

What Comes After Big Data?

The MIT Institute for Data, Systems, and Society (IDSS) is celebrating the end of its inaugural year with an eye toward the future. This past October, IDSS saw over 1200 participants enroll in their new six-week online course, Data Science: Data to Insights, created in collaboration with MIT Professional Education, to help data scientists develop the skills they need to handle the oncoming data deluge.

The amount of data being generated and collected on a daily basis today is mind boggling. This reality presents both an opportunity and a challenge. On one hand, big data has the potential to reshape businesses and unleash innovation. But as the number of connected devices continues to explode, it becomes increasingly complex and difficult to analyze these massive data sets. Data scientists will need to evolve in order to convert information to insights and deliver on the promise of big data.

“With its emphasis on using data to gain the insights needed to make key decisions — ultimately, to address real-world challenges — IDSS is well-positioned to lead this exciting education effort,” says Munther Dahleh, IDSS Director and the William A. Coolidge Professor of Electrical Engineering and Computer Science.

Data Science: Data to Insights is designed to provide data science professionals with the ability to understand and analyze large data sets. The course is open to any data science professional with a desire to learn how to apply data science techniques to more effectively address an organization’s needs. ➔

To learn more about Data Science: Data to Insights, visit <http://digitalprograms.mit.edu/ds>

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Fueling a Researcher and Entrepreneur

MIT Professional Education’s Advanced Study Program (ASP), which gives working professionals the opportunity to take virtually any class at MIT, bills itself as “self-directed.” It’s proven to be a perfect match for Ralph A. Rodriguez, a man who describes himself as “self-driven.”

Rodriguez has logged an unprecedented 20 consecutive semesters of diverse studies (and a 4.9 cumulative GPA) in the ASP program even as he’s started and run several companies, been awarded 11 patents with more pending, and served on multiple boards.

“I really appreciated that MIT Professional Education didn’t look at me and say, ‘you’re in computer science so that’s what you should study,’” recalls Rodriguez, whose background in information technology, communications, and software had led him to C-level positions at a number of publicly held tech companies. “My studies here have helped me become both a researcher and an entrepreneur, thinking simultaneously about intellectual property and what’s described in patent lingo as ‘reduction to practice,’ which is really about taking a novel idea, fleshing out a concept, and actually building it. It’s the MIT ‘mens et manus’ spirit, and it’s an understanding that helps develop unique concepts that create value.”

Adds Bhaskar Pant, Executive Director of MIT Professional Education, “In the 52 years of the ASP program, a diverse set of bright professionals from around the world have taken advantage of the program’s unique feature of allowing access to regular MIT courses without having to enroll in a degree program. Some have spent several semesters



Ralph Rodriguez is a 20-semester veteran of MIT Professional Education’s Advanced Study Program.

doing that, but Ralph stands alone as a quintessential “lifelong learner” in his record 20-semester association with us. We are so proud to have been able to play a continuing role in Ralph’s decades-long learning and entrepreneurial success.” ➔

Celebrating 20 years of the MIT Summer Philharmonic Orchestra



Bhaskar Pant, Executive Director of MIT Professional Education, presents MITSPO conductor and music director George Ogata with an award of excellence for his years of service. Photo: Andy Shao.

On the evening of July 15, 2016, MIT alum George Ogata ‘92 led the 98-piece MIT Summer Philharmonic Orchestra (MITSPO) through Hector Berlioz’s “Symphonie Fantastique, Op. 14” to a full house at Kresge Auditorium. This year marked the 20th anniversary of the annual free-admission performance sponsored by MIT Professional Education and offered to the MIT and greater Cambridge community.

While pursuing his biology degree at MIT, Ogata began serving as the concertmaster of the MIT Symphony Orchestra, a position he held for seven years. In 1995, Ogata founded MITSPO as a way to provide local musicians from MIT and the greater Boston community an opportunity to rehearse and perform orchestral music during the off-season summer months.

“Our 20th anniversary concert was a capstone performance building on previous successful seasons. As director and conductor, I was proud of — and stunned by — the hard work

and energy displayed by the musicians,” said Ogata, who also serves as music director and conductor of the Reading Symphony Orchestra based in Reading, Massachusetts. “Not only was this a singular performance, it was a celebration of the fine collaboration with MIT Professional Education, whose dedicated support over all of the past 20 years made that very evening even possible. We are truly grateful.”

The evening opened with Ogata being honored with an award of excellence from MIT Professional Education and endorsed by the MIT Music and Theater Arts section for Ogata’s decades of service to the community. Bhaskar Pant, Executive Director of MIT Professional Education, presented Ogata with the award after his opening remarks.

“George had minored in music while studying at MIT; little did anyone, including George, know at the time he graduated how he would turn that background into a major annual contribution to the MIT and Cambridge music-loving communities,” said Bhaskar Pant after the performance. ➔

For more information on these programs, visit professional.mit.edu

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THE INNOVATION EDITION



Bhaskar Pant, Executive Director
Photo by Stuart Darsch

INNOVATION AND MIT GO HAND IN HAND - WHICH IS WHY PROFESSIONALS AROUND THE GLOBE HAVE LOOKED TO MIT PROFESSIONAL EDUCATION FOR THE BEST PROGRAMS ON INNOVATIVE THINKING AND PRACTICE.

To provide them with an even higher level of value, this year we introduced a multi-course Professional Certificate Program in Innovation and Technology that participants can complete within two years. In this newsletter, you will learn about the certificate program and how one professional managed to complete all its requirements in the program’s first year alone.

You will learn through an infographic about the global reach of our programs, in terms of both the geographic diversity represented among professionals attending our on-campus and online programs, as well as the increasing number of countries around the globe in which we deliver locally-relevant programs. Among new initiatives this year, we launched a six-week online course related to big data titled “Data Science: From Data to Insights” from a newly inaugurated department at MIT, the Institute for Data, Systems and Society (IDSS), that elicited registration from over 1200 professionals worldwide in its first run.

Our premier program, the Advanced Study Program (ASP), has had several of its enrollees return to the MIT campus to gain new knowledge in their respective area/s of interest or to gain new knowledge and perspectives in entirely different disciplines. However, among them, only Boston-based serial entrepreneur Ralph Rodriguez has returned to MIT for twenty consecutive semesters to take one or more full-semester courses each time in a wide array of subject areas that he says have given him new business ideas and kept him “evergreen.”

Finally, you will also enjoy reading about the 20th anniversary of the MIT Professional Education–sponsored annual concert of the MIT Summer Philharmonic Orchestra. We feel proud to be associated with this all-volunteer orchestra and its concerts ever since the inception of the orchestra under the leadership of its founder/director, George Ogata, an MIT alumnus of the Mathematics Department. As always, the orchestra thrilled the audience that packed MIT’s Kresge auditorium for its 2016 concert with a riveting rendition of Berlioz’s “Symphonie Fantastique.”

I hope you will enjoy reading these stories and more in our newsletter.

Best Regards,

Bhaskar Pant
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New Innovation Certificate Helps Professionals Make Impact

In keeping with MIT's institute-wide innovation initiative, MIT Professional Education launched a professional certificate this past year, focusing on building competitive advantage through innovation and technology. Over 40 professionals from around the globe enrolled in the Professional Certificate Program in Innovation and Technology in its inaugural year and eight professionals graduated at the end of summer 2016.

"I feel energized and inspired. We leave the classroom and feel like, 'I can do this.' Whatever it is you want to do, you feel like you've been given the tools to just do it," said Denzil Wilson, a 2016 Innovation and Technology Certificate graduate.

The MIT Innovation and Technology Professional Certificate consists of seven core Short Programs courses hosted at the MIT campus every summer that focus on identifying, cultivating and sustaining innovation within organizations, disruptive technologies, and nurturing both creative and analytical skills. Nine elective courses allow Certificate participants to seek further knowledge in specialized concentrations across various industries.

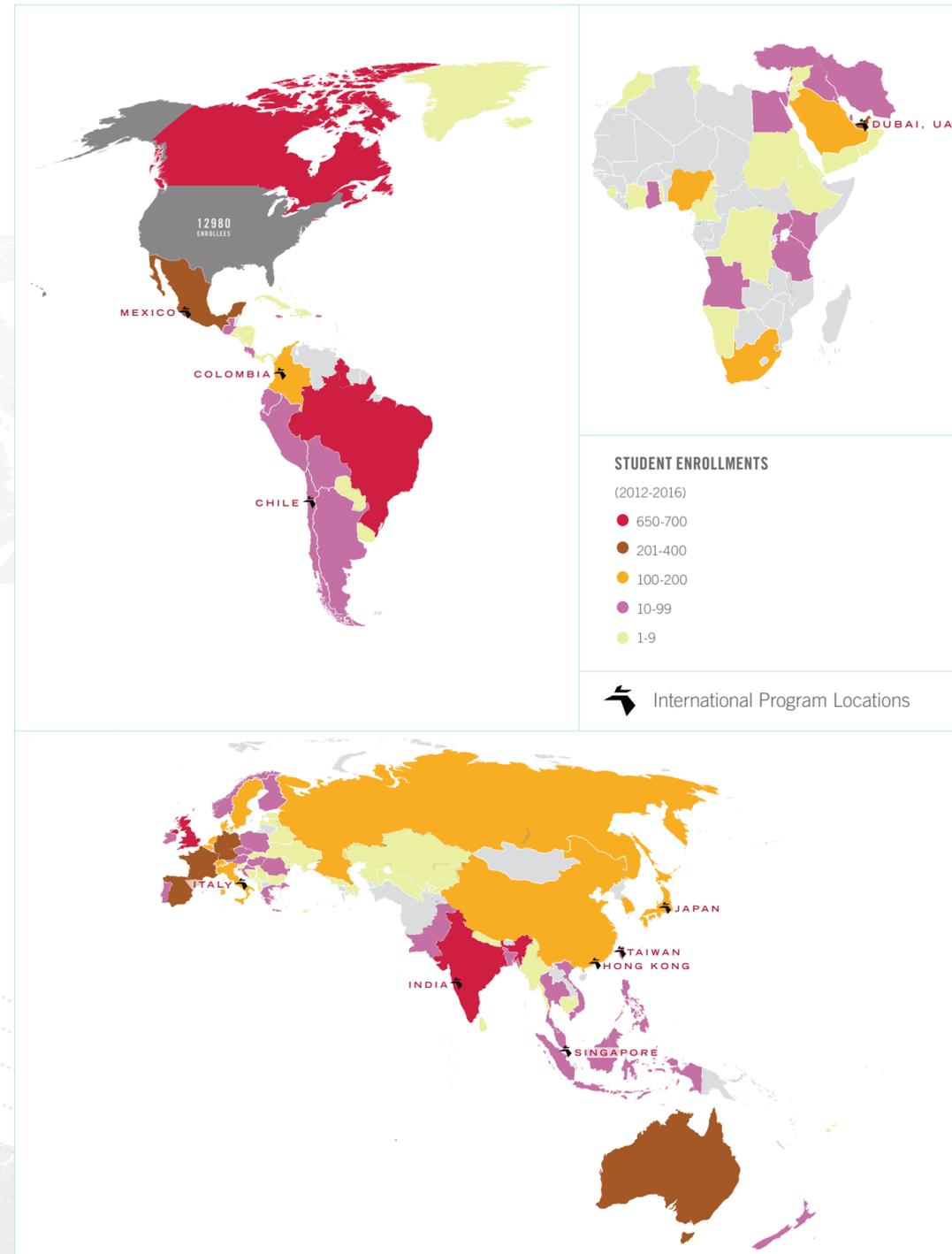
"THROUGH THIS NEW PROFESSIONAL CERTIFICATE, EVERYONE FROM ENTREPRENEURS TO MANAGERS OF LARGE CORPORATIONS WILL BE ABLE TO LEVERAGE MIT'S EXPERTISE..."

"Professionals in every discipline today know that innovation is key to their organization's success, though few have the requisite understanding and expertise to effect innovative changes in an environment that is often change-resistant," said Bhaskar Pant, Executive Director of MIT Professional Education. "Through this new professional certificate, everyone from entrepreneurs to managers of large corporations will be able to leverage MIT's expertise to expand their preparedness in fostering lasting innovation."

To learn about MIT Professional Education Innovation courses and the certificate, visit <http://professional.mit.edu/innovation>



Left: Bhaskar Pant, Executive Director of Professional Education. Right: Chukwudi Awaraka, 2016 Innovation and Technology Certificate Graduate.



MIT Professional Education Spreads its Wings to Hong Kong



The one-day Beyond Smart Cities workshop was held in Hong Kong in conjunction with the opening of MIT's Hong Kong Innovation Node.



MIT Professional Education broke new ground for both location and duration of one of its courses—its first teaching event in Hong Kong and its first-ever event compressed into a single day.

Professor Kent Larson, Director of the MIT Media Lab's Changing Places group, taught Beyond Smart Cities to a group of about 30 in June in Hong Kong. The opportunity arose because of two other MIT-related events held there at the same time: the launch of the MIT Hong Kong Innovation Node, and EmTech Hong Kong, a conference on emerging technologies organized by MIT's Technology Review magazine. The goal of the MIT Hong Kong Innovation Node is for students, faculty, researchers and businesses from both locales to work together on various entrepreneurial and research projects to help students learn how to commercialize their ideas more quickly.

Beyond Smart Cities focuses on new technologies to improve the livability of rapidly growing cities while also emphasizing sustainable practices. "It's probably the course with the most international participation we offer," says Lily Fu, Associate Director of International Marketing for MIT Professional Education. "The topic has garnered a lot of interest in the Middle East and from emerging economies like India, and it's something that a lot of governments are really investing in."

Not surprisingly, the Hong Kong course attendees were primarily from the public sector in Malaysia, Hong Kong and China. The class challenged attendees to come up with ideas on how to achieve MIT President Rafael Reif's goal of significantly reducing CO2 emissions from transportation by MIT staff, faculty and students.

"THE CLASS CHALLENGED ATTENDEES TO COME UP WITH IDEAS ON HOW TO ACHIEVE [THE] GOAL OF SIGNIFICANTLY REDUCING CO2 EMISSIONS FROM TRANSPORTATION BY MIT STAFF, FACULTY, AND STUDENTS."