

2012/2013

ANNUAL REPORT

MISSION

The Martin Trust Center for MIT Entrepreneurship provides the expertise, support, and connections MIT students need to become effective entrepreneurs. Founded in 1990 by Professor Edward Roberts, we serve all MIT students, across all schools, across all disciplines.

PRINCIPLES OF OPERATION

- 1. MIT Standard of Excellence and Rigor:** We provide the highest-quality education, advising, and practical experiences.

2. Collaboration: We work closely with other MIT departments, labs, centers, and groups to connect students with the best entrepreneurship programming across the Institute.

3. Diversity: Entrepreneurship requires diversity of opinion and diversity of people. Throughout our courses, advising, and programming, we combine a range of critical perspectives.
- 4. Experimentation:** Each year we try new programs and activities. If we fail, we learn in the process. When we succeed, we aim to scale rapidly.

5. Honest Broker: No one in the Center will ever take a part of your company or look for a place on your board. Our only goal is your long-term success.

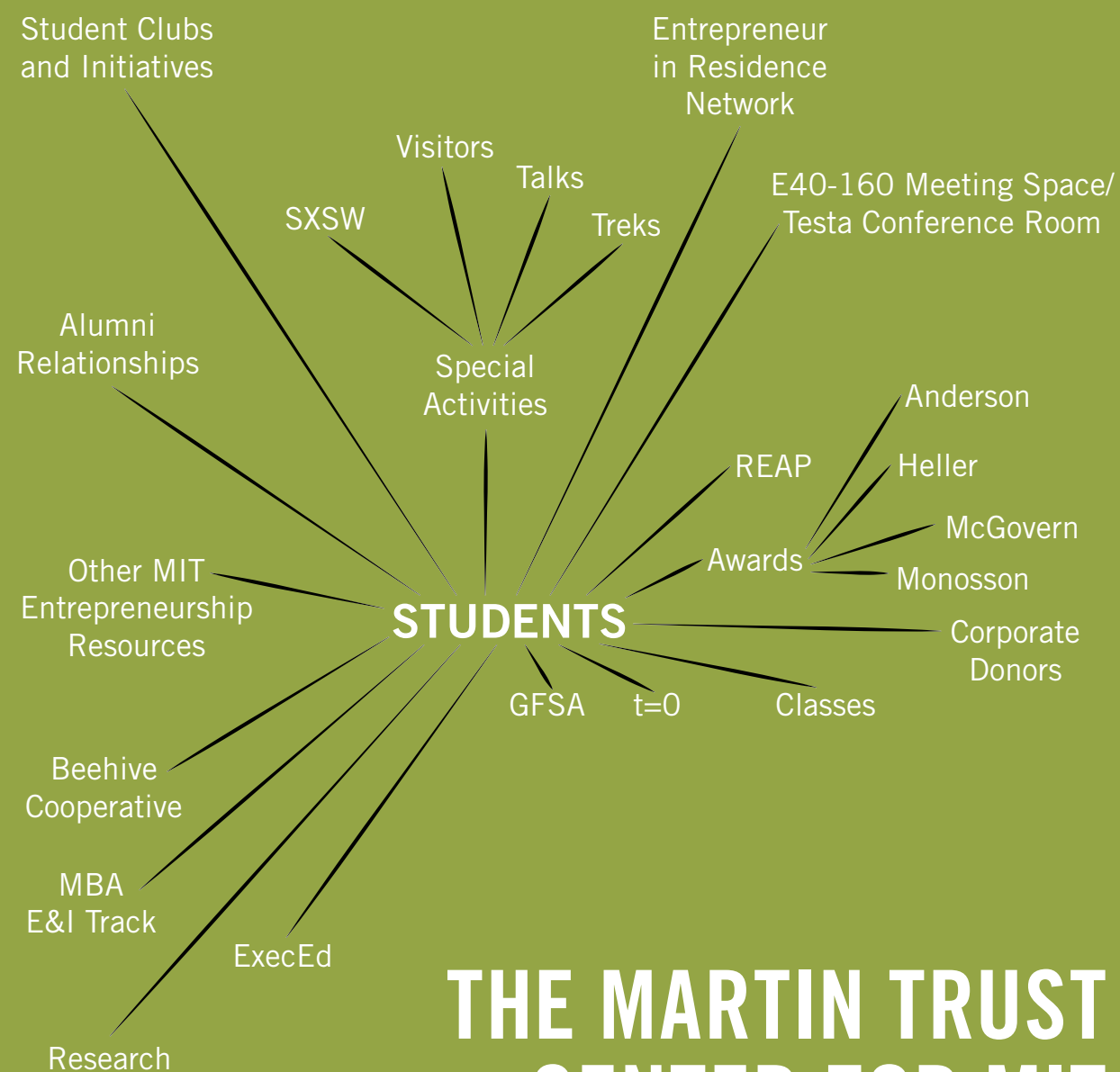
6. Mens et Manus: True to the motto of MIT, in all of our courses and throughout our activities, we operate on a hybrid model that fuses academic and practitioner perspectives.

ABOUT MARTIN TRUST

The Martin Trust Center for MIT Entrepreneurship is named after Martin Trust, SM '58. In 1970, Trust founded Mast Industries, which merged with The Limited Stores (now Limited Brands) in 1978. He served on the board of directors for Limited Brands until 2003. He has advised the U.S. government on textile trade issues, and currently runs the investment firm Brandot International, which he founded. He holds a bachelor's in mechanical engineering from The Cooper Union as well as a master's in industrial management from MIT.

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THE MARTIN TRUST CENTER FOR MIT ENTREPRENEURSHIP PLAYS A UNIQUE AND EXTREMELY VALUABLE ROLE AT MIT AND BEYOND.

Founded in 1990 by Professor Edward Roberts, the Martin Trust Center exists today to help MIT fulfill its bold mission of bringing knowledge to bear on the world's greatest challenges. Working across all five of MIT's schools, our focus is on educating the next generation of entrepreneurs to rapidly and effectively translate innovative technology or ideas into real-world impact. We do so by providing disciplined entrepreneurship education, effective advising, and community-focused space. Everything we do is informed by our world-class entrepreneurship research.

The Center aspires to be a vibrant intellectual and practical thought leader for innovation-driven entrepreneurship at MIT and worldwide. While all types of entrepreneurship are critical to an economy, the Martin Trust Center's focus is on educating entrepreneurs who can build high growth potential businesses driven by real innovations. We give our students the skills to identify entrepreneurial opportunities from among the wealth of exciting innovations developed across MIT. We then educate them in the fundamentals required at each stage of venture creation and growth (for standalone businesses or within a large corporation). This bridging of innovation and entrepreneurship education enables our students to address opportunities in a way that is sustainable, high-growth, and job-creating.

We proudly and passionately believe in our educational mission and take the position that entrepreneurial knowledge and skills can be taught as well as practiced. Reflecting MIT's "mens et manus" approach, we combine the theory of entrepreneurship with the practice of entrepreneurship in all of our activities. The diverse programming at our Center—from courses to workshops, mentoring and an accelerator—reflect this belief. We are confident that teaching people systematically "how to fish" will have much higher impact over time than helping to merely "catch a fish."

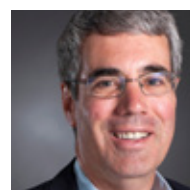
Our goals are very ambitious. Together with our colleagues throughout MIT, we want to educate MIT's next generation of leading innovation-driven entrepreneurs and to share best practices with other educational institutions worldwide.

Our greatest reward comes from working at the Center every day and seeing our students learn, grow, and succeed. How do we measure the Center's success?

1. It is a success when we expose students to the entrepreneurial economy so they are able to make informed decisions about when and whether to pursue an entrepreneurial path.
2. It is a success when students are able to take part in rigorous entrepreneurship education and experiences.
3. It is a success when we graduate a new class of high-quality prospective entrepreneurs who will make major lifetime contributions to society because of the spirit and skills they acquired while at MIT.
4. It is a success when the innovation and entrepreneurship ideas and frameworks developed by MIT scholars are implemented in universities, governments, and communities to improve their programs and policies.

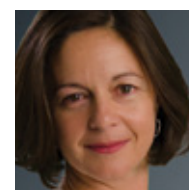
So how are we doing? Without question, things have never been better! We have seen tremendous results and received recognition from around the world and from the people who matter most to us: our students. That being said, we have room for improvement and challenges lie ahead, not least of which is the need to scale our educational programming to meet high student demand while maintaining our commitment to MIT's standard of excellence.

We hope you enjoy this report and find it informative. We express our deep gratitude to all of you who have helped make these achievements possible. Nothing great happens in entrepreneurship without a great team and the same holds true for the Martin Trust Center for MIT Entrepreneurship. Thanks to all!



Bill Aulet

Managing Director, Martin Trust Center; Senior Lecturer, MIT Sloan



Fiona Murray

Faculty Director, Martin Trust Center; Alvin J. Siteman (1948) Professor of Entrepreneurship



Edward B. Roberts

Founder and Chair, Martin Trust Center; David Sarnoff Professor of Management of Technology

2012 – 2013 PROGRAM HIGHLIGHTS

MIT GLOBAL FOUNDERS' SKILLS ACCELERATOR

In summer 2012, the Martin Trust Center launched an unparalleled accelerator program in which several student teams spent the summer in an intense, deep-dive entrepreneurship education program, the MIT Founders' Skills Accelerator. This culminated in a Demo Day (see below) that was well received.

This summer, we made it even better by incorporating a global perspective. The newly renamed MIT Global Founders' Skills Accelerator (MIT GFSA) brings together MIT student teams with teams from McGill University (Canada), Zhejiang University (China), TU Berlin (Germany), Skoltech (Russia), the University of Edinburgh and Heriot-Watt University (Scotland), and Sabanci University (Turkey). This way, the teams can build cross-cultural ties that expose them to new perspectives.

"We have combined the best of university and external programs to create a top-tier initiative that is uniquely suited to MIT's mission of advancing knowledge and educating students," said Center Managing Director Bill Aulet. "The addition of six teams from universities around the world gives our students a unique opportunity to broaden their understanding of global entrepreneurship and helps disseminate MIT's experience and leading-edge research in entrepreneurship."

Ash Martin, MBA '10, introduces one of the student teams presenting at the MIT 2012 Summer Accelerator Demo Day in September 2012.



BEEHIVE COOPERATIVE

After the 2012 MIT Founders' Skills Accelerator attracted 129 applications, we scrambled to find a way to meet the demand for co-working space that could complement students' entrepreneurship education. MIT's space planners graciously gave us temporary use of space in E52 that was vacant due to impending renovations.

The Beehive Cooperative, named by founding "bee wrangler" Phil Cohen, MBA '13, was formed in June 2012 as a community for student teams to learn together in a dynamic, supportive environment. The space opened in June 2012, and was renewed for the 2012 – 2013 academic year with new "bee wranglers" Chris Moses, SB '10, and Shambhavi Kadam, SB '06, MBA '12. Martin Trust Center Managing Director Bill Aulet and Program Manager Ben Israelite supervised the program and provided their entrepreneurship expertise.

The Beehive was designed for student teams that were far enough along to benefit from dedicated workspace, while still taking full advantage of the educational programs available throughout the MIT entrepreneurship ecosystem.

Now that the E52 renovation has begun, we have relinquished our space, and we have transitioned the Beehive into the "Roaming Beehive Nation," working to provide student teams with similar opportunities to those that the Beehive Cooperative provided over the past year.



Phil Cohen, MBA '13, welcomes the dozens of Beehive teams at the grand opening in June 2012.

MIT SUMMER ACCELERATOR DEMO DAY

The MIT 2012 Summer Accelerator Demo Day showcased 15 student startups from the MIT Founders' Skills Accelerator and Beehive Cooperative. Teams spanned every possible industry, from super-slippery coatings to revolutionizing music and art to creating a "social genome." Dozens of people from the MIT and Boston entrepreneurial communities were in the audience as well, as for many of these teams the Demo Day was their "coming-out party."



RISE OF CREATIVE ARTS ENTREPRENEURSHIP

Ask any outsider what comes to mind when they think of MIT, and the arts are unlikely to be mentioned. But student creativity is not limited to laboratory research or computer programming. A growing number of partnerships between entrepreneurs and art organizations have bolstered the presence of creative arts entrepreneurship on campus.

Two major hackathons were held this past year. The Music Hack Day @ MIT held November 10 – 11 was co-sponsored by the Martin Trust Center and MIT alumni-founded company The Echo Nest. A second hackathon, Hacking Arts: Ideate, on April 6, was run by the MIT Sloan Entertainment, Media, and Sports Club, in partnership with the Martin Trust Center, New England Conservatory of Music, and the School of the Museum of Fine Arts. The momentum from this event is building into the 2013 – 2014 academic year and promises to make arts a prominent part of the MIT startup scene.

MIT also saw fashion executives visit to discuss branding challenges and entrepreneurship during the Fashion Innovators @ MIT event on April 29, and welcomed the inaugural \$10K Creative Arts Competition, run by the Arts at MIT in conjunction with the MIT \$100K Launch Business Plan Contest.

Medium team members Kim Gordon, MBA '13, and Shambhavi Kadam, SB '06, MBA '12, pose with Arts at MIT student art programs coordinator Sam Magee after winning the \$10K Creative Arts Competition.



t=0 EXPANDS TO FULL WEEK

We started t=0 (time equals zero, or “the time is now”) in September 2011 to expose all students early in the academic year to the possibilities of entrepreneurship. It expanded this year from a single weekend to a nine-day series of events September 8 – 16, 2012, designed to inspire students (the MIT Summer Accelerator Demo Day), get them excited and brainstorming (Immersion Nights), and to show them how to take an idea and grow it into a startup using MIT’s extensive resources (Ignition Weekend Hackathon). Imbued with the sense of what was possible, dozens of students eagerly took part in four Immersion Nights, each with a different theme—energy, healthcare, software, and hardware. Faculty from across many disciplines opened their labs for student tours, followed by evening TED-style talks about how they think about innovation and that next big idea. MIT faculty who spoke at the Immersion Nights included Professors Ian Hunter, Daniel Jackson, Robert Langer, Joel Schindall, and Alex Slocum; Dean for Graduate Education Christine Ortiz; Dr. Leo Celi; and Media Lab director Joi Ito. Each evening wrapped up with a brainstorming session facilitated by leaders from student initiatives such as the MIT Energy Club and Hacking Medicine.

The Ignition Weekend Hackathon encompassed a wide range of fields, unified around a dedicated weekend of working on a single project, and brought students together from across the Institute to pitch their ideas, form teams, and make their ideas happen. After 103 ideas were pitched on Friday night, 27 teams formed, and in just 30 hours, 22 teams shared what their next steps were going to be in making their ideas into reality.



A student team gets to work during the Ignition Weekend Hackathon.

MEETING SPACE FOR STUDENTS

We continually work to improve our meeting space in E40-160 to make it more useful for students. Among the innovations this year was installation of Roomzilla™, an application that allows for online room booking, and displays current room status on iPads mounted outside each door. The Martin Trust Center is an early adopter of the system, which was originally developed by the Cambridge Innovation Center for its own use.

2012 – 2013

ACADEMIC HIGHLIGHTS

HEALTHCARE VENTURES LAUNCHES

In the Fall 2012 semester, a new seminar brought cross-disciplinary student teams together to learn how to build new ventures in the healthcare space. Healthcare Ventures, co-taught by Professor Martha Gray and senior lecturer Zen Chu, was inspired by the success of the Hacking Medicine student initiative over the past two years, which itself was inspired by the work done in MIT's energy entrepreneurship community.

"The vision for Hacking Medicine was to take students who knew little about healthcare and walk them up the curve of interest and engagement," says Elliot Cohen, MBA '13, the

TA for the inaugural semester. “The class is a critical part of that vision—enabling students to engage more deeply than a weekend-long hackathon or lunchtime chat.” While Healthcare Ventures is not connected officially to Hacking Medicine, the two collaborate where possible.

Cohen says that MIT is well-suited for such a course. “MIT has a unique attitude toward academic research and practice...professors on all sides are open-minded about collaboration. This is one of the keys to making the class interesting,” he says.

Healthcare Ventures will next be offered in the Fall 2013 semester.

PRODUCT MARKETING COURSE GIVES STUDENT TEAMS \$1K TO EXECUTE

For entrepreneurship education to be effective, students need hands-on experience in identifying and reaching potential customers. With the half-semester special seminar Entrepreneurial Product Marketing and Development, now in its second year, lecturers Brian Halligan, MBA '05; Elaine Chen, SB '91, SM '93; and Bridget Akinc, MBA '13; are doing just that.

After the 20 participating student teams constructed business models and identified potential customers, they were required to hit the pavement and start talking to potential users to determine client pain points and their solutions.

And this year, to enhance teams' ability to put their skills into practice, each team received \$1,000 to apply what they learned through startup ideas of their own.

“It’s one of the most pragmatic classes I’ve taken,” said Angela Zhang, SB ’15. “Brian, Elaine, and Bridget are very clear about what worked and what didn’t work from their own industry experience. The lectures were highly interactive and the exercises we did in class directly related to each team’s project.”

<https://entrepreneurship.mit.edu/news/scaling-your-startup-an-mit-crash-course>

[Entrepreneurial Product Marketing and Development is] one of the most pragmatic classes I've taken... The lectures were highly interactive and the exercises we did in class directly related to each team's project.

– ANGELA ZHANG, SB '15

2012 – 2013 VISITORS

BRITISH PM CAMERON VISITS MIT

Adapted from “British Prime Minister David Cameron visits MIT: Personable robots, advanced prosthetics, and entrepreneurship figure prominently in campus visit,” David L. Chandler, MIT News Office, May 14, 2013

British Prime Minister David Cameron, hosted by Martin Trust Center Faculty Director Professor Fiona Murray, met with a group of young MIT entrepreneurs during a visit to MIT on May 14, 2013. Cameron met informally with a small group of students and recent alumni who have started businesses, or are in the process of doing so. The seven young entrepreneurs each gave a brief introduction to their inventions or concepts for a startup; Cameron then asked questions about their projects.

Murray said the young entrepreneurs who Cameron met “represent the diversity of students here on campus,” coming from different departments yet often engaging in interdisciplinary projects.

Elliot Cohen, MBA '13, said of the meeting, “I think it’s very difficult, if you’re not inside an ecosystem like this, to appreciate the subtle interactions that make up the foundation of it and are so important. The fact that he really spent some time getting to know people like us who are right in the middle of it, to me, is really encouraging. He’s not just trying to analyze it from the outside.”

Danielle Zurovcik, SM '07, PhD '12, said Cameron noted that many universities around the world have tried to become centers of innovation and entrepreneurship, but few have done so as successfully as MIT. Cameron, she said, seemed to be very interested in learning, “How does MIT do it successfully?”

Cameron’s visit took place in the MIT Media Lab, where he also took a tour of the facility and met with Media Lab researchers who showed him some of their prototypes.

<http://web.mit.edu/newsoffice/2013/david-cameron-visits-mit-0514.html>

Cameron seemed to be very interested in learning, “How does MIT [lead in innovation and entrepreneurship] successfully?”

– DANIELLE ZUROVCIK, SM '07, PHD '12

British Prime Minister David Cameron speaks with Martin Trust Center Faculty Director Professor Fiona Murray and a group of student and alumni entrepreneurs during a visit to the MIT Media Lab.



U.S. IMMIGRATION DIRECTOR UNVEILS NEW PROGRAM DURING MIT VISIT

Adapted from “At MIT Sloan, U.S. immigration chief addresses challenges for foreign-born entrepreneurs,” MIT Sloan Newsroom, Dec. 4, 2012

U.S. Citizenship and Immigration Services director **Alejandro Mayorkas** discussed the challenges faced by prospective immigrant entrepreneurs during a panel discussion on November 28.

“The immigration system, unfortunately, doesn’t lend itself to easy, smooth paths for these individuals, but too often presents obstacles,” Mayorkas told students. “The law provides very

limited paths for individuals who want to be entrepreneurial in the United States who were born [elsewhere].”

He was joined on the panel by Anurag Bajpayee, PhD ’12; Rene Reinsberg, MBA ’11; Professor Matt Marx; and immigration attorney Lisa Burton. As part of the visit, Mayorkas unveiled a web resource for immigrant entrepreneurs called Entrepreneur Pathways.

<http://mitsloan.mit.edu/newsroom/2012-mayorkas.php>

U.S. immigration chief Alejandro Mayorkas (right) discusses challenges for entrepreneurial immigrants during a panel discussion. Next to him in the photo are immigration attorney Lisa Burton and MIT Professor Matt Marx.



LADY GAGA PRODUCER GARIBAY VISITS MUSIC HACK DAY

The **Music Hack Day @ MIT**, co-sponsored by the Martin Trust Center and The Echo Nest, attracted the interest of Interscope Records executive Fernando Garibay, the musical director for Lady Gaga’s *Born This Way* album. Garibay spoke at the hackathon as well as at a meeting of the Do Innovation Team @ MIT (do.it@MIT), and visited the Martin Trust Center and the Media Lab to learn more about the intersection of art and entrepreneurship at MIT.

“I found it very fascinating how many entrepreneurship and startup models parallel our artist development and marketing models,” Garibay told MIT Sloan Newsroom. “I wasn’t aware how much music was a part of the MIT community. I would go so far as to say that music is part of its core.”

<http://mitsloan.mit.edu/newsroom/2012-intercope.php>



Music producer Fernando Garibay, standing at left, and his team learn about a student’s work during a visit to the Martin Trust Center.

FASHION EXPERTS DISCUSS BRANDING & STARTUPS

Executives from the fashion industry came together on April 29 to discuss “Branding Fashion in an Evolving Landscape” as part of the Fashion Innovators @ MIT event. Laurent Claquin, head of Kering Americas; Brant Cryder, U.S. President of Saint Laurent; Shenan Reed, Chief Media Officer of Createthe Group; and Shauna Mei, SB ’05, founder and CEO of AHALife; discussed the convergence of online and offline, the impact of rapidly evolving technology, and lessons big brands can learn from emerging brands.

Brian Kalma of Ministry of Supply, a company founded by several MIT alumni, moderated the panel. Branding experts Marcus Wilson and Michael Schaeffer, co-founders of The Right Collaborative, delivered the keynote.

“It was amazing to see the MIT community rally around fashion, and the impact the MIT students can have on innovation in the fashion industry,” said Bijal Shah, MBA ’13, co-founder of lallitara.

The panelists and audience members started the evening with a showcase of several fashion startups founded by MIT students and recent alumni.

<https://entrepreneurship.mit.edu/news/stylish-startups-fashion-event-brings-together-apparel-focused-entrepreneur>

It was amazing to see the impact the MIT students can have on innovation in the fashion industry.

—BIJAL SHAH, MBA ’13, CO-FOUNDER OF LALLITARA

2012 – 2013 EXTERNAL HIGHLIGHTS



ACCELERATING REGIONAL ENTREPRENEURIAL ECOSYSTEMS

Policymakers, university and private sector leaders, entrepreneurs, and risk capitalists from seven regions around the world are coming together to accelerate their regions' entrepreneurial ecosystems in the pilot cohort of the MIT Regional Entrepreneurship Acceleration Program (MIT REAP).

MIT REAP helps regions enhance their prosperity agenda and long-term job creation. It accomplishes this goal by educating, engaging, and enabling regional stakeholders

in the development and execution of a well-designed acceleration strategy focused on innovation-driven entrepreneurial activity. The pilot cohort—the Andalucía region of Spain, Finland, the city of Hangzhou in China, the city of Istanbul in Turkey, New Zealand, Scotland, and the Veracruz region of Mexico—have completed workshops held at MIT as well as in Scotland and New Zealand.

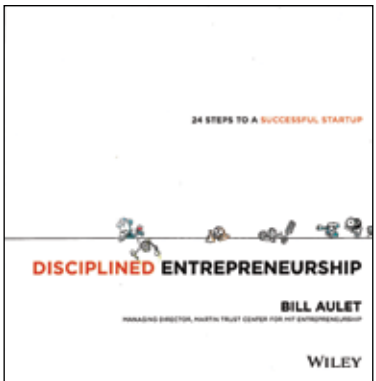
Read more about MIT REAP on page 26.
<http://reap.mit.edu>

DISCIPLINED ENTREPRENEURSHIP

Over the past year, Martin Trust Center Managing Director Bill Aulet has been working to document key parts of the curriculum from the foundation entrepreneurship course 15.390 New Enterprises. After piloting a manuscript over the past two semesters in class, he published the book *Disciplined Entrepreneurship: 24 Steps to a Successful Startup* in August 2013.

The book focuses on how to systematically bring great products to market when launching a new venture, capturing the “creative irreverence” at the core of MIT while also being rigorous and practical. The 24-step guide gives new and experienced entrepreneurs alike a time-tested framework that reduces startup risk.

<http://www.disciplinedentrepreneurship.com/>



Participants in the first MIT REAP cohort listen to a speaker during a workshop held in New Zealand. The program brings regions together to learn from each other as well as from MIT's extensive research on entrepreneurial ecosystems.

A TALE OF TWO ENTREPRENEURS

From “A Tale of Two Entrepreneurs: New Kauffman Paper Highlights Different Types and Their Roles in Economy,” Ewing Marion Kauffman Foundation, May 2, 2013

Not all startup companies are created equal. A paper co-authored by Martin Trust Center Faculty Director Professor Fiona Murray and Managing Director Bill Aulet outlines the differences between new ventures that serve local markets and are not dependent on innovation (small and medium enterprises or SMEs), and startups that focus on global markets and rely on a technology, process, or business model innovation (innovation-driven enterprises or IDEs).

“Both SMEs and IDEs are critical to a successful economy, but IDEs are particularly important for accelerating economic growth because of their potential to contribute jobs and advance new innovations,” said Murray. “IDE entrepreneurship must be a major element of government strategy and policymaking, with separate and equitable organizations created to support the success of both types of ventures.”

<http://www.kauffman.org/uploadedFiles/DownloadableResources/a-tale-of-two-entrepreneurs.pdf>

“People who use entrepreneurship as a ‘catch-all’ phrase to capture a single economic activity make a big mistake,” said Aulet. “Each type faces different hiring challenges, funding needs, growth potential, risk levels, and other needs that support organizations must understand to successfully help these companies.”



WHAT WE DO.

ACADEMICS

CURRICULUM

MIT's motto, *mens et manus* (mind and hand), is an integral part of MIT's entrepreneurial culture and its many entrepreneurship courses. Courses combine theory and practice to give students ample opportunity to use the skills they have learned within the curriculum.

Nearly all entrepreneurship courses are open to all MIT students, undergraduate and graduate, from all disciplines.

Fall 2012

- | | | |
|---|--|---|
| 1.462/11.345 Entrepreneurship in Construction and Real Estate Development | 15.128/MAS.883 Neurotechnology Ventures | 15.390 New Enterprises |
| 2.009 The Product Engineering Process | 15.360 Introduction to Technological Entrepreneurship | 15.391 Early Stage Capital |
| 2.75/2.750 Medical Device Design | 15.366 Energy Ventures | 15.399 Entrepreneurship Lab |
| 6.902/ESD.051 Engineering Innovation and Design | 15.369 Corporate Entrepreneurship: Strategies for Technology-Based New Business Development | 15.615 Basic Business Law for the Entrepreneur and Manager |
| 6.933 Entrepreneurship in Engineering: The Founder's Journey | 15.375/EC.731/MAS.665 Development Ventures | 15.933 Strategic Opportunities in Energy |
| 7.547/10.547/15.136/ESD.691/HST.920 Principles and Practice of Drug Development | 15.383 Entrepreneurship and Sustainable Economic Development: The Case of Puerto Rico | 15.S05 Spec Sem: Regional Entrepreneurial Acceleration Lab |
| 9.455/15.128/20.454/MAS.883 Neuro-technology Ventures | 15.385 Social Innovation and Entrepreneurship | 15.S07 Spec Sem: Healthcare Ventures |
| 10.807/15.371 Innovation Teams (i-Teams) | 15.387 Technology Sales and Sales Management | 15.S17 Spec Sem: Applications of Advanced Entrepreneurial Techniques |
| | 15.389 Global Entrepreneurship Lab | |

IAP 2013

15.S21 The Nuts and Bolts of New Ventures/ Business Plans

15.S24 From MIT to CEO: Tech-nologists Leading Startup Ventures

15.S25 The Story of One Laptop Per Child

15.S51 Hacking IAP

15.S56 Validating Your Startup; or, Focus on Winning and Don't Waste Time

15.S57 Entrepreneur's Guide to Accelerators and Incubators

15.S58

Entrepreneurship on the Big Screen: What Can We Learn About Entrepreneurship from Movies?

Spring 2013

2.739/15.783/ESD.32 Product Design and Development

2.752/2.753 Development of Mechanical Products

2.888 Professional Seminar in Global Manufacturing Innovation + Entrepreneurship

3.207 Innovation and Commercialization

6.903/15.628 Patents, Copyrights, and the Law of Intellectual Property

6.932/15.377 Linked Data Ventures

6.933 Entrepreneurship in Engineering: The Founder's Journey

10.807/15.371 Innovation Teams (i-Teams)

15.356 How to Develop Breakthrough Products and Services

15.358 The Business of Software and Digital Platforms

15.363/HST.971 Strategic Decision Making in the Life Sciences

15.376/MAS.664 Media Lab Enterprises: Digital Innovations

15.387 Technology Sales and Sales Management

15.390 New Enterprises

15.394 Dilemmas in Founding New Ventures

15.399 Entrepreneurship Lab

15.431 Entrepreneurial Finance

15.615 Basic Business Law for the Entrepreneur and Manager

15.618 Law and Cutting-Edge Technologies

15.818 Pricing

15.911 Entrepreneurial Strategy

15.912 Strategic Management of Innovation and Entrepreneurship

15.S08 Spec Sem: User-Centered Innovation in the Internet Age

15.S15 Spec Sem: Entrepreneurship and Prosperity in Low Income Countries

15.S16 Spec Sem: Entrepreneurial Product Marketing and Development

15.S71 Spec Sem: Application of Advanced Entrepreneurial Techniques

ESD.125 Mapping and Evaluating New Energy Technologies

MAS.533 Imaging Ventures: Cameras, Displays, and Visual Computing

FACULTY AFFILIATES

Our “dual-track” faculty model brings professors and adjunct practitioners together in the classroom so that students benefit from a broad range of perspectives and experiences.

Leadership Team

Bill Aulet, Managing Director

Fiona Murray, Faculty Director

Edward Roberts, Founder & Chair

Professors

SCHOOL OF ENGINEERING

Tim Berners-Lee

Vladimir Bulovic

Charles Cooney

Martha Gray

Doug Hart

Bob Langer

Don Sadoway

Sanjay Sarma

Joel Schindall

Alex Slocum

SCHOOL OF ARCHITECTURE + PLANNING

Joi Ito

Sandy Pentland

Ramesh Raskar

SLOAN SCHOOL OF MANAGEMENT

Michael Cusumano

Jason Davis

Steven Eppinger

Charles Fine

Yasheng Huang

Richard Locke

Matt Marx

Fiona Murray

Edward Roberts

Antoinette Schoar

Scott Stern

Catherine Tucker

Eric von Hippel

Lecturers

Noubar Afeyan

Bridget Akinc

John Akula

Howard Anderson

Bill Aulet

Steven Bauer

Phil Budden

Elaine Chen

Zen Chu

Jim Dougherty

Jonathan Fleming

Joe Hadzima

Brian Halligan

Tod Hynes

Shari Loessberg

Francis O'Sullivan

Luis Perez-Breva

Katherine Rae

Imran Sayeed

Lou Shipley

Reed Sturtevant

Andrew Wolk

Andrey Zarur

15.S71 APPLICATION OF ADVANCED ENTREPRENEURIAL TECHNIQUES (AKA “GSD”)

“GSD [get stuff done] class,” as it’s known to the dozens of budding entrepreneurs who have taken the course since its inception in spring 2012, started when a group of highly motivated undergraduates met with the Martin Trust Center’s Bill Aulet and Colin Kennedy one night at the Center. “What do you want to do?” Aulet asked the group. “Build cool stuff,” they replied. Aulet and Kennedy designed an independent study to give structure and rigor to the students’ ambitions, while attracting a cross-disciplinary group of both undergraduate and graduate students. The independent study led to an IAP course that, in turn, led to the GSD class being created as a special seminar.

Members of the Spring 2013 class of Application of Advanced Entrepreneurial Techniques (aka “the GSD class”) smile at the conclusion of their final presentations.



HEIDI BAUMGARTNER, SB '14 Course 8

Heidi always planned to be a research scientist in either physics or electrical engineering. But when she met Bayley Wang, SB '14; and Daniel Kramnik, SB '16; through the student club MITERS (MIT Electronics Research Society) and started writing a how-to manual for their Tesla coil driver board, little did she know she would end up starting a company.

A Tesla coil generates a display of high-voltage arcs. The kit Heidi and her team created, called oneTesla, takes MIDI input, either from a file or a MIDI keyboard, and uses those arcs to produce both music and light.

“One burst of lightning just sounds like a snap. But if you make it snap 262 times in one second, you hear a middle C,” Heidi explains. “We vary the rate that the lightning fires away to produce different pitches of sound.” (See <http://www.youtube.com/user/oneTesla/videos> for a demo.)

After the team realized that others might be interested in buying such a do-it-yourself kit, Heidi enrolled in Application of Advanced Entrepreneurial Techniques (“the GSD class”) and spent the Fall 2012 semester creating prototypes and negotiating with parts suppliers for their kit’s 100-plus components.

“That was the first time someone called oneTesla a ‘startup,’ which surprised me because I had considered it very much a side project that wouldn’t get anywhere,” says Heidi about her first experience in an entrepreneurship class at MIT. “I realized then that it could be bigger than my team and I had envisioned.”

Much bigger. The project, which had a fundraising goal of \$20,000 when it was put on Kickstarter in January 2013, raised \$169,155. The company has since hired seven employees to assemble the kits needed to meet the increasing demand in their online store. Heidi is refining her management and quality control strategies, though she still plans to pursue a career in scientific research.

A version of this profile was published in “The accidental entrepreneurs,” MIT Sloan Newsroom, July 1, 2013, <http://mitsloan.mit.edu/newsroom/2013-accidental-entrepreneurs.php>.



10.807/15.371 INNOVATION TEAMS (I-TEAMS)

i-Teams is a unique MIT experience, drawing students, faculty, and projects from across the Institute. Taught by the Martin Trust Center’s Faculty Director Professor Fiona Murray, in collaboration with research scientist Dr. Luis Perez-Breva of the School of Engineering and senior lecturer Dr. Noubar Afeyan, PhD '87, CEO of Flagship Ventures, the course draws on expertise from the Martin Trust Center and the Deshpande Center for Technological Innovation. Each semester, cross-disciplinary teams of students analyze the commercial potential of cutting-edge research out of the labs of MIT faculty. In the past several years, the class has engaged over 100 MIT faculty from all departments assessing technologies as diverse as RFID, motion sensing, sugar monitoring, and ethylene sniffing. The goal is to teach students the process of science and technology commercialization. “i-Teams provided so much

insight into the technology commercialization process... I couldn’t imagine leaving MIT without this knowledge,” says Ash Martin, MBA '10, who used his i-Teams experience to launch Viztu with Course 2 PhD student Tom Milnes.

<http://iteams.mit.edu>

i-Teams provided so much insight into the technology commercialization process... I couldn’t imagine leaving MIT without this knowledge.

– ASH MARTIN, MBA '10, CO-FOUNDER OF VIZTU

SELECTIONED RECENT RESEARCH & PUBLICATIONS
IN ENTREPRENEURSHIP & INNOVATION

MICHAEL CUSUMANO

“Are the Costs of ‘Free’ Too High in Online Education? Considering the economic implications as educational institutions expand online learning initiatives,” *Communications of the ACM*, Vol. 56, No. 4, 1 – 4, April 2013

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JASON DAVIS

Bingham, Christopher B., and Jason P. Davis, “Learning Sequences: Their Existence, Effect, and Evolution,” *Academy of Management Journal*, Vol. 55, No. 3, 611 – 641, June 2012.

Davis, Jason P., and Kathleen M. Eisenhardt, “Rotating Leadership and Collaborative Innovation: Recombination Processes in Symbiotic Relationships,” *Administrative Science Quarterly*, Vol. 56, No. 2, 159 – 201, June 2011.

MATT MARX

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FIONA MURRAY

MacCormack, Alan, Fiona Murray, and Erika Wagner, “Spurring Innovation Through Competitions,” *MIT Sloan Management Review*, Vol. 55, No. 1, 25-32, Fall 2013.

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evaluation,” *Research Policy*, Vol. 41, No. 10, 1779 – 1792, December 2012.

Ding, Waverly, Fiona Murray, and Toby Stuart, “From Bench to Board: Gender Differences in University Scientists’ Participation in Corporate Scientific Advisory Boards,” *Academy of Management Journal*, 2012.

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SCOTT STERN

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Delgado, Mercedes, Michael E. Porter, and Scott Stern, “Clusters, Convergence, and Economic Performance,” NBER Working Paper No. 18250, July 2012.

ERIC VON HIPPEL

Raasch, Christiana, and Eric von Hippel, “Amplifying user and producer innovation: The power of participation motives,” MIT Sloan School of Management Working Paper, 2012.

Raasch, Christiana, and Eric von Hippel, “Modeling interactions between the user and producer innovation paradigms: User-contested and user-complemented markets for innovation,” MIT Sloan School of Management Working Paper, 2012.

E&I TRACK

The **Entrepreneurship & Innovation Track** within the MIT Sloan MBA program, designed for MBA students who have a strong commitment to entrepreneurship, focuses on launching and developing emerging technology companies. The track curriculum heavily emphasizes team practice linked to real-world entrepreneurial projects, balances theoretical and practitioner education, and provides a thorough exposure to the many building blocks of an entrepreneurial career, while leaving freedom to explore MIT’s rich course catalog.

The E&I Track starts with the first-semester course 15.360 Introduction to Technological Entrepreneurship, led by Martin Trust Center Founder and Chair Professor Edward Roberts. Students meet key MIT faculty

and outside entrepreneurs, angel investors and VCs, and learn about MIT’s renowned entrepreneurial network. In the second semester, students explore startups and develop their entrepreneurial network on the Silicon Valley Study Tour, while a specialized curriculum helps them choose appropriate courses to further their interests and goals. Students who fulfill the E&I Track requirements receive a Certificate in Entrepreneurship & Innovation concurrent with their MBA degree.

<https://entrepreneurship.mit.edu/ei>



EXECUTIVE EDUCATION

Entrepreneurship Development Program (EDP)

EDP leverages MIT’s culture of high-tech entrepreneurship to help entrepreneurs, corporate venturing executives, and others involved in entrepreneurial environments learn what they need to develop ideas into successful businesses, and how to increase entrepreneurial opportunities in their corporations, institutions, and regions. The material will introduce participants to MIT’s technology transfer system, entrepreneurial educational programs, and entrepreneurial network.

Through lectures by senior MIT faculty, visits to high-tech startups, and live case studies with successful entrepreneurs, participants will be exposed to the content, context, and contacts that enable entrepreneurs to design and launch successful new ventures based on innovative technologies. Specially designed team projects give participants hands-on, practical experience developing a business plan, while networking events bring participants together with members of MIT’s entrepreneurial community.

<http://executive.mit.edu/edp>

EDP is genuinely a
life-changing experience.
— PAULA DOUGLAS, ACCOUNT MANAGER, SCOTTISH ENTERPRISE

Energy Innovation: MIT's Approach to Discovering and Realizing Energy Opportunities

Energy is the challenge as well as the opportunity of our generation. This innovative new four-day program is designed to enable business executives, entrepreneurs, and government officials to more effectively encourage, lead, and manage the entire venture creation process for energy—be they standalone new ventures or pioneering undertakings inside of larger organizations. The process includes

identifying opportunities, generating new ideas, designing a holistic solution, and building a viable, significant, and sustainable new energy-oriented business.

The program has been newly updated for 2013. It was formerly called “Creating Clean Energy Ventures.”

<http://executive.mit.edu/cev>

REGIONAL ENTREPRENEURSHIP ACCELERATION PROGRAM

The MIT Regional Entrepreneurship Acceleration Program (REAP) enables regional champions and their teams to develop and implement an acceleration strategy to propel their region forward using innovation-driven entrepreneurship. This innovative program promotes prosperity and job creation in regions around the globe based on MIT's unique research and expertise in innovation-driven entrepreneurial ecosystems.

MIT's history of leadership in innovation-driven entrepreneurship uniquely positions MIT REAP to educate and engage groups to drive entrepreneurial action in their regions. In contrast to a consulting agreement, in which outside experts tell a region how it should operate, MIT REAP uses frameworks built upon MIT faculty research and practice to enable member regions to develop and implement strategies customized to their strengths and opportunities.

The program is structured around four 2.5-day educational workshops over a two-year period. The integrated experience is designed to develop regional programs that are then tested and iterated. All regions in a cohort attend all workshops together, where they have time to interact with faculty, work together as a team and collaborate with other regions. Two of the workshops take place on the MIT campus, and the other two workshops take place in member regions to showcase other ecosystems and have a central action-learning-oriented case study.

Teams are comprised of five key stakeholders: government economic development agencies, entrepreneurial community, risk capital, universities, and large corporations. Such team diversity enables teams to fully represent the stakeholders that inform and influence a regional strategy and ecosystem, ensuring that that programs and policies that bolster the innovation-driven entrepreneurial ecosystem are effectively implemented.

The second MIT REAP cohort will begin with teams gathering locally in their home regions in October 2013. The first in-person workshop will be held at MIT in February 2014.

<http://reap.mit.edu/> and <http://web.mit.edu/newsoffice/2013/mit-helps-the-worlds-regions-accelerate-support-for-entrepreneurship.html>



RESOURCES

PROGRAMS

MIT Global Founders' Skills Accelerator

Meet milestones on your startup idea over the summer, and get up to \$20K in return! It's all part of MIT's summer program for student entrepreneurs, the MIT Global Founders' Skills Accelerator (MIT GFSA).

The MIT GFSA brings together student teams from MIT and from participating universities around the world. It provides participating teams with up to \$20,000 in grants for meeting customized milestones, as well as individual stipends, workspace, and personalized instruction and guidance. The program culminates in a Demo Day held at the beginning of the academic year in conjunction with the t=0 festival of innovation and entrepreneurship.

The MIT GFSA is an expansion of the MIT Founders' Skills Accelerator, a pilot program that hosted ten MIT student teams during the summer of 2012. It is a natural progression from the 40+ courses and numerous startup competitions and entrepreneurial programs offered at MIT. The MIT GFSA solidifies

students' entrepreneurship skills and increases their effectiveness at creating new innovation-based ventures to meet the challenges of the 21st century.

The MIT GFSA is an initiative of all five MIT schools—the School of Engineering, the School of Science, the School of Humanities and Social Sciences, the School of Architecture and Planning, and the MIT Sloan School of Management—as well as a collaboration with the MIT Skoltech Initiative which jointly developed the program last year. Students will have access to resources from across the Institute, including the Martin Trust Center for MIT Entrepreneurship, the Deshpande Center for Technological Innovation, the MIT Venture Mentoring Service, the MIT Technology Licensing Office, the Gordon-MIT Engineering Leadership Program, the MIT Media Lab Entrepreneurship Program, the SUTD-MIT International Design Centre, and other MIT entrepreneurship resources as appropriate.

Beehive Cooperative

The Beehive Cooperative was MIT's largest community space for MIT student teams working on startup ideas. Located in building E52, the Beehive allowed MIT student teams to form a close-knit, supportive community of entrepreneurs. Culture was promoted through frequent check-ins and gatherings, as well as an open-door policy.

The Beehive was designed for student teams that have gained valuable skills and knowledge in entrepreneurship and who would benefit from a workspace. It complemented the Martin Trust Center's collection of meeting rooms in E40-160.

The Beehive began in June 2012, and closed in June 2013 as its space was slated for renovation. While searching for permanent space, the “Roaming Nation of Beehive” attempts to connect MIT student teams with external space and resources on an ad-hoc basis.

ENTREPRENEUR IN RESIDENCE (EIR) NETWORK

The Martin Trust Center's Entrepreneur in Residence (EIR) Network allows MIT students to meet with experienced advisors who can provide advice and knowledge-sharing tailored to the current stage of their startup idea.

The program features entrepreneurs and professionals spanning industry areas and levels of experience, from industry veterans to individuals who have just completed the

early stages of startup creation. This multi-tier approach allows us to match students with the appropriate EIR for their particular questions.

The EIR program is available for all current MIT students to quickly get in touch with external advisors and resources. It prepares students for the MIT Venture Mentoring Service, where they can develop a long-term relationship with a specific team of mentors.



CHRISTINA CHASE Full-Time Entrepreneur in Residence and Student Evangelist

Christina started her first company at 18, worked in several B2B hardware and healthcare IT startups, and was a business mentor for Dartmouth's technology transfer program.

Now, fresh off founding an edtech startup, she is leveraging her expertise to help MIT student teams, both by advising them in their entrepreneurial endeavors, regardless of stage, and facilitating connections between them and the broader entrepreneurial community at MIT and beyond. "We give them the tools to ask the right questions, and to get their hands dirty and practice entrepreneurship," she says.

Part of her work is managing the MIT Entrepreneur in Residence Network, a group of 40-plus volunteer entrepreneurs and subject-matter experts who hold office hours with students throughout the year. She also works collaboratively with MIT departments and groups to provide more-targeted entrepreneurship education opportunities. One collaboration she is particularly excited about is her advising of student teams in MADMEC, the innovation competition run by Course 3 (materials science and engineering).

"They are working on amazing ideas," she says. "Only Course 3 can run this sort of competition that deeply engages Course 3 students. I can supplement that by asking the right kinds of questions to help the students understand the market for these potential innovations."

She rejects the binary approach that you either become an entrepreneur or work for an existing company. "In the MIT academic environment, students can test out and explore what entrepreneurship is, without closing off a different career path," she says. "Much like athletic practice, entrepreneurship practice gives them the opportunity to decide whether they want to continue entrepreneurship, while simultaneously refining the craft."

AWARDS

MIT rewards and recognizes student excellence in entrepreneurship through several awards overseen by the Martin Trust Center. An additional award recognizes commendable effort in entrepreneurship mentoring.

The Patrick J. McGovern, Jr. Award

The McGovern Award is given at each year's MIT Awards Convocation to an individual or team that, in working closely with the Martin Trust Center, has made a significant impact on the quality and overall spirit of entrepreneurship at the Institute. The objective of the award is to motivate future student leaders, raise the profile of student-led organizations, and reward individuals for outstanding achievement in building entrepreneurial excellence.

The McGovern Award recipients for 2013 are: Elliot Cohen, MBA '13; Allen Cheng, G; Allison Yost, PhD '16 (Hacking Medicine); William F. Whitney, SB '13 (StartLabs); and Colin Sidoti, SB '14 (undergraduate entrepreneurship support and outreach).



McGovern Award recipients William Whitney, SB '13; Elliot Cohen, MBA '13; and Allison Yost, PhD '16; pose with Martin Trust Center Chair Professor Edward Roberts. Missing from the photo are Allen Cheng, G; and Colin Sidoti, SB '14.

The Ronald I. Heller Entrepreneurship Grant

The Heller Grant is presented annually by the Martin Trust Center for MIT Entrepreneurship to a student group or individual students, working closely with our Center, who make a significant impact on the quality and overall spirit of entrepreneurship at the Institute.

The Heller Grant recipients for 2013 are: Heidi Baumgartner, SB '14; Nikita Khlystov, SB '14; Anya Priester, MBA '13; and Sam Shaner, PhD '15.



Martin Trust Center Managing Director Bill Aulet (far left) and Chair Professor Edward Roberts (far right) pose with the Heller Grant recipients, from left: Sam Shaner, PhD '15; Heidi Baumgartner, SB '14; Anya Priester, MBA '13; and Nikita Khlystov, SB '14.



The Howard and Carol Anderson Fellowship in Entrepreneurship

The Anderson Fellowship is awarded each year by MIT Sloan to recognize up to three distinguished second-year MBAs who have demonstrated excellence in academics and entrepreneurship within the context of the Martin Trust Center’s activities.

The Anderson Fellows recipients for 2013 are: Adam Borelli, MBA ’13; Philip Cohen, MBA ’13; and Kim Gordon, MBA ’13.

The 2013 Anderson Fellows, from left: Adam Borelli, MBA ’13; Kim Gordon, MBA ’13; and Phil Cohen, MBA ’13.



PHILIP COHEN, MBA ’13

Phil has been a hockey player, a military officer, and a management student. But above all, he wants to be known as an artist. “I’ve always considered myself a musician and songwriter first and foremost,” says the front man of his eponymously named band.

Entrepreneurship has helped him explore his passion for music. When recording music, “I ran into huge inefficiencies in audio data organization, transfer, and storage, and most importantly, communication bottlenecks,” he

says. He co-founded AudioCommon to address these issues through an online venue where musicians can securely communicate, organize their recordings, and collaborate.

He completed his three-person founding team during a chance encounter at the Thirsty Ear, a pub in MIT’s Ashdown House. “The pub was closing down, and there were three folks at the bar,” he says. “The bartender asked me how my band was doing, and the guy sitting next to me said, ‘Hey, you play music?’” That’s how Phil met Course 6 PhD student and musician Frank Permenter.

He has also been a leader in the MIT entrepreneurship community, co-creating a Music Hack Day, serving as a TA for 15.390 New Enterprises, and spearheading the creation of the Beehive Cooperative, a student startup co-working space supported by the Martin Trust Center.

“Bill [Aulet] tapped me on the shoulder in the hallway, and said, ‘I’ve got this big space and lots of demand for startup space. Would you be willing to lead the charge?’ I’ve always responded well to this type of challenge, so I decided to run with it.” The Beehive, which Phil named to evoke the activity and productivity of a bee colony, started accepting applications within a week, quickly accepting dozens of teams.

The Adolf F. Monosson Prize for Entrepreneurship Mentoring

Created to honor the memory of MIT graduate Adolf F. Monosson, ’48, the award recognizes entrepreneurship mentors who have committed their time, energy, and/or capital toward future generations of entrepreneurs. Established at the Sloan School of Management and made possible by Mr. & Mrs. William S. Grinker, ’56, the award continues Monosson’s mission of providing mentoring to would-be entrepreneurs.

This year’s Monosson Prize was awarded to Martin Trust Center Managing Director Bill Aulet for his selfless support of MIT entrepreneurship. Professors Edward Roberts and Fiona Murray presented Aulet with the prize to recognize his achievements since taking over as managing director of the Center in 2009.



Monosson Prize recipient Bill Aulet (second from left) with, from left: his wife Lisa; Martin Trust, SM ’58; Center Faculty Director Professor Fiona Murray; and Center Chair Professor Edward Roberts.

OTHER RESOURCES

The Martin Trust Center’s meeting space in E40-160 features eight meeting rooms and three phone booths, all capable of making international phone calls. A videoconference room allows students to seamlessly connect both with room-based videoconference systems as well as consumer-grade videochat software. Students can book rooms in advance online.

We have software and tech equipment available for students to check out, including video-cameras as well as mobile devices for app testing. Two iMacs available in the Center give students access to Adobe® Creative Suite and video editing software such as Final Cut Pro® X.

We’ve also arranged for our student entrepreneurs to have access to free services from outside vendors to help build their startups, such as free server space for a year, free software, and other complimentary offers.

Students can learn about the various entrepreneurship events and resources available to them through our digital presence. Any MIT Kerberos holder can share entrepreneurship events by adding them to our website’s calendar. Our weekly email newsletter keeps students up to date on events, news, and more. The Digital Shingle Project (<http://digitalshingle.mit.edu>) showcases MIT alumni-founded companies. We continually identify new ways to engage MIT students and scale our programs through Internet tools. Thank you to Robert T. Huang, SM ’79, for his generous support of our digital presence.

We hold several events throughout the year, such as the annual t=0 festival of innovation and entrepreneurship, as well as lunchtime talks and other events large and small. We also provide support to students who wish to organize their own events.

It is going to be the entrepreneurs, engineers, and creative community that fix the problems of the music industry.

– PHIL COHEN, MBA ’13; ORGANIZER, MUSIC HACK DAY @ MIT



Student team 3dim won the MIT \$100K Launch Business Plan Contest on May 15 for its idea to implement gesture-recognition technology in smartphones. The team included Andrea Colaço, SM '10, PhD '13; Ahmed Kirmani, SM '10, PhD '13; Nan-Wei Gong, SM '09, PhD '13; Hoolie Tejwani, MBA '13; and Nathaniel Stewart, MBA '13.

COMMUNITY

STUDENT CLUBS AND INITIATIVES

MIT has over 20 student clubs and initiatives with a focus on entrepreneurship. The Martin Trust Center provides programmatic advising to many of these clubs, and several of them use our E40-160 meeting space to hold club meetings and events.

Specific to Entrepreneurship:

MIT \$100K Entrepreneurship Competition

MIT Clean Energy Prize (CEP)

Discover Entrepreneurship and Leadership (DEAL) Freshman Pre-Orientation Program (FPOP)

The MIT Entrepreneurs Club (E-Club)

MIT Entrepreneurship Review (MITER)

MIT Global Startup Workshop (GSW)

Hacking Medicine

MIT-China Innovation and Entrepreneurship Forum (MIT-CHIEF)

MIT Sloan Entrepreneurs for International Development (SEID)

MIT Sloan Entrepreneurship & Innovation Club

StartLabs

MIT Venture Capital and Private Equity Club

VentureShips Club

With an Entrepreneurship Element:

The Do Innovation Team at MIT (do.it@MIT)

MIT Energy Club

MIT Energy Club at Sloan

MIT Sloan Business Club

MIT Sloan Healthcare Club

MIT Sloan Sales Club

MIT Sloan Tech Club

MIT Sloan Women in Management (SWIM)

Techfair

TechLink

<https://entrepreneurship.mit.edu/community/student-clubs/>

The \$100K Accelerate Contest really helped us to focus our efforts.

—ALLEN CHEN, HST GRAD STUDENT

AKSHAR WUNNAVA, SB '14 COURSE 10

Akshar has taken full advantage of MIT's entrepreneurship resources while an undergrad.

"I knew I wanted to explore entrepreneurship as soon as I came to MIT," he says. "There were so many resources available, and so many interesting students with out-of-this-world ideas."

But he noticed that some of his classmates with brilliant startup ideas were not developing them.

"Many students do not understand what entrepreneurship entails and are very skeptical of an entrepreneurial career given the stability that jobs with large corporations offer," he says.

Akshar began designing a program that would educate incoming freshman about entrepreneurship and the resources available to them. Discover Entrepreneurship and Leadership (DEAL) was created in 2012 as a freshman pre-orientation program (FPOP).

DEAL, a four-day camp sponsored by the Martin Trust Center, brought 20 incoming freshman together to develop ideas, pitches, and executive summaries, while being exposed to MIT's entrepreneurship clubs and resources as well as resources in the Boston area.

"We had students, professors, and industry professionals from all of the MIT schools contribute to make DEAL a reality," he says, including a core team of 10 undergrads.



Akshar also started a company while at MIT, founding BioBatts with Arvind Thiagarajan, SB '13, G, in 2011. The duo has refined their concept through various MIT resources, including the t=0 festival of innovation and entrepreneurship, the MIT \$100K Entrepreneurship Competition, and the IDEAS Global Challenge.

"MIT has been instrumental in my entrepreneurial experiences over the past three years. I'm not sure if I would have even explored entrepreneurship had I been somewhere else."

IN THE NEWS

How MIT Became the Most Important University in the World

Boston magazine, November 2012

MIT entrepreneurs program to include six foreign teams

The Boston Globe, May 1, 2013

MIT student start-ups have their eyes on fashion

The Boston Globe, May 4, 2013

From Boston to Austin: How the City's Colleges are Celebrating SXSW

BostInno, March 7, 2013

People are realizing you don't need to be a data geek to build a company anymore.

—BEN ISRAELITE, MARTIN TRUST CENTER PROGRAM MANAGER

"MIT STUDENT START-UPS HAVE THEIR EYES ON FASHION," *THE BOSTON GLOBE*, MAY 4, 2013

Other countries court skilled immigrants frustrated by U.S. visa laws

The Washington Post, February 18, 2013

London's tech hub looks to capture

The Boston Globe, February 6, 2013

Changes to the freshman experience

The Tech (MIT), February 5, 2013



Photo by Scott M. Lacey. First published in *Boston* magazine.
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ECOSYSTEM

MIT DESHPANDE CENTER FOR TECHNOLOGICAL INNOVATION

Founded in 2002, the Deshpande Center was the first of its kind to promote technology commercialization in an academic environment with proof-of-concept grants to faculty members. To date the Center has funded more than 90 faculty research projects, and 26 spinout companies have been formed from these projects.

MIT ENTERPRISE FORUM

This external-facing organization, founded in 1978, provides a valuable network and resources to connect entrepreneurs to the outside world. The Enterprise Forum has 29 worldwide chapters including a very active Cambridge chapter and runs programs that integrate MIT alumni and the community.

BERNARD M. GORDON-MIT ENGINEERING LEADERSHIP PROGRAM

The Gordon-MIT Engineering Leadership Program, offered through the School of Engineering, enables MIT juniors and seniors to develop leadership and communication skills through an interactive program of realistic hands-on activities, exercises, and classes. Many of its graduates are in startup companies or are receiving accolades for their effectiveness and entrepreneurial initiatives in the larger companies where they work.

THE LEGATUM CENTER FOR DEVELOPMENT AND ENTREPRENEURSHIP

Established in 2007, the Legatum Center administers programs that promote and shape discourse on bottom-up development, especially in emerging economies. It also runs a fellowship program intended to launch enterprises in low-income countries.

THE LEMELSON-MIT PROGRAM

The Lemelson-MIT Program, established in 1994, is dedicated to honoring the acclaimed and unsung heroes who have helped improve our lives through invention. It runs programs and competitions to support this mission, including the \$30,000 Lemelson-MIT Student Prize.

MIT MEDIA LAB ENTREPRENEURSHIP PROGRAM

Founded in 2006, the Media Lab Entrepreneurship Program consists of several courses that help students leverage Media Lab technologies to create new businesses. Students are from the MIT's Sloan and Engineering schools in addition to the Media Lab, and also from Harvard's Kennedy, Public Health, and Education schools.

MIT PUBLIC SERVICE CENTER

The MIT Public Service Center (PSC) provides the guidance, support, and resources for the MIT community to achieve transformative outcomes through service. The PSC supports innovation and entrepreneurship through the MIT IDEAS Global Challenge, an annual competition that awards up to \$10,000 per team for the best ideas to tackle barriers to well-being.

MIT TECHNOLOGY LICENSING OFFICE (TLO)

The MIT TLO assists MIT inventors in protecting their technologies, and in licensing those technologies to existing companies and startups. In the past 10 years alone, it has licensed technology that has created 210 new companies. The office currently averages 80 – 100 agreements and 500 disclosures per year.

MIT VENTURE MENTORING SERVICE (VMS)

VMS was founded in 2000 and is a free service with no strings attached that is available to all MIT students, faculty, staff, and alumni who qualify. It provides an extensive and structured mentoring service through a network of hundreds of highly qualified mentors, most of whom are MIT alumni.

THE FUTURE

CHALLENGES

High Demand for High-Touch Entrepreneurship Education

Today, MIT is leading the way in university-based entrepreneurship education that consists of experiential learning in the classroom and a wide array of co-curricular activities. Central to our approach is ensuring that our classes are taught by academic faculty in full collaboration with experienced entrepreneurs. This mix of real-world experience and rigorous, tested frameworks creates a positive feedback loop that continually improves the quality of education.

The challenge (and the virtue) of the MIT model lies in its high-touch, resource-intensive approach at a time when demand for entrepreneurship education among students is exploding. Our solution will come not from watering down the quality of student education, but instead finding innovative, creative ways to meet demand.

Decentralized MIT Entrepreneurship Community

Entrepreneurship @ MIT is widespread and can be found throughout the campus. Many leading faculty members are also successful entrepreneurs, dozens of student clubs have some connection to entrepreneurship, and alumni engage in entrepreneurship at ever-growing rates. This breadth has led to a proliferation of ways to engage would-be student entrepreneurs.

With this embarrassment of riches, our challenge is to ensure that the whole is greater than the sum of the parts. In particular, we want to ensure high educational quality based both on experience and on the plethora of entrepreneurship research (of which our faculty are among the world's experts). We also welcome the deep engagement of entrepreneurs and experienced investors in our educational mission at MIT, but we want to ensure that this is done through an honest broker approach that provides advice in a way that limits conflicts of interest, protecting the interests of our students.

Space Constraints

We continually encounter heavy student demand for a wide range of infrastructure-based resources. From designated desk space for student teams and meeting space for teams and clubs, to machine shop and prototyping space, entrepreneurs need a range of different types of space, particularly if they are trying to build physical products.

Machine shops like the Hobby Shop and MITERS already have high demand from entrepreneurs and non-entrepreneurs alike, while dedicated workspace that is centrally located on campus is sparse. Our Beehive Cooperative was able to take advantage of some vacant offices, but only for a year. Our ability to meet the aspirations of MIT student entrepreneurs is limited by a lack of diverse high-quality types of space.

GOALS

Develop Undergraduate Minor

Led by Center Faculty Director Professor Fiona Murray in collaboration with Professor Doug Hart from mechanical engineering, MIT is working to identify how best to complement the undergraduate educational experience with effective entrepreneurship education. Although a range of different courses and advanced learning opportunities meet some needs, we believe that

without a campus-wide undergraduate minor or concentration, undergraduates will not be armed with the range of skills they need to transform their ideas to impact. The Center will support the development of an undergraduate minor design by MIT faculty with input from across the Institute and from the students.

Increase Opportunities for Student Experimentation

Removing obstacles to obtaining resources is critical for students to explore their interest in entrepreneurship by trying out an idea or a concept. This year, we aim to remove barriers by developing entrepreneurial concept grants

and expanding the amount and types of space available for students to try new things and explore what it means to be an innovation-driven entrepreneur.

Bolster Connections to External Community While Maintaining Our Unique Honest-Broker Approach

One of the best ways to encourage students to pursue entrepreneurship in an academic setting is to facilitate connections to entrepreneurs, investors, and others from the broader entrepreneurship community who can inspire and advise students. Many of our courses and programs rely on support from the

external community. We plan to increase these collaborations, while mindful that our unique honest-broker approach, which requires advice to be presented without conflict of interest, is important to the students who trust our Center to develop their entrepreneurship skills.

Continue to Improve Diversity

Entrepreneurship is not a solo sport; MIT research has found that teams with more founders are more successful. Diversity also plays an important part in entrepreneurial success—bringing together different perspectives, experiences, and skill sets allows teams to look at opportunities with less bias

toward any one individual's view of the world. We are committed to breaking down barriers that discourage any groups from pursuing entrepreneurship, and we will continue to make sure that our programming actively involves students all over campus, regardless of degree program, gender, or other demographic group.

Establish Communities of Practice in Distinct Industry Areas

We have seen great success over the past several years when students, faculty, and the external community collaborate to build a vibrant entrepreneurial ecosystem with specific industry focus, such as with our clean energy initiatives, Hacking Medicine, and some of the creative arts activities. To build on this success, we will establish five “communities of practice,”

each with a student leader who develops and executes a plan to foster a vibrant community that spans academics, extracurriculars, and connections to the world beyond MIT. Our five proposed communities (some new and some well-established) will be healthtech, clean energy, fintech, creative arts, and corporate.

|||||

Individual Donors

We are thankful to those individuals whose generous donations to the Martin Trust Center help sustain our diverse entrepreneurship programming. These gifts, large and small, enable us to take on new challenges each year, continually improving the quantity and quality of our offerings.

Corporate Donors

Our corporate donors look to engage with MIT best practice to apply innovation and entrepreneurship to their individual challenges. “Intrapreneurship” has become a trend among many large companies, and these companies are at the forefront of innovative thought in this regard.

| | |
|---------------------------|-----------------|
| 3M | OCP Morocco |
| Bilfinger Venture Capital | Parker-Hannifin |
| GDF Suez | Pfizer Inc. |
| General Electric Company | Turkcell |
| Henkel | |

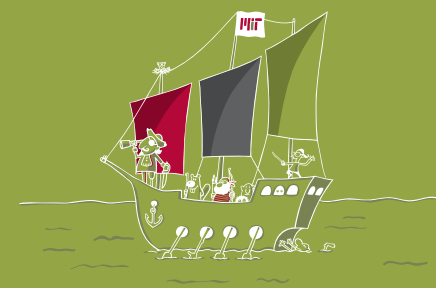


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