, we developed a three-dimensional model identifying eight possible roles, along with a questionnaire companies can use to determine the optimal role a CDO can play in their organizations.

Establishing a CDO position means adopting a new approach to data analysis. Organizations traditionally assigned most data matters to their information technology departments. When data problems arose, a small group within IT usually was assigned to resolve them. With a CDO in place, data policies and practices are elevated to enterprise-level responsibilities. Executive-rank CDOs can guide how organizations use data as part of their broader business strategy.

We will never know whether having a CDO would have hastened significantly the search for the missing jet. But we



do know that CDOs in business give companies a distinct advantage. A survey by the Economist Intelligence Unit found in 2011 that firms with a CDO had better performance than similar companies without the position.

We can be fairly certain that governments overseeing the MH370 search—overwhelmed with information, besieged by grieving families, and buffeted by international and domestic politics—could have used a highly skilled leader who had prepared them to make sense of all of the data coming at them.

*Stuart Madnick is the John Norris Maguire (1960) Professor of Information Technology; Professor of Information Technology and Engineering Systems; Co-Director, PROFIT Program.*



## Is Bitcoin a viable currency? It's probably too volatile

Jonathan Parker

SF Gate, May 26, 2014

**While Bitcoin remains a hot-button issue**, most of the talk has centered on the technology of this virtual currency. There are lots of questions: Is Bitcoin really secure? Is it truly anonymous? Can it be counterfeited? Are transaction costs actually lower?

I have a more fundamental question: Is Bitcoin a viable currency?

My answer is no, and not just because of the wild fluctuations in the value but because these fluctuations are destined to continue. A good currency serves three purposes. It is:

- A unit of account, used to measure and write contracts for income, wealth, and goods.
- A means of payment, used to avoid barter.
- A store of value, held to be able to make future transactions.

Of these, the third historically has been the most important. People will be wary of accepting something that might lose lots of value, and something with a volatile price makes a bad unit of account.

Basically, Bitcoin lacks a mechanism for setting the supply equal to the demand. That is needed in order for Bitcoin to maintain its value.

History is replete with examples of what happens to currencies with fixed supplies. When governments tie their hands in the supply of their currencies, much like Bitcoin has done, the value fluctuates.

Before the founding of the Federal Reserve, for example, the dollar was backed by gold. But gold discoveries led to inflations and collapses and to recessions and even financial crises. Since



the end of the Great Depression, the Fed has actively managed the money supply to achieve price stability.

Central banks maintain a stable value by supplying their currencies in proportion to the needs of currency users. Bitcoin does not have a central bank. It has a “mining” system, but anyone who thinks mining acts to maintain price stability only needs to look at the last year of prices. As long as people are people and as long as the economy is volatile, the demand for money is volatile and Bitcoin will have an unstable value.

The supply of Bitcoin is fixed, but the supply of cryptocurrencies is infinite. Bitcoin is not really in limited supply, despite its proponents’ claims. The Bitcoin technology may be designed to ensure that the supply grows slowly and is ultimately limited, but what happens when Bitcoin 2.0 comes out?

**“As long as people are people and as long as the economy is volatile, the demand for money is volatile and bitcoin will have an unstable value.”**

Here’s another scenario. Global banks start to provide currency transfers within their institutions and across international borders that are as safe, rapid, and as low cost as Bitcoin payments. Bitcoin thus loses any technological advantage. While Bitcoin is in limited supply, cryptocurrencies are not; neither are inexpensive ways to transfer money and make payments.

Finally, the true supply of any currency is determined in part by notes and coins but in majority by the banking sector. Profit incentives are already driving Bitcoin banking, and this could go one of two ways:

First, Bitcoin banking could be significantly private and unregulated. But the history of unregulated banking is a disaster full of bank runs, volatile price levels, currency collapses, and so on. Look at how the collapse of a single Bitcoin exchange, Mt. Gox, affected the price of Bitcoins.

Alternatively, Bitcoin banking could become a regulated part of the traditional banking sector. But then several claimed benefits of Bitcoin go out the window.

The true, large supply of Bitcoin would be governed by banking regulation (but in every country in the world—what a mess!). And while a Bitcoin is anonymous, a Bitcoin deposit is not. And once in banking systems, the Bitcoin technology makes Bitcoins easier to track and regulate than cash.

I am not worried about solving Bitcoin’s technological problems. But the finance is suspect.

I am guessing that Bitcoin either remains small and volatile, with only transactions of suspect legality willing to accept the volatility as the price of true anonymity, or Bitcoin will go down in history as a bubble, ultimately as worthless as the sequence of zeroes and ones that make up each coin.

*Jonathan Parker is International Programs Professor in Management, Professor of Finance.*



## The financial case for local manufacturing

Suzanne DeTreville

*Outsource Magazine, June 24, 2014*

**In the last 20 years**, we’ve seen a massive wave of manufacturing jobs move to low-labor-cost countries. Now, many companies are beginning to question whether the cost differential offered by distant suppliers compensates for the cost of working with an extended supply chain. These companies find themselves with massive inventories, yet in spite of those inventories they frequently are not able to meet all demand.

It has been difficult for managers to analyze the cost differential mismatch trade-off because mismatch costs are difficult to quantify. The intuition is that the mismatch costs are high, but the managers I talk with have difficulty believing that overstocks and stockout costs are high enough to wipe out the cost advantage enjoyed by their offshore supplier. Without solid numbers, it’s difficult for managers to incorporate these costs into decision-making.

At the same time, policymakers throughout the developed world have made a commitment to supporting local manufacturing because of the economic benefit that manufacturing brings to a region. Twenty years of offshoring have left entire regions of the U.S. and Europe devastated. The objective at the policy level is to find a path to domestic manufacturing that doesn’t cause companies to lose competitiveness or require that governments provide subsidies.

Our objective has thus been to find a way to quantify the mismatch costs so that decision-makers can see where proximity is sufficiently valuable to warrant paying developed-world salaries. We have turned toward quantitative finance, as the value of proximity can be translated into the value of an option to postpone the order quantity decision so as to work with better information.

Suppose that a manager has two possible suppliers. One is able to produce to order. The other offers a 30 percent cost differential, but requires that the order be placed three months in advance. As the time between placing the order and the demand occurrence increases, the demand volatility exposure—the range of demand values that the firm has to be prepared to face—will likewise increase. The profit margin if produced to order is 56 percent. If the product is not sold during the selling season, it can be sold at a clearance price that is 20 percent of the normal selling price. The order quantity will be that which maximizes profit. Demand is lognormally distributed with a coefficient of variation of demand for the long lead time of one: a level of demand variability that is frequently encountered in practice. Under these conditions, it is easy to calculate that the long-lead-time supplier will need to offer a cost differential that is close to 40 percent just to cover the mismatch costs. This is far higher than the 30 percent that seemed so compelling. As soon as we bring the mismatch cost into the calculations, we can identify many products and industries that lend themselves to competitive local manufacturing even when the workers on the shop floor earn a middle-class wage.

This simple example demonstrates the ability of real-options reasoning to communicate the magnitude of the mismatch cost. A second advantage of taking a real-options approach is that it allows managers to calculate how the cost differential required to compensate for the increased demand volatility increases in

lead time. Interestingly, in many cases the difference between a 50-day lead time and a 100-day lead time is not very great. What really matters in terms of mismatch cost is the difference between make to order and 30 days. In such cases, a manager might experience mismatch costs with a 100-day lead time, move some production to a neighboring low-wage country so as to get lead time down to say 30 days, and then be disappointed that mismatch costs remain high.

**“Policymakers throughout the developed world have made a commitment to supporting local manufacturing because of the economic benefit that manufacturing brings to a region.”**

In response to realizing how big a mismatch is, managers often ask: Can’t we reduce the mismatch cost by forecasting? Not really. Three months in advance, all that forecasting can do is to give us an idea of how volatile demand will be, or what range of demand values the firm needs to be prepared to face. The volatility used to calculate the mismatch cost is what is left once the forecasting has been done.

Note that this 40 percent only covers the mismatch cost. Ending up with too much product or not being able to satisfy the customer is only one of the costs of an extended supply chain. Let’s take a moment to consider some of the other costs:

- *Supply risk increases:* There are more ways for things to go wrong when a product is being transported across 12 time zones rather than 12 miles!
- *Process innovation:* Creative processes work best when the plant is right next to R&D.
- And, let’s not forget the risk of *intellectual property loss*, and how it increases when production is transferred offshore.

When managers see the results that emerge from this kind of real-options reasoning, and they begin to understand the



magnitude of the cost differential required just to compensate for the mismatch cost—before factoring in any other risk factors—they tend to be dumbfounded by how much money is being left on the table. When the mismatch cost is higher than the savings from the cost differential, compressing the supply chain and bringing manufacturing close to the local market is justified.

The reshored manufacturing that we are talking about is not limited to highly automated factories with few workers. We are looking at small, relatively manual and highly flexible contract manufacturers. They can actually be conceptualized as service businesses that happen to make things. Inventors in developed countries today face a serious shortage of contract manufacturers, so are forced to fit their innovation into something that can be manufactured offshore.

The laboratory that I run at the University of Lausanne has built a real-options calculator to make it easy for decision-makers to estimate the cost differential required to compensate for increases in lead time. The tool and a video demonstrating use of the calculator and the implications for manufacturing locally can be found at <http://cdf-oplab.unil.ch/>. Over the next weeks, we will be making this calculator available to managers and policymakers to help them identify the products that lend themselves the most readily to competitive local manufacturing throughout the developed world. It is being taken into use by the U.S. Department of Commerce to complement other powerful tools to support reshoring such as the Total Cost of Ownership calculator offered by ReshoreNow.org.

Suzanne DeTreville was a Visiting Professor at MIT Sloan in the spring 2014 semester. She is a faculty member at the University of Lausanne.





## REUNION 2014

This past June's Reunion Weekend brought alumni and their guests back to Cambridge to celebrate with classmates, explore campus, and honor a special moment in MIT Sloan's history: Course XV's Centennial.





1,717  
GUESTS

39  
COUNTRIES

36  
STATES

33  
SEPARATE CLASSES  
FROM 8 PROGRAMS  
(MBA, AMP, SM, SF, MOT,  
EMBA, LGO, MFIN)



# Celebrating 100 Years of Learning

The Course XV Centennial celebration culminated on June 7, 2014, when 1,333 faculty, alumni, and friends gathered in Cambridge for the Centennial Colloquium.

Held during Reunion Weekend, the Colloquium featured faculty presentations and a special session of the popular system dynamics simulation, The Beer Game. The day ended with Dean Schmittlein's Course XV Commemorative Presentation, marking the end of a yearlong tour in celebration of 100 years of management education at MIT.

Visit the Course XV Centennial website to view pictures and presentations from the day and the 18 Centennial events: <http://mitsloan.mit.edu/100years/colloquium.php>.



## Erik Brynjolfsson, PhD '91

*Schussel Family Professor of Management Science  
Professor of Information Technology  
Director, MIT Initiative on the Digital Economy*

### The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies

Professor Erik Brynjolfsson has spent his career exploring the intersection of technology and business. In his session, he talked about how massive technological advances are leading to what he and his co-researcher Andrew McAfee, Principal Research Scientist at MIT Sloan, call a "Second Machine Age." Brynjolfsson argued that in a world where computers and robots have the ability to replace human beings in many industries, we must fundamentally rethink the way our society approaches work and education.



## Roberto Rigobon, PhD '97

*Society of Sloan Fellows Professor of Management  
Professor of Applied Economics*

### Big Data in Financial Systems: Potential and Ramifications

The age of Big Data has made it possible to collect more information than ever before, but how this data can be used to create knowledge remains unclear. Professor Roberto Rigobon, who helped launch the Billion Prices Project, an influential effort to create a real-time inflation gauge based on data from around the world, discussed the utility and ramifications of using Big Data to understand the global economy.



## Yasheng Huang

*Associate Dean, International Initiatives and Action Learning  
International Program Professor in Chinese Economy and Business  
Professor of Global Economics and Management*

### The Role of Democracy in Economic Growth

An expert in uncovering the forces that stimulate and stymie economic growth, Associate Dean Yasheng Huang has been challenging commonly held perceptions about emerging economies for more than two decades. In his most recent work, Huang explores the role of democracy in economic expansion, arguing that there are important lessons the Chinese government can learn from the mistakes of established democracies like the United States. In his session, Huang asked: Does democracy hinder or promote economic growth?



## Fiona Murray

*Associate Dean of Innovation  
William Porter (1967) Distinguished Professor of Entrepreneurship  
Faculty Director, Martin Trust Center for MIT Entrepreneurship  
Co-Director, MIT Innovation Initiative*

### Making Innovation Work

In the newly launched Innovation Initiative, MIT President L. Rafael Reif is challenging our community to “see an opportunity to substantially enhance our ability to deliver innovation: to identify problems and create solutions faster and more effectively, at every scale and for every context...” In partnership with School of Engineering Associate Dean Vladimir Bulović, MIT Sloan Associate Dean of Innovation Fiona Murray is directing this initiative and exploring the forces that will drive continued success for our students and faculty as they address the global challenges of today and the future. In her session, Murray considered how to make the next generation of innovation real at MIT.



### Deborah Lucas

*Sloan Distinguished Professor of Finance  
Director, MIT Center for Finance and Policy*

#### Finance Education for the Public Sector

Professor Deborah Lucas has served as an assistant director and chief economist at the Congressional Budget Office and as a senior staff economist on the President's Council of Economic Advisers. She is director of the MIT Center for Finance and Policy (CFP), a new initiative whose mission is to serve as a catalyst for innovative financial research and educational initiatives that will positively impact policy and society. Lucas discussed the importance of finance analytics for informed public-sector decision-making, and the role of the CFP in improving financial literacy in the public sector.



### Andrew W. Lo

*Charles E. and Susan T. Harris Professor  
Professor of Finance  
Director, Laboratory for Financial Engineering*

#### Financing Biomedical Research

Professor Andrew W. Lo is an internationally recognized expert on hedge funds, financial markets, and risk management. He spoke about his groundbreaking work bringing financial engineering to biomedical research, including his bold proposal to create a \$30 billion megafund for early-stage cancer research. Alumni learned how a structured finance approach could reduce the risk and increase the return on research investments. By bundling opportunities to invest in multiple drug development efforts through a single fund, thereby creating a way for investors to own a piece of a portfolio of projects, Lo aims to attract critical capital to cancer research.

# 100XV

## A CENTURY OF INNOVATION



### Tavneet Suri

*Maurice F. Strong Career Development Professor  
Associate Professor of Applied Economics*

#### Mobile Technology and Voting in Sub-Saharan Africa

Last year, Professor Suri and her research team sent text messages to two million Kenyans in order to gauge the impact of mobile technology on voter participation in the country's national elections. Suri, whose research is focused on Sub-Saharan Africa, discussed the project and explored how mobile phones and emerging technologies have the power to change economic and political systems in the developing world.



### Zeynep Ton

*Adjunct Associate Professor of Operations Management*

#### The Good Jobs Strategy

Almost one in four American working adults has a job that pays less than a living wage. Conventional wisdom says bad jobs with low wages, minimal benefits, little training, and chaotic schedules are the only way companies can keep costs down and prices low. If companies were to offer better jobs, customers would have to pay more or companies would have to make less. MIT Sloan Adjunct Associate Professor Zeynep Ton made the compelling case that even in low-cost settings, leaving employees behind—with bad jobs—is a choice, not a necessity. Drawing on more than a decade of research, Ton showed how operational excellence enables companies to offer the lowest prices to customers while ensuring good jobs for their employees and superior results for their investors.

*By Thomas W. Malone*

Patrick J. McGovern (1959)  
Professor of Management;  
Professor of Information  
Technology; Director, MIT Center  
for Collective Intelligence

# How the MIT Climate CoLab harnesses collective intelligence to combat climate change

**T**here's a strong consensus among scientists that our climate is changing, that human activities are part of the cause, and that, no matter what else we do, we'll need to adapt to things like ever-rising sea levels, more frequent droughts, and more intense storms. Of course, no one knows for sure exactly when and how all these things will happen, but many people would say that figuring out what to do about these risks is one of the most important problems facing humanity today.

Unfortunately, this is a very complicated problem! Solving it will require combining knowledge across all disciplines—from the economics of technological change to the psychology of consumer decision-making to the politics of countries around the world.

And, also unfortunately, the largely top-down approaches we've tried so far—such as international treaties and national legislation—haven't worked very well. These are all reasons for pessimism.

But there is at least one reason for optimism: We now have a new way of solving big, hard, complicated problems. As examples like Wikipedia, open source software, and citizen science show, it's now possible to harness the collective intelligence of thousands of people all over the world, at a scale and with a degree of collaboration that was never before possible.

At the MIT Center for Collective Intelligence, my colleagues and I are now applying this crowdsourcing approach to the problem of what to do about global climate change. Five years ago, we developed the Climate CoLab, a global Internet-based community that pools people's intelligence through a portfolio of competitions that seek promising solutions to this intractable problem. Our goal is to draw people in and motivate them. In return, they get recognition and visibility for their ideas, as well as a chance to make a difference. In some cases, the winners also receive monetary prizes.

Activity on Climate CoLab is arranged around a series of contests. Currently, there are 20 active contests on the site ranging from "How could a national price on carbon be implemented in the U.S.?" to "How can greenhouse gas emissions from the electricity sector be minimized?" to "How

can we empower the public and communities to build awareness and demand for green buildings?" Members of the community enter contests by proposing new actions to address climate change. These ideas can span anything from a new technology, a marketing initiative, or a new business to a community program or even a new law. Other members of the community are invited to offer their support for and comment on the ideas.

In each contest, everyone—no matter who they are or where they come from—is allowed to enter and submit an idea. The rationale being that, the solution to climate change is one in which all of us, experts and citizens alike, need to be involved, because we never know where breakthrough ideas will originate.

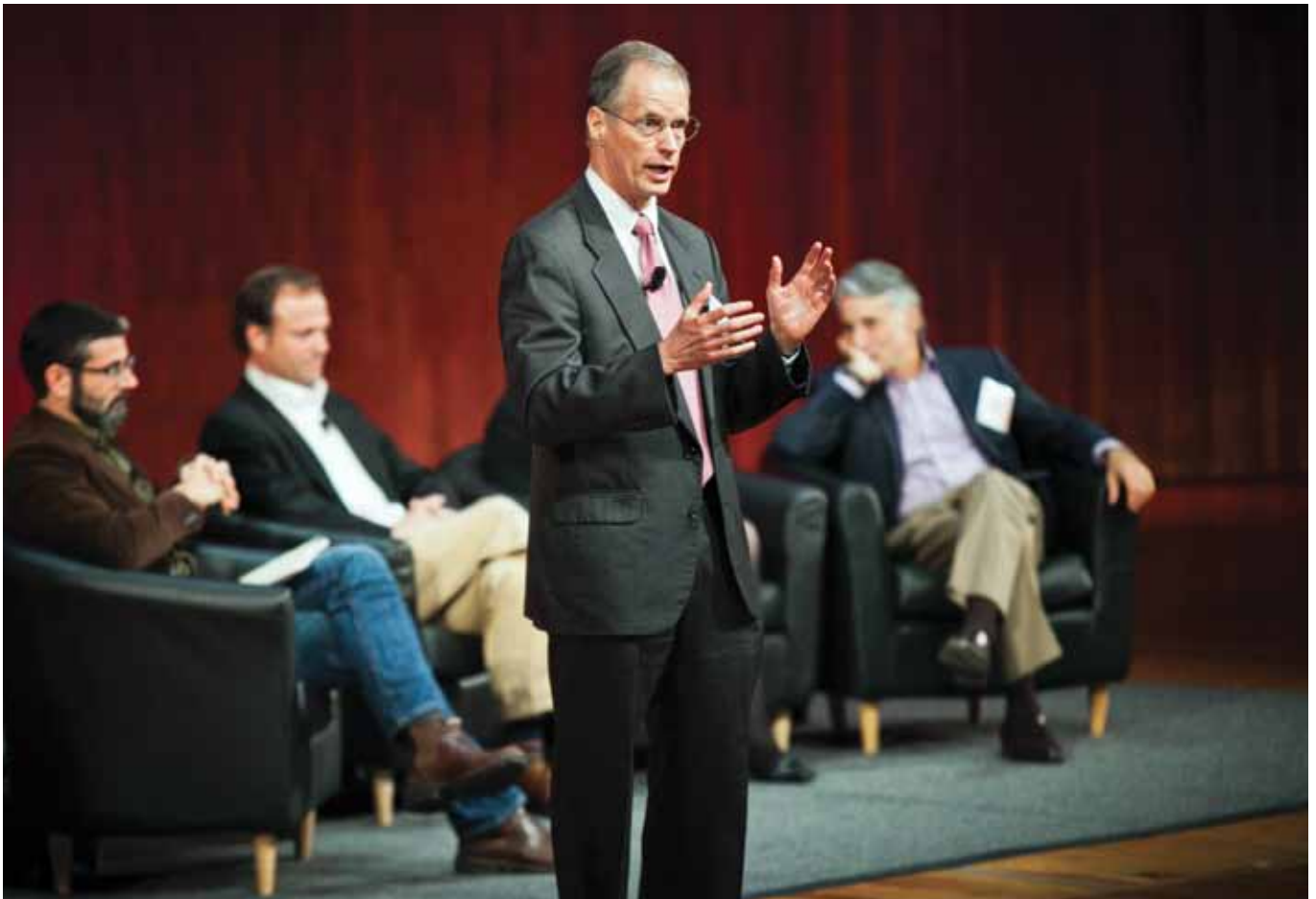
At the moment, Climate CoLab has over 15,000 registered members from more than 150 countries who represent all walks of life. They include renowned experts from organizations like NASA, the World Bank, the Union of Concerned

Scientists, and leading universities like MIT, Stanford, and Columbia. They also include business people, officials at nongovernmental organizations, policymakers, students, and ordinary citizens who are concerned about the problems related to climate change.

Judges, who are distinguished researchers and officials at companies, government agencies, and nonprofits, choose the best entries to be finalists and provide advice on how they can be improved. After the finalists' entries are reworked, the community is invited to vote for the ones they consider the most promising, with the top-ranked proposals receiving Popular Choice Awards. The judges also select the Judges' Choice Awards.

Our contests in recent years have broken down the large, multifaceted problem of climate change into a series of more manageable sub-problems. The beauty of these sub-problem contests is that they inspire members to focus on specific ideas. The risk, however, is that the

*Thomas W. Malone speaks at the 2013 Climate CoLab*





*The 2013 Climate CoLab winners*

solutions generated may be either incompatible with one another or way too small to solve the overall problem.

So we recently introduced our first integrated contest that seeks an overall plan for the world as a whole. Ultimately, the progress that humankind makes in the face of climate change will be dictated by a combination of actions taken by multiple organizations around the world. The goal of this integrated contest is to encourage members and teams to collaborate with one another and come up with solutions that are mutually compatible and that—together—could be enough to solve the whole problem. Submissions in this integrated contest will be evaluated on how well they bring together proposals from other contests to articulate a broad and coherent road map for the world.

This integrated contest is a pilot test that embodies a novel way to do very large-scale collective problem solving online. Like traditional business organizations, it breaks a problem into pieces and then puts the pieces back together. But unlike a traditional hierarchical organization, there are many paths for a given idea to be applied in an overall solution. Many people are looking for good ideas in many places, and no one can single-handedly prevent a good idea from being used elsewhere.

In a sense, this approach is more like what happens in a market. For instance, in the market for computer systems, different computer companies can buy hardware and software

CoLab Stats  
(as of August 2014)

**15,000** MEMBERS

**Over 150** COUNTRIES/TERRITORIES  
(INCLUDING THE UNITED STATES, INDIA, UNITED KINGDOM, CHINA, AUSTRALIA, GERMANY, THAILAND, PHILIPPINES, FRANCE, AND PAKISTAN)

**57%** OF 2014 WINNING PROPOSALS CAME FROM OUTSIDE THE UNITED STATES

components from different combinations of other vendors, each creating their own unique combination. In a similar way, an integrated proposal team can “buy” component parts from any number of sub-proposal teams in hopes of creating a product that the integrated contest judges want to buy. But unlike in a traditional market, the same sub-proposal can be “sold” an unlimited number of times to different integrated proposals, and the creators of a sub-proposal can’t stop anyone from buying their product. The result is a competitive and democratic market for good ideas.

Entrants to this contest must also demonstrate how their proposed solutions will make a real impact. It’s all well and good to present ideas that sound like they’d be effective, but we need to keep these proposals grounded in the physical and economic reality. To that end, we require that members do a model run of their submission using the Stanford Energy Modeling Forum’s EMF27 exercise. Teams input combinations of future policies and energy technologies into the model, which projects the future environmental and economic outcomes of the actions they advocate. Then, in numerical detail, teams see what effect their proposals

## MIT INITIATIVE ON THE ENVIRONMENT

**In May, MIT announced a major new initiative** to promote transformative cross-disciplinary research relating to the environment. Founding Director Susan Solomon, the Ellen Swallow Richards Professor of Atmospheric Chemistry and Climate Science, is charged with launching the program.

The new initiative will promote research that engages wide participation by members of the MIT community to address the most significant interdisciplinary problems in the environment, spanning the physical and social sciences, urban planning and policy, and engineering. MIT Sloan is poised to play an important role through programs like the

Climate CoLab and a variety of other activities that comprise the MIT Sloan Sustainability Initiative, whose mission focuses on developing innovative cross-disciplinary solutions to the problems facing the sustainable use of natural and human resources.

In his announcement to the community, President L. Rafael Reif wrote, “MIT specializes in achieving breakthroughs by encouraging widely different minds to tackle hard problems together. ... such an open conversation will sharpen our thinking and help us choose the best path to real progress against climate change.”

would have—if any—on the sea level, the temperature, and the rate of carbon emissions. These simulations are a good starting point to capture certain kinds of expert knowledge. The Climate CoLab is also working closely with John Sterman, the Jay W. Forrester Professor of Management at the MIT Sloan School of Management and the director of MIT’s System Dynamics Group, to use more simulations in forthcoming contests.

Another contest we recently introduced focuses on young people. (In a sense, climate change threatens them more than most; they’ll be around to deal with the consequences of our warming planet long after many of us are gone.) For this contest, we partnered with CliMates, an international student think-tank, and the Elders, a human rights group, to ask the under-30 crowd what they can do to help solve this enormous challenge. We want to hear from the largest, educated, and connected generation in history: “What are your potential levers for action to combat climate change?” Solutions might include projects like improving the accessibility and availability of green jobs or creating legal mechanisms to protect youth interests in corporate decision-making. Proposals might

also include consciousness-raising activities like petitions and demonstrations. Mary Robinson, the former president of Ireland who also served as the United Nations High Commissioner for Human Rights, and Gro Harlem Brundtland, the former Prime Minister of Norway, and a current Special Envoy with the United Nations, are among the advisors to this contest.

The Climate CoLab offers a cash award to a single Grand Prize Winner, and all the Popular and Judges’ Choice winners receive an opportunity to show their ideas to top experts and stakeholders who could help implement their ideas. Recent winners, for instance, presented their ideas to officials at the United Nations in New York; the U.S. Congress in Washington, D.C.; and the Crowd & Climate Conference at MIT.

Last year’s Grand Prize winner, from the University of Calgary in Canada, was a project that uses aerial infrared photography to map heat loss on a building-by-building level. Home and business owners can compare their buildings to their neighbors’ for free, and connect to the resources to improve their energy efficiency. As a result of its win, the team has received over 20 different media opportunities, and is now working to scale up the project to map not just cities, but entire provinces as well.

This is just the beginning. By constructively engaging a broad range of scientists, policymakers, business people, investors, and others, we hope the Climate CoLab will help to develop, and gain support for, climate change solutions that are better than any that would have otherwise been developed. ● ● ●

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*With contributions by:*

**Lauren Fisher**, Research Scientist, MIT Center for Collective Intelligence

**Robert Laubacher**, Associate Director, MIT Center for Collective Intelligence

*A group at the 2013 Climate CoLab Conference discusses “Making the Climate Change Party More Fun”*







# L O N D O N C A L L I N G

**THE FIRST CLASS** of the newly established Course XV convened at MIT just as war erupted in Europe in 1914. The new Engineering Administration program's first years were understandably rocky. As students left to enlist and faculty members volunteered their services and expertise to the war effort, the Institute was forced to temporarily discontinue or consolidate classes. Of the 37 students in that first graduating class, 24 entered military service. Many Course XV faculty—Davis R. Dewey, Erwin Schell, Carroll W. Doten, and Martin J. Shugrue—worked in support of various U.S. government departments.

**Over a century later**, MIT Sloan faculty members have continued the proud tradition of serving the public. For decades since, they have been widely recognized not only for their innovative ideas and groundbreaking research, but also for their ability to transform those ideas into viable solutions to the world's problems. Given MIT Sloan's long-standing commitment to providing real-world relevance, it's no surprise that the School has consistently taken a rare open stance, encouraging faculty members to develop close associations with industry and organizations outside the School—and to go out into the world and make a difference. Along with the many partnerships the School has established in the private and nonprofit sectors over the years has come the enduring bonds forged with governing bodies in the United States and abroad.

This year, Fiona Murray and Kristin Forbes follow in the footsteps of a long line of faculty members who recognize MIT Sloan as a platform for making a positive impact in the world.

The ability to put their exceptional research and experience to work for the good of a nation—in this case, the United Kingdom—was a driving factor for both Murray and Forbes in accepting new appointments.

“  
My work is strongly  
focused on the ways  
policies and programs  
can be designed to  
improve and accelerate  
innovation-driven  
prosperity in countries,  
regions, and businesses.”

FIONA MURRAY

## GIVING BRITAIN COUNSEL ON SCIENCE AND TECHNOLOGY

In March, U.K. Prime Minister David Cameron appointed Fiona Murray to his Council for Science and Technology (CST). For the next two years she will advise the prime minister on issues related to science, technology, and innovation, including science, technology, engineering, and mathematics (STEM) education, research, policy, and the economy. In the position, Murray will no doubt call upon her international expertise on ways to accelerate the process of bringing new technologies out of labs and into the marketplace. No stranger to real-world problems, Murray has ample experience working with science-based startups on their commercialization strategies. She has consulted for a range of firms designing global organizations that are both commercially successful and at the forefront of science.

“My work is strongly focused on the ways policies and programs can be designed to improve and accelerate innovation-driven prosperity in countries, regions, and businesses. I especially focus on ‘innovation ecosystems,’ where governments and their policies are important,” says Murray. “So, when I had the chance to participate in shaping British policy, it was an ideal opportunity for me to put my expertise into action.”

As London reemerges as a hub of scientific innovation and technology, the United Kingdom will certainly also benefit from Murray's experience with MIT's Regional Entrepreneurship Acceleration Program (REAP). “REAP's mission is to spur the development and growth of innovation-driven enterprises which become a key engine in prosperity,” says Murray, who co-founded the program in response to the increasing number of countries around the world looking to MIT for advice on how to boost their regions' economies. In the program, partner regions form multidisciplinary teams and commit to a two-year learning engagement with MIT. During this time, teams work with faculty members to build and implement a custom regional strategy for enhancing their entrepreneurial ecosystems. Since its founding, REAP has successfully partnered with two cohorts of teams, including groups from China, England, Finland, Mexico, New Zealand, Qatar, Russia, Scotland, Singapore, Spain, and Turkey. The program is an act of “innovation diplomacy,” says Murray, and confirms MIT's world status as *the* destination for innovation. Along with focusing more intently on entrepreneurship policy comes the hope that successful entrepreneurial ventures can improve the world economy—and, subsequently, the world—for the better.



## Fiona Murray

Associate Dean of Innovation

William Porter (1967) Distinguished Professor of Entrepreneurship

Faculty Director, Martin Trust Center for MIT Entrepreneurship

Co-Director, MIT Innovation Initiative

- 
- |      |                                                                                                                                                                       |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2014 | Became Faculty Director of the MIT Legatum Center for Development and Entrepreneurship<br>Named the William Porter (1967) Distinguished Professor of Entrepreneurship |
| 2013 | Named Co-Director of the MIT Innovation Initiative<br>Named Associate Dean of Innovation                                                                              |
| 2012 | Co-Founded MIT Regional Entrepreneurship Acceleration Program (REAP)                                                                                                  |
| 2009 | Named Faculty Director of the Martin Trust Center for MIT Entrepreneurship                                                                                            |
| 2006 | Promoted to Associate Professor in the Technological Innovation, Entrepreneurship, and Strategic Management Group                                                     |
| 1999 | Joined the MIT Sloan Faculty                                                                                                                                          |

*Previously held positions at Harvard University, the University of Oxford, the Asian Development Bank, and the United Nations Environment Program in Kenya*



## Kristin Forbes, PhD '98

Jerome and Dorothy Lemelson Professor of Management

2014

Named to the International Monetary Fund's *Finance & Development* magazine's "Generation Next," a list of "25 economists under 45 who are shaping the way we think about the global economy."

2009

Named the Jerome and Dorothy Lemelson Professor of Management

2004

Promoted to Associate Professor of Economics

2003 – 2005

Served on the White House Council of Economic Advisers

1998

Joined the MIT Sloan Faculty

Graduated from MIT Sloan

*Member of the Bellagio Group, Trilateral Commission, Council on Foreign Relations, Panel of Economic Advisers for the Congressional Budget Office, and the Academic Advisory Board at the Peterson Institute for International Economics and the Center for Global Development. Previously held positions at the U.S. Treasury, the World Bank, and Morgan Stanley*

Murray first met the prime minister on the MIT campus last year, when she led a session in which Cameron met informally with a small group of students and recent alumni who had started businesses, or were in the process of doing so. The seven young entrepreneurs each gave a brief introduction of their inventions or concepts for a startup; Cameron then asked questions. “The lasting impression I have of Prime Minister Cameron’s visit was that he was incredibly engaged and interested in the students,” Murray recalls, “so much so that I had to ask him to stop asking so many questions so that they each had time to speak! It is quite a moment to meet the leader of an important country—even more so for me because it’s my own country.”

In her new role, she will attend the Council in London quarterly. “What we advise from the Council will have real-time impact in Britain. It will be especially interesting to have a front-row seat to the remarkable rise of entrepreneurial London, which is now the most significant hub of such innovation-driven startups in Europe.”

“  
My experience on the  
CEA showed firsthand  
how clear economic  
analysis can help shape  
decisions at the highest  
policy levels.”

KRISTIN FORBES

## SHAPING BRITAIN'S MONETARY POLICY

In May, the Chancellor of the Exchequer George Osborne appointed Kristin Forbes an external member of the Bank of England’s Monetary Policy Committee (MPC). During Forbes’s three-year term, she will hold one of nine votes that determine Britain’s monetary policy. Throughout her career, Forbes has divided her time among academic scholarship, teaching, and public policy. She admits it is a challenge being the new person on the MPC, but she feels up to the task. “My academic background in economics and previous hands-on policy experience in the U.S. as it recovered from a recession should facilitate a quick transition in this new role. It’s going to be exciting to take what I’ve worked on in my research over the past few years and implement it in practice.”

Forbes was honored in 2005 as a “Young Global Leader” as part of the World Economic Forum at Davos. As she starts her new job in London, the International Monetary Fund has added her to its list of “25 economists under 45 who are shaping the way we think about the global economy.” She might be new to the Bank of England (one of the world’s oldest national banks), but this isn’t the first time she’s held a high-profile senior policy position. From 2003 to 2005, she was the youngest-ever member of the White House Council of Economic Advisers (CEA), under George W. Bush. In this role, Forbes followed a trail blazed by her MIT Sloan colleagues. Paul MacAvoy served on the Council in the mid-1970s; Dean Emeritus Richard Schmalensee served from 1989 through 1991. “My experience on the CEA showed firsthand how clear economic analysis can help shape decisions at the highest policy levels,” says Forbes. Her practical experience in the White House will certainly be an asset for Forbes as she joins the nine-member MPC at a time of much debate about when U.K. interest rates might rise. Forbes’s research will also inform her deliberations on the MPC. The bulk of her studies address policy-related questions in international finance and macroeconomics. She is a world expert on financial contagion (how financial risks in one country spill over into others), and has written extensively on capital controls, currency movements, financial crises, and capital flows. All of these are important for the United Kingdom due to its role as a major financial center and close connections to the global economy.

The MPC meets monthly in London. Forbes’s assignment officially began in July. Once a quarter, Forbes will provide analysis and help draft a major economic report. She’ll often appear before Parliament to discuss monetary policy and will travel to different



parts of the United Kingdom to visit with companies and other economic institutions. Making the appointment a family affair, her husband and three children will join her in London next year for the duration of her term. On her decision to accept the position, Forbes noted, “I have a high bar for what makes sense for me, my career, and my family, and this made sense. My research and academic expertise could allow me to help inform good policy decisions and make a positive difference.”

Osborne agrees. “Dr. Kristin Forbes is an economist of outstanding ability with real practical experience of policy-making. She will make an exceptionally strong addition to the MPC.”

“

I also expect to learn from the MPC experience what the big questions are that we haven't answered.”

KRISTIN FORBES

## BRITS VERSUS YANKS

Forbes's new position in London will give her the opportunity to gain a unique perspective on the economic policy of the United States versus the United Kingdom. At first glance, the approaches of the two nations are more similar than different, she says. Both are free trade, market-based economies with strong financial sectors. One aspect she finds attractive about her MPC role is the lack of politics. “I am an economist, not a politician,” says Forbes. “What I like about being an external member is that the Committee prizes independent views. We don't have to follow the party line, neither in the political sphere nor even with the Bank of England. If you disagree, you are encouraged to stick to your views and explain why. The focus is squarely on making the best economic decisions.”

The MPC has a clear mandate, adds Forbes. Its prime responsibility is to keep the Consumer Price Index (CPI) measure of inflation close to a target set by the government (2 percent as of 2011). Its secondary aim is to support growth and employment. In contrast, the White House often has many economic goals, and politics is always in play, notes Forbes. “When advising the president, I was just an economic voice in the room, and not the only one.” The White House group consists of many voices with many interests, Forbes adds, and in the United States, Congress plays a stronger role in setting policy than Parliament does in the United Kingdom.

So how do the two countries approach science and technology? “That's an interesting question,” says Murray, and one she's experienced firsthand, getting science degrees at Oxford and Harvard before coming to MIT. “From a policy perspective, the prime minister's CST is very much a parallel to the U.S. President's Council on Science and Technology (PCAST).” Coincidentally, PCAST is co-chaired by another MIT faculty member—Professor Eric Lander, along with alumnus John Holdren SB '65, SM '66. This MIT connection, Murray says, could help bring the U.K. and U.S. councils closer together.





However, there are some interesting differences in how science and technology are developed and linked to innovation and economic impact in the United States versus the United Kingdom, says Murray. “First of all, in the United States, each government agency—the Department of Energy, Department of Health, Department of Defense, etc.—has a budget for basic science (for example, alongside the NSF) and also has a responsibility and budget for the more applied aspects of innovation—linking scientific discovery to more applied problems, to businesses (large and small), and to procurement of new innovations. In the United Kingdom, the structure is different,” Murray says, noting that there are several Research Councils that allocate basic research funding in the areas of physical sciences and medical science, but with the boundaries stopping at fairly basic discovery. “The responsibility for links to the market lies with a more distributed set of actors, but importantly with an agency called ‘Innovate U.K.’ (which grew out of the Technology Strategy Board) and the Business, Innovation, and Skills (BIS) department. This makes for different types of challenges, but also opportunities for sharing lessons, best practices, and policies—which I hope I can facilitate as an MIT-based Brit on the prime minister’s council.”

The work of the Council is driven primarily by the prime minister’s requests. Innovation is no doubt a key theme, says Murray. “This means ensuring that investments in science and technology really have an impact on prosperity. This sounds like a simple directive, but it’s a very challenging accomplishment for any organization, region, or nation—to make it happen and have the evidence that this link exists, when the reality of the link from initial ideas to impact (otherwise known as innovation) is a complex process that takes time and many stakeholders. MIT happens to be world-class at this, and the Massachusetts economy benefits as a result.”

“  
I’m sure that  
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insights back to my  
research and into the  
classroom.”

FIONA MURRAY

#### FROM THE REAL WORLD TO THE CLASSROOM TO RESEARCH ... AND BACK

MIT Sloan has long valued the transformation of knowledge and expertise into action that delivers real-world change. The British Government has much to gain by engaging Murray and Forbes, but the two professors, their students, and MIT Sloan will reap just as much benefit.

“I’m sure that throughout the Council experience, I will bring many new insights back to my research and into the classroom,” says Murray. “That is one of the things that makes this opportunity so special. I also believe it will be beneficial for our own innovation ecosystem in greater Boston, which is one of the key nodes in the world’s network of innovation hotspots.”

For Forbes—a Teacher of the Year, whose Global Economics course is one of the most popular at MIT Sloan—working in the field has had a major influence on how her classes have evolved. “Once you’ve had a seat at the table and actually helped shape policy, it makes your teaching much more interesting. Not only can you share real stories, but you can more accurately describe the real-world constraints on what may seem an obvious ‘best’ economic policy,” she says. “I also expect to learn from the MPC experience what the big questions are that we haven’t answered. I’ll take those back to inform further research. I know I’ll come back refreshed and excited.”

Education, innovation, and global impact are at the heart of MIT Sloan’s mission. In their new roles, Murray and Forbes are the perfect embodiment of these long-held principles—unselfish sharing of knowledge for the greater good and bringing research and experience to real-world issues, in service of the global society. ● ● ●

# Sustaining today's MIT Sloan.

## Protecting the School's legacy for generations to come.



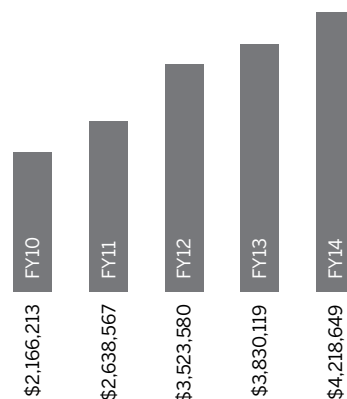
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- Action Learning Labs
- International Initiatives
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## Theresa Stone, SM '76

**Former Executive Vice President and Treasurer, MIT**



**T**erry Stone knows firsthand how welcoming MIT Sloan is to women and to people with diverse professional and academic backgrounds.

In honor of her own transformative experiences at the School, Stone is a long-time champion of the School and its initiatives, including most recently, the Sloan Women's Fellowship Fund.

Stone arrived at MIT Sloan in 1974 after studying for a PhD in French Literature and working with the National Organization for Women. NOW gave her a taste for getting things done, and from there she wanted to do more, much more.

"I knew I wanted to be in a position where I could have an impact in organizations that I cared about, and I received the management knowledge I needed to do that at MIT Sloan," says Stone. "But what I also achieved was a great career in finance, management, and board positions at Morgan Stanley, Chubb, Jefferson Pilot, and AIG. I got my start in this career and the opportunities to excel at these companies because of MIT Sloan. As a result I've always wanted to give back to the School."

A longtime Corporation member and philanthropic supporter of the School, Stone served as the Institute's Executive Vice President and Treasurer from 2007 to

2011. And the state of women at MIT and MIT Sloan is a cause she always held close to her heart. "MIT Sloan accepted me and treated me no differently as a woman," explains Stone. "The School enabled me to achieve incredible positions and a great deal of satisfaction with the work I did. I want to provide those same opportunities to today's female students through the Sloan Women's Fellowship Fund."

Stone's husband, Rick, also came to MIT Sloan with an untraditional background—he received his PhD in English—and joins his wife in her advocacy for the fellowship fund. "The School saw something in us, and our experiences there were transformative for both of us," says Stone. "And we both have always been extremely grateful to the School for that."

Adds Stone, "MBA programs across the country are now looking for female candidates, which is great, but competition is strong. Our competitors are using financial aid to attract top-notch women, and Rick and I want to help ensure that MIT Sloan is in the position to compete for the best and the brightest."

## Ruby Chandy, SB '82, SM '89

**President, Industrial, Pall Corporation**

**H**ow do you make giving back to your alma mater not just a mechanical reaction? How do you construct a vibrant community that makes you feel truly engaged and connected?

Ruby Chandy looked for an answer to those questions in the last few years. Her search ultimately led her to a simple, yet valuable truth: Find something you care about, and odds are, MIT Sloan has an opportunity for you to pursue it.

Chandy has long supported MIT Sloan philanthropically, guided by a sense of appreciation for how much the School has given to her. “Coming to MIT Sloan was career changing for me,” says Chandy. “The management knowledge I received was a perfect complement to my material sciences background, and has allowed me to build a successful career around my passion for marrying technology, innovation, and market performance.”

“I was also the recipient of an Ida M. Green Fellowship at MIT Sloan,” explains Chandy. “That fellowship made such a big difference to me not only because of the financial support, but also because it was MIT Sloan telling me that they recognized a specific potential in me beyond what I had recognized in myself. By giving back, I hope to enable students who might not attend the School either because of engagement or need.”

It was a pivotal conversation with Dean David Schmittlein, however, that opened Chandy’s eyes to the



many ways in which she could become more engaged with students and with her fellow alumni. He suggested options from teaching to student mentorship to alumni engagement. With a particular passion for the power of alumni engagement, Chandy became chair of the newly created Alumni Networking Committee, part of the new Alumni Board. Says Chandy, “The goal of the committee is to discover what our alumni want and how to give them more of a sense of community.”

Inspired by her own search for the “right” opportunity, Chandy hopes the committee will help construct powerful engagement models that bring more value to alumni and make them feel closer to MIT Sloan. “It’s very important to me to support the School’s goal of strengthening alumni relationships with each other and with MIT Sloan.”

“As students, we all felt so connected to each other and to MIT Sloan,” says Chandy. We spoke so passionately about our school. Through our committee’s efforts, we hope to build on those feelings and make that sense of connection and engagement something all alumni can carry with them throughout their careers—and their lives.”

## Sanjeev Verma, MBA '97

**Co-Founder and Director, Airvana**



“**S**imply gratitude.” Such a small and unassuming phrase, but one that represents profound motivation to Sanjeev Verma.

For Verma—who’s spent the past 14 years running his global wireless business, Airvana—it is “simply gratitude” that motivates his extensive philanthropic and volunteer commitments, including his deep engagement with the MIT Sloan community.

“The education I received in finance and economics was invaluable to me in starting my company,” says Verma. “The idea of what I really wanted to do with my life, which was to found and run a business, was born and solidified while I was at MIT Sloan.”

“I came to the United States from India in 1985, and the transformational experience in my life has been education,” explains Verma. “Because of that, I want to repay what I owe the School. I stay connected in order to help the people who are going through the MIT experience right now.”

Part of that connection has been returning to campus to speak to students about his entrepreneurial

experiences, in the hope that what they learn from him can help them fulfill their own professional goals. He also hosts students at Airvana as part of the annual Boston Tech Trek.

Verma is currently working with MIT faculty and students with an eye toward starting a new company by using technology that has been developed at MIT.

“MIT is fertile ground for collaboration between the strong engineering expertise that exists at the Institute and the business and entrepreneurial skills that Sloan students are passionate about.”

In addition to his philanthropic commitments and volunteerism with MIT Sloan, Verma serves on the board of a Boston-area nonprofit that helps underprivileged children to receive a more complete education.

Once again for Verma, it’s all very simple: “In my life, I care about education, health, and children. Those things are dear to my heart, and so I just follow my heart.”

## Eliseo Haro, MBA '12

Co-founder, *Próxima Canción*



When Eliseo Haro, MBA '12, came to MIT Sloan, he knew that he was interested in changing careers and starting his own company. What he did not know was that this change would be influenced not by what he learned in the classroom, but by the MIT Sloan community both on and off campus. “This huge, life-changing learning experience was not driven mainly by my teachers in class, but by the MIT culture, and the community of peers at MIT Sloan and beyond,” explains Haro. He met his business partner, Ricardo Victorero, SF '12, at the Beehive Cooperative, a community space for MIT students working on startup ideas run by the Martin Trust Center for MIT Entrepreneurship. The two quickly realized that their strengths would complement each other in building a business. “In my previous career, I was a CEO of a broker dealer, but I wanted to come to MIT Sloan for the opportunity to do something to make an impact on the world. My experience coupled with Eliseo’s eagerness and enthusiasm seemed the perfect fit,” says Victorero.

Their company, *Próxima Canción*, is still in its formative stages. It is a platform to discover new musicians through a public music talent show performed in subway facilities and is broadcast over smart phones rather than television. The audience of city commuters then has the opportunity to vote on their favorite performers. The company’s goal is not only to discover

new musicians, but also to create a sense of community and joy throughout a city by allowing citizens to be part of the success of an artist, as well as enjoy new music during their commute to work. Haro chose Santiago, Chile, as the location for the first pilot program because of its good Internet access and high saturation of cell phone use. But, more importantly to Haro, “Santiago is living a socioeconomic change. It is a city looking for social ways to express thoughts. Through *Próxima Canción*, we hope to inspire those without opportunities to find a path through music.”

Haro says that *Próxima Canción* owes much of its success up to this point to the global network of MIT Sloan. In the implementation of the Chilean pilot, the MIT Club of Chile was instrumental in putting him in contact with key people within the private and the government sectors to make the pilot a reality. “All of this traction,” Haro says, “would not have been possible without the support of MIT. When I came to Chile, it felt like I was still on the MIT Sloan campus. The community is very strong and always willing to help.”

## Bijal Shah, MBA '13

Founder and Chief Sari Collector, LALLITARA

**B**ijal Shah came to MIT Sloan hoping to gain the management knowledge she needed to evolve her fledgling business, LALLITARA. She ended up with not only expert advice, but also passionate encouragement of her ideas—and a seemingly endless well of support that has continued and grown since her graduation.

“The people at MIT Sloan are constantly thinking about how they can help you,” says Shah. “I’m truly amazed at how invested mentors and fellow classmates are in seeing you succeed.”

The seeds for LALLITARA were literally sewn when Shah received an American India Foundation Clinton Fellowship. In India, she worked on a project aimed at training domestic help so that they might obtain higher wages and improve their situations. In an effort to learn more about the women whom she was trying to help, Shah began participating in a local sewing group. It was there that she became aware of a community of men and women struggling to make a living through the sale of secondhand saris. Shah began to buy as many saris as she could to support this community, and then used the fabric to create clothing and accessories. And thus LALLITARA was born.



Once at MIT Sloan, Shah dove whole-heartedly into the MIT entrepreneurial ecosystem and welcomed everything it had to offer—from advice to fellowship funding to dedicated desk space at the Martin Trust Center for MIT Entrepreneurship. “The amount of resources for entrepreneurship is incredible,” explains Shah. “And people aren’t giving you their money and time because they want you to build a billion-dollar company, but because they value exploration and research. They want you to pick yourself up and try. That takes the pressure off you and forges an almost magical environment where you feel free to create.”

Things with LALLITARA are moving along well, and Shah continues working to increase their customer base. “I’ve been very lucky to have the support of MIT Sloan and still feel so closely connected to the campus—my engagement with the School will never stop.”

# In Memoriam

With deep sadness, the MIT Sloan School of Management reports the recent passing of fellow alumni.

|      |                                                                                                                                                   |                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 1938 | Mr. G. Richard Young, SB/SM                                                                                                                       | June 19, 2014                                                                      |
| 1942 | Mr. Bradford M. Torrey, SB                                                                                                                        | April 30, 2014                                                                     |
| 1943 | Mr. Stanley M. Proctor, SB                                                                                                                        | May 7, 2014                                                                        |
| 1944 | Mr. Kenneth W. Nelson, SB                                                                                                                         | July 29, 2014                                                                      |
| 1947 | Mr. James R. Casserly, SB<br>Mr. Thomas B. Inglis, Jr., SB<br>Mr. Robert E. McBride, SB<br>Mr. Harry C. Rice, Jr., SB<br>Mr. David S. Yablong, SB | April 28, 2014<br>March 25, 2014<br>May 30, 2014<br>May 20, 2014<br>April 26, 2014 |
| 1948 | Mr. James L. Ball, SB<br>Dr. Charles D. Bright, SB<br>Mr. Howard A. Jacobson, SB<br>Mr. Robert S. Reebie, SB                                      | March 13, 2014<br>August 7, 2014<br>July 22, 2014<br>March 8, 2014                 |
| 1949 | Dr. Paul Moschella, SB<br>Mr. Leonard F. Newton, SB<br>Mr. David Tod, SB<br>Dr. James A. Reid, SB                                                 | February 28, 2014<br>July 19, 2014<br>April 23, 2014<br>August 6, 2014             |
| 1950 | Mr. Robert F. Bean, SB<br>Dr. Warren T. Hill, SB<br>Mr. Warren Marcus, SB                                                                         | March 15, 2014<br>August 3, 2014<br>June 28, 2014                                  |
| 1952 | Mr. James I. Stockwell, SB                                                                                                                        | July 14, 2014                                                                      |
| 1953 | Mr. Robert W. Ballou, SB                                                                                                                          | August 6, 2014                                                                     |
| 1956 | Mr. Rollins E. Dobbin, SE<br>Mr. John R. Gates, SM<br>Dr. Robert N. Sawyer, SB                                                                    | May 24, 2014<br>February 9, 2014<br>February 11, 2014                              |
| 1957 | Mr. Eldon C. Hanes, SM<br>Mr. John G. Herre, SM<br>Dr. Stanley L. Kroder, SB                                                                      | January 28, 2014<br>June 5, 2014<br>March 6, 2014                                  |
| 1958 | Mr. Philip A. Stevens, SM<br>Mr. Randolph N. Wilkinson III, SM                                                                                    | March 6, 2014<br>February 22, 2014                                                 |
| 1959 | Mr. Maxwell E. Peel, SB                                                                                                                           | April 16, 2014                                                                     |

|      |                                                                                       |                                                  |
|------|---------------------------------------------------------------------------------------|--------------------------------------------------|
| 1960 | Mr. Phillip W. Thompson, SM                                                           | March 20, 2014                                   |
| 1961 | Dr. Philip W. Lett, Jr., SM<br>Mr. Guy W. Nichols, Jr., SM<br>Mr. Donald L. Ravey, SM | June 6, 2014<br>June 18, 2014<br>August 22, 2014 |
| 1962 | Mr. Frank N. Bien, SE                                                                 | March 11, 2014                                   |
| 1966 | Mr. Eugene M. Isenberg, SE                                                            | March 16, 2014                                   |
| 1968 | Dr. John F. Rockart, PhD<br>Mr. James E. Singer, SM                                   | February 3, 2014<br>February 8, 2014             |
| 1969 | Mr. Narendra K. Patni, SM<br>Mr. O. Morris Sievert, SE                                | June 3, 2014<br>March 19, 2014                   |
| 1970 | Mr. Charles I. Lavine, SB                                                             | July 24, 2014                                    |
| 1972 | Dr. Robert J. Baker, Jr., SM                                                          | March 30, 2014                                   |
| 1973 | Mr. H. P. MacCowatt, SM                                                               | February 16, 2014                                |
| 1974 | Dr. Albert A. Marcotte, PhD<br>Mr. Dan R. Valdivia, UE                                | August 3, 2014<br>June 9, 2014                   |
| 1976 | Dr. W. Donald Weston, SF                                                              | May 20, 2014                                     |
| 1978 | Ms. Christine Howe, SM                                                                | July 2, 2014                                     |
| 1981 | Dr. Bernard Casey E. Ichniowsky, SM                                                   | February 1, 2014                                 |
| 1984 | Mr. William J. Aston, SE<br>Dr. Nelson T. Tsao-Wu, SM/PhD                             | March 4, 2014<br>May 7, 2014                     |
| 1986 | Mr. Eric R. Nance, SM                                                                 | April 19, 2014                                   |
| 1988 | Mr. David S. Joury, SF<br>Mr. David K. MacDonald, SE                                  | July 5, 2014<br>June 11, 2014                    |
| 1991 | Mr. David J. Bills, SE                                                                | March 30, 2014                                   |
| 2009 | Ms. Laurel Anne Hoffman, MBA                                                          | April 12, 2014                                   |

*As of August 31, 2014*

MIT Sloan was saddened to learn recently of the passing of the following alumni.

|      |                                                                                         |                                                |
|------|-----------------------------------------------------------------------------------------|------------------------------------------------|
| 1922 | BrGen William Carter Robinson, BO                                                       | August 1980                                    |
| 1942 | Mr. Joseph E. Welsh, SB                                                                 | December 1996                                  |
| 1948 | Mr. David W. Dyer, SB<br>Mr. Richard R. Wood, MO                                        | January 2011<br>February 2013                  |
| 1949 | Mr. William W. Downer, SM                                                               | November 2006                                  |
| 1951 | Mr. Jay C. Gilmore, SB<br>Mr. Ewald Schuettner, Jr., SB                                 | March 2013<br>March 2000                       |
| 1952 | Mr. Willard A. Bridges, Jr., MO                                                         | August 2012                                    |
| 1954 | Mr. Armando Santacruz Baca, SM<br>Mr. James H. Davidson, SB<br>Mr. Sooren Soovajian, SB | September 2011<br>January 2012<br>October 2009 |
| 1955 | Mr. Stanton R. Levitt, SB                                                               | November 2013                                  |
| 1957 | Mr. Michael J. Erdei, SM                                                                | August 2012                                    |
| 1962 | Mr. William L. Budge, SE                                                                | February 1976                                  |
| 1966 | Mr. Roy N. Poust, SM                                                                    | June 2012                                      |
| 1970 | Mr. Mirjan Ivanetic, SE                                                                 | December 2013                                  |
| 1972 | Mr. Bennie L. Franks, SE                                                                | October 2013                                   |
| 1973 | Mr. Peter F. Starrett, UE                                                               | August 2011                                    |
| 1974 | Captain John E. Hoch, Jr., USN (Ret.), SE                                               | December 2013                                  |
| 1977 | Mr. Edward B. Fauvre, SE                                                                | June 2003                                      |
| 1978 | Mr. Barron W. Schoder, Jr., SE                                                          | March 2013                                     |
| 1990 | Mr. Frederick C. Cha, SM                                                                | December 2002                                  |
| 2004 | Mr. Frank Neri, MBA                                                                     | October 2012                                   |

*As of August 31, 2014*



# June 4-7

# Reunion 2015

| 1955 | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2014 |

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Reconnect with friends, faculty, and the MIT Sloan community.

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For more information visit:

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### The Fung Group

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#### THE SOLUTION

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inventive

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Join Dean Schmittlein for an interactive and inspirational celebration of our alumni community in a city near you:

|             |                    |
|-------------|--------------------|
| November 20 | New York, New York |
| December 11 | São Paulo, Brazil  |

|             |                           |
|-------------|---------------------------|
| February 11 | San Francisco, California |
| April 30    | Chicago, Illinois         |

<http://mitsloan.mit.edu/alumni/events>

 #SloanieVoices



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