

**ini**

Carnegie Mellon University  
Information Networking Institute

# The Network



## Barbara Lazarus Professorship

*INI director honored for fostering diversity & inclusion*

# Message from the Director

**T**he value of mentorship cannot be understated. In 2017, we lost two renowned academics and beloved educational leaders who played a vital role in shaping the INI into what it is today.

Dr. Angel Jordan was university provost in 1989 when the Bellcore contract was signed calling for a master's-level program in information networking. He was deeply involved in the early stages of the INI, laying the groundwork for our future success.

In 2002, together with Dr. Christos C. Halkias, former dean of Athens Information Technology (AIT), we launched the first CMU degree to be earned at a global location: the Athens Master of Science in Information Networking (MSIN). His vision and leadership ensured the success of this program and laid the groundwork for CMU's future transnational university partnership programs across the globe.



**Dr. Christos C. Halkias (left), Dena Haritos Tsamitis (center) and Dr. Angel Jordan (right) in Greece during one of many trips together for the Athens MSIN program.**

They have left an indelible mark on my life and on the INI. As I reflect on receiving the Barbara Lazarus Professorship in Information Networking, named in honor of another legendary academic, Dr. Barbara Lazarus, I am inspired to follow in their footsteps.

I look to these three remarkable individuals for inspiration, and I invite you to reflect on your own experiences with mentorship. Make this the year you reach out to your network and find (or become) a mentor within the INI community.

A handwritten signature in black ink, appearing to read 'D. Tsamitis'.

**Dr. Dena Haritos Tsamitis**  
Director of the INI

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### ABOUT THE INI

The Information Networking Institute (INI) at Carnegie Mellon University (CMU) educates and develops engineers through technical, interdisciplinary master's degree programs in information networking, security, and mobility that incorporate business and policy perspectives. Founded in 1989, it is an integral part of the College of Engineering, and a collaboration of the School of Computer Science, the Tepper School of Business and the H. John Heinz III College. With an advanced, specialized curriculum combining computer science, electrical and computer engineering, software engineering, and information systems, the INI's programs uniquely position graduates for next-generation careers at the pulse of the tech industry.

### Interdisciplinary Master's Programs

MS in Information Networking (**MSIN**)

MS in Information Security (**MSIS**)

MS in Information Technology (**MSIT**)

Mobility (**MSIT-MOB**)

Information Security (**MSIT-IS**)

### CONNECT WITH US

 The Information Networking Institute

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 @inicmu

[cmu.edu/ini](http://cmu.edu/ini)

Writer & Designer: Jessica Corry  
Assistant Director of Marketing and Communications






INI director Dena Haritos Tsamitis with INI alumni.

# INI DIRECTOR RECEIVES Barbara Lazarus Professorship

Dena Haritos Tsamitis was honored at a reception on April 20, 2017 hosted by the College of Engineering Dean James H. Garrett Jr., with President Farnam Jahanian, university leadership, staff, faculty, students, alumni and family in attendance.

 President Farnam Jahanian joined in the celebration and remarked on the important efforts underway at the university to build an inclusive and diverse culture.



**D**ena Haritos Tsamitis, director of the Information Networking Institute (INI), is the first recipient of the Barbara Lazarus Professorship in Information Networking.

*“One of CMU’s greatest strengths is the caliber of our people,” said Dean James H. Garrett, Jr. “It is my pleasure to celebrate the achievements of our friend and colleague Dena as she receives this incredible honor named after another legendary CMU woman.”*

## Honoring the Legacy of Barbara Lazarus

Carnegie Mellon created the professorship to celebrate the legacy of Barbara Lazarus, associate provost for academic affairs, teacher, scholar and beloved member of the university community from 1985 to 2003. Her husband, Marvin Sirbu, the INI’s founder and a profes-

sor of engineering and public policy, attended the reception with the Sirbu and Lazarus families.

“When Barbara and I came to Carnegie Mellon in 1985, she already had a reputation for her work encouraging women to consider non-traditional occupations,” said Sirbu.

He sees Barbara’s commitment to promoting equality and inclusion reflected in Haritos Tsamitis, who has over a decade of work fostering diversity at the INI while nurturing the lives and careers of many students along the way.

This is the second time Haritos Tsamitis has earned a recognition honoring her legacy. In 2012, she received the university’s Barbara Lazarus Award for Graduate Student and Junior Faculty Mentoring for her work with women and underrepresented minorities and her commitment to creating a culture that supports all.

## An Inspiration for All

Joyce Brocaglia, CEO of Alta Associates and founder of the Executive Women's Forum (EWF), praised Haritos Tsamitis for her dedication to students and passion for inspiring women. In 2007, Brocaglia and Haritos Tsamitis created a partnership that offers an annual EWF INI Fellowship for one remarkable young woman to study information security.

"For INI students, Dena is their lifeline, their person, the one they can turn to celebrate their successes, discuss challenges, grieve over losses and look to for guidance," said Brocaglia. Haritos Tsamitis' daughter Eleni O'Brien echoed this sentiment and shared her admiration for her mother's journey to becoming director of the INI.

Inspirational is a word that came up in each speaker's remarks describing Haritos Tsamitis. Within two weeks of the celebration, she became a source of inspiration for someone close to home with the birth of her first granddaughter.

"I look forward to raising my daughter with the values and virtues that my mom has instilled in me in the hopes that she will be inspired to carry the torch forward," said O'Brien.



### The celebration continued with two special events during Spring Carnival:

- 1 "Valerie Plame: An Ex-CIA Operative's Take on Cyber Warfare."
- 2 "Why Culture Matters: Expert Panel on Inclusion in STEM," featuring INI alumnus Michael Bruce (MS06) as moderator.



*"Barbara Lazarus was an early champion of the belief that culture matters.*

*I am inspired by her example and incredibly honored to receive this professorship in her name," said Haritos Tsamitis.*

*Dean Garrett with Haritos Tsamitis.*



# BARBARA LAZARUS

*Lifelong commitment to diversity and inclusion.*

A nationally and internationally known scholar and activist, Barbara Lazarus worked tirelessly for the equity of women in the workplace, and the well-being and flourishing of graduate students and junior faculty at the university.

Barbara joined the Carnegie Mellon community as associate dean in the School of Urban and Public Affairs (now Heinz College) in 1985.

She later served as an associate dean in the Graduate School of

Industrial Administration and eventually became associate provost. Her connection to the INI was through her husband, Marvin Sirbu, the INI's founder and a professor of engineering and public policy.

Winner of Carnegie Mellon's Doherty Prize, Barbara touched the lives of hundreds of students and staff through her efforts to give women and minorities increased access to non-traditional occupations.





*“CTF is a fun way to learn, and continue learning, about computer security. It exposes you to new and exciting challenges in every competition, which means you are always learning about new topics whenever you play,” said INI alumna Erye Hernandez.*

*Hernandez is a member of the Plaid Parliament of Pwning and competes with the hacking team at DefCon.*

# Hacking the Workforce

Combine a fast-growing field with a huge skills gap, and you are left with a big problem. As the demand for cybersecurity professionals continues to outpace the number of qualified candidates, a new solution has emerged: teach kids how to hack.

At Carnegie Mellon University (CMU), INI faculty and students are combatting the negative hacker stereotype and embracing hacking competitions for skill development and outreach to younger generations.

According to INI teaching professor **Martin Carlisle**, Capture the Flag (CTF) competitions are valuable to security experts because they help students develop an adversarial mindset.

*“If you are in sports, you have to understand both offense and defense, even if you are a defender,” he explained. “Computer security is the same. CTFs help us think like attackers, and therefore protect better against them.”*

## Hands-On Learning

Experiential learning is a cornerstone of the INI's programs. In 2017, a team of INI students participated in an independent study that led to a third-place win in the MITRE Embedded CTF.

The semester-long competition required each team to assume the role of defender and attacker on a self-driving car.

Team member **Tiemoko Ballo** (MS28) explains that CTFs force students to develop deeper technical understanding, beyond what is learned in the classroom.

“You might learn about common cryptographic pitfalls in a classroom setting, but after actually exploiting similar flaws on a real device, you'll never make that mistake yourself,” said Ballo.

Other INI students seek out CTF opportunities in their free time, like **Xingyu Jin** (MS28) who travels the globe for CTFs.

“I don't want to miss any opportunities for me to enhance my hacking skills, it's the best way to improve practical security skills,” said Jin.

## Support for picoCTF

Carnegie Mellon CyLab Security and Privacy Institute launched picoCTF in 2013. Since then, nearly 50,000 middle and high school students have played the online security game.

“Back in high school, I got interested in security through competitions just like picoCTF,” said **Carolina Zarate**, who is joining the INI for her integrated master's in security after earning her undergraduate degree from CMU's School of Computer Science. “Now that I'm on the other side developing challenges for picoCTF, I see why it's really important to have competitions for these students.”

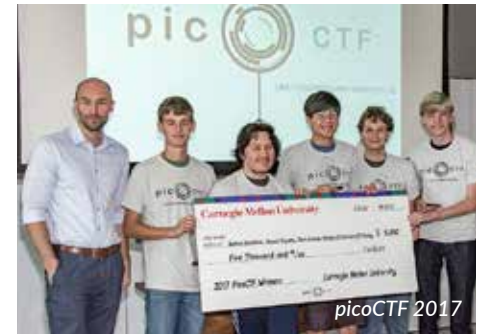
As picoCTF's technical lead, Professor Carlisle's team is developing the computer security challenges that participants must solve in order to win the game.

“I'm hoping these students will continue to pursue computer security and that I'll get a chance to work with some of them here at Carnegie Mellon,” said **Professor Carlisle**.



INI students placed third in the MITRE Embedded CTF in 2017.

INI students and faculty are leading the way by embracing hacking and CTFs as a valuable way to teach ethical hacking skills and promote interest in cybersecurity careers.



## Tour Your Future

In partnership with the Carnegie Science Center, the INI hosted a Tour Your Future cybersecurity career exploration program for middle and high school girls in April 2018.

**Laura Raderman**, INI alumna and ISO policy and compliance coordinator at CMU, participated in the Q&A panel because she believes it is important for young women to see older women in careers that are typically male-dominated.

*“There are so many ways to participate in cybersecurity, not everyone has to be a programmer or understand code,” said Raderman. “You can pick which parts you enjoy and go for those!”*



Q&A Panelists: Professor Lorrie Cranor; INI students Carolina Zarate and Era Vuksani; alumna Laura Raderman; and Professor Limin Jia.



# PRACTICUM

Innovate in the Wild

**L**ast fall, INI bicoastal mobility and information security students collaborated with companies in Silicon Valley to solve complex problems. In the practicum project, these students developed apps powered by blockchain, researched the security of enterprise routers, created airport simulation tools, analyzed electric vehicle and smart home energy data, and much more.

## 2017 SPONSORS

BitClave  
Carnegie Mellon  
Cisco  
Ericsson

Google  
NASA  
Quin  
SLAC



*“From a sponsor’s perspective, the value of the practicum is influence. Sharing the Cisco brand and culture, inspiring the next generation, giving back - all while improving our recruiting pipeline.”*

– **Chris Dorros (MS23)**  
Cisco Practicum Sponsor





# MEET OUR ALUMNI PRACTICUM SPONSORS:

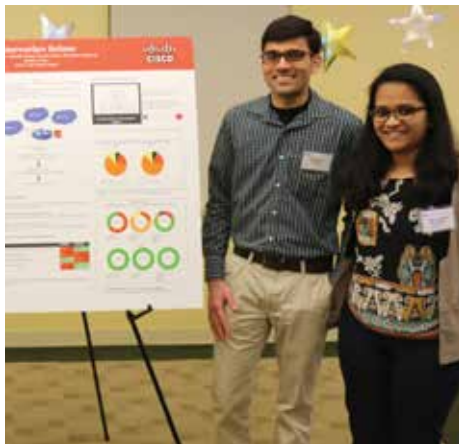


## CHRIS DORROS

### Detecting Web Application Attacks in Real-Time

Chris Dorros (MS23) went from student to sponsor in just five years.

"I have benefited tremendously as a result of my experience at Carnegie Mellon and it was great to be able to give back, on the other side this time," he said.



## LEO BOULTON

### Cyberwarfare Defense

For **Leo Boulton** (MS16), the practicum was a means to obtain outside-in perspective to a challenging problem.

"You can't get such industry-specific insight from a conventional academic setting, so it's great that the practicum afforded us this opportunity," said student **Nitish Balachandran** (MS28).



## YEN-MING CHEN

### Identity on Blockchain

Working alongside alumnus **Yen-Ming Chen** (MS10), Team Quin built a mobile app powered by a blockchain.

"The students were able to bring in their perspectives, expertise and creativity to the product and make it a great team experience," he said.

Interested in sponsoring a project?

**LEARN MORE:** [cmu.edu/ini/practicum](http://cmu.edu/ini/practicum)

# 12 Things That Make Us Happy

1

**FARNAM JAHANIAN**  
*named President of Carnegie Mellon*



The nationally recognized computer scientist, successful entrepreneur, senior public servant and respected leader in higher education has been appointed as the 10<sup>th</sup> president of Carnegie Mellon.



2 **ALUMNA SPEAKS AT Graduation**

**Marachel Knight** (MS07), AT&T technology executive, delivered the keynote speech at the graduation ceremony on Sunday, May 20, 2018.

3

**LAUNCHED A BRAND NEW WEBSITE:**



**[www.cmu.edu/ini](http://www.cmu.edu/ini)**

4

*INI students help build BitClave's*  
**BLOCKCHAIN NETWORK**



In the 2017 practicum, INI students worked side-by-side with BitClave to bring the start-up's blockchain platform to life. "The tasks we gave the team were very much where we're trying to go with the next version of the product," said **Patrick Tague**, BitClave CTO and INI's associate director.

5

**CONFERENCE TALKS**



August 8-9, 2018  
**DIANA INITIATIVE**

Sept 26-28, 2018  
**GRACE HOPPER**

Will you be in Las Vegas in August or Houston in September? Catch **Dena Haritos Tsamitis'** talks on shattering impostor syndrome at The Diana Initiative and Grace Hopper Celebration of Women in Computing.



6

# Hello \$118,000

That's the median salary for the Class of 2017. Top employers are Google, Facebook, Amazon, Adobe, VMware and MITRE.



## 7 Around the World

We talked highlights and lessons learned from INI's global programs in Kobe, Athens, Aveiro and Lisbon at the #50CMU Around the World session featuring Athens MSIN alumna and Pittsburgh Googler **Vicky Theodoreli** (MS21).



## 100% GIVING

Thank you to our INI staff and Alumni Leadership Council – both reached 100% giving in 2017!

## 9 43% WOMEN IN MS30 CLASS

Our fall 2018 incoming class is one of the most diverse in the INI's history.

## 10 INI & EWF Award 10<sup>th</sup> Fellow



**Nishchala Tangirala** (MS29) is the tenth recipient of the full-tuition EWF INI Fellowship.



## 11 OUTREACH: HOW TO STAY SAFE ONLINE

INI director **Dena Haritos Tsamitis** appeared on a live webcast of WQED's television program *iQ: smartparent* on March 9, 2018.

"Today children are starting to go online much younger than they did in the past. Just as we give them guidance about going out and looking both ways before they cross the street, we have to give them similar guidance about what they do online," she said.



## 12 ANDY AWARD NOMINATION

*INI staff recognized for Teamwork & Collaboration.*

Through "Building Our Bridges," cross-functional teams of INI faculty and staff worked together to refine the Silicon Valley industry-sponsored practicum course and to develop a Pittsburgh pilot.

# Meet Our Students

## Rachel

Committed to contributing to the U.S. Air Force's mission of defending our nation from attack in cyberspace.



**Rachel Eaton** (MS29) is a currently-serving Air Force officer and the 2017-18 Director's Fellow. She majored in applied mathematics at the U.S. Air Force Academy (USAFA) and says the cybersecurity field drew her in because the need is so great and there is no one-size-fits-all solution to security issues.

Her connection to INI began with Dr. Martin Carlisle, the INI's director of academic affairs and teaching professor, who previously served as a computer science professor at USAFA.

*"I wanted a degree designed to recognize the human as well as the technical elements of security," said Eaton. "That was really what drew me to the INI."*

Eaton is passionate about contributing to the Air Force's mission of defending our nation from attack in cyberspace.

After earning her master's degree in information security from the INI, Eaton will head to Keesler Air Force Base in Biloxi, MS to complete tech school as a cyberspace operations officer.

"I think there's a huge need for people who understand both the technical and the human sides of security to translate one to the other," she explained. "I'd like to become one of those people."



**Eaton is the 2017 Director's Fellow.**

*Established in 2016, the Director's Fellowship aims to increase the number of underrepresented minorities and women at the INI by removing financial barriers to education.*





# Julio

Following his dream to earn a master's degree in security.

While studying computer science at the University of Puerto Rico, **Julio De La Cruz Natero** (MS29) took a chance on an "Introduction to Cybersecurity" class. It sparked his interest in cybersecurity, leading him to pursue undergraduate research, compete in security competitions and ultimately end up at the INI earning his graduate degree in the field.

"I enjoy cybersecurity, and I know that I would not complain when I have to get up in the morning to go to work," he said.

De La Cruz Natero first discovered the INI's program while in Pittsburgh for Heinz College's IT Lab: Summer Security Intensive (SSI) in 2016.

"This was crucial for my decision because learning about the INI's programs, and how technical they are, was what I always dreamed for my graduate studies," he said.

After graduation, De La Cruz Natero wants to be a penetration tester. At the INI, he hopes to gain the tools to better understand systems, their vulnerabilities and the impact they can have on a company if they get hacked.

"I just want to help protect people by helping companies, or the government, to better secure their systems," he explained.

De La Cruz Natero is a recipient of the Science, Mathematics And Research for Transformation (SMART) Scholarship for Service Program established by the Department of Defense (DoD).

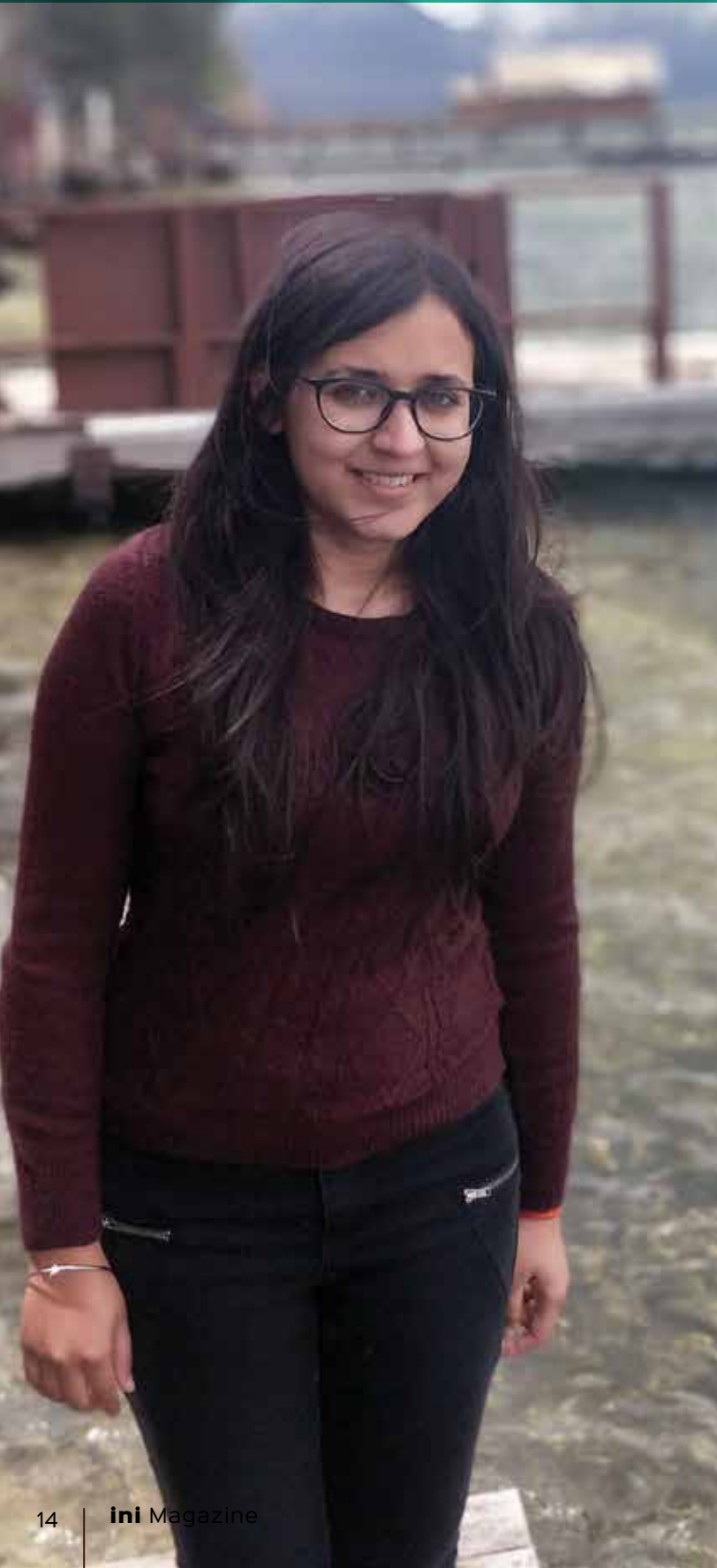
"Receiving this opportunity was huge for me, it was a blessing. Without it, I would not be able to study here," he said.



**De La Cruz Natero is a 2017 DoD SMART Scholar.**

*The DoD SMART program aims to increase the number of civilian scientists and engineers working at DoD laboratories by supporting graduate students in STEM.*

# ANSHU RAJENDRA



*“I wish to be a part of the fourth industrial revolution as an innovator developing solutions at an enterprise scale with global impact.”*

 **Rajendra is an MS28 bicoastal mobility student.**

#### **Why did you study mobility?**

The thing that drew me towards mobile technology is its immense potential to tackle practical problems with maximum efficiency and minimum latency. The world is mobile today and companies everywhere are trying to develop context-aware solutions around their users in close proximity.

#### **What is your dream career?**

My dream career is a researcher in the fast-evolving area of machine learning.

#### **Tell us about your projects at the INI.**

I worked on a research project with the Human-Computer Interaction Institute (HCII) at CMU developing a semantic traffic analyzer to discover the intent of mobile application’s data traffic via machine learning.

In my last semester, I worked on an industry practicum project for NASA to develop a smart scheduler to mitigate flight delays and reduce the probability of human error at large airports. The best part of this practicum was brainstorming with NASA faculty on an intellectually stimulating problem of enormous scale, both in terms of complexity and the practical impact.

#### **Plans after graduation?**

I will join Salesforce’s IoT team, working on developing a scalable event processing engine for sensor data and integrating analytics on top of it to develop intelligent customer solutions, which resonates with my interest in developing machine learning solutions for user data on an enterprise scale.





# How I Got Here

Alex Fulton sees a universal lack of understanding about what cybersecurity is and he wants to help bridge that gap.

## Background

I got my undergraduate degree from the U.S. Air Force Academy in computer science and have interned more on the software development side, so I'm certainly at home with the slightly higher-level coding side of things.

## Cyber Competitor

In my free time, I competed with the Cyber Competition Team, which led me deeper into the underlying systems than a standard computer science degree. Now I'm working with Professor Martin Carlisle to develop picoCTF problems.

## Technically Minded

The technical classes that are available through the INI and CMU are unparalleled... I am excited by the opportunity to try and get the whole picture and take advantage of the flexibility offered by classes from different colleges and disciplines.

*"I chose the INI because I saw it as a great opportunity to get exposure to a breadth that I didn't see anywhere else."*



Fulton is the 2017 Presidential Fellow and an MS29 security student.

*The Presidential Fellowship provides financial support to recruit and retain outstanding graduate students to ensure Carnegie Mellon remains a world leader in education and research.*

# Inside the INI

## GREGORY KESDEN

**Back in plaid as the new INI teaching professor after a few years away.**

Greg Kesden likes building things. He believes the ambition of computer scientists and software engineers to make the world a better place is boundless and that's why he is thrilled to be back at Carnegie Mellon teaching those future changemakers.



Gregory Kesden joined the INI as an associate teaching professor in 2017. Previously, he spent 16 years on the faculty of CMU's School of Computer Science (SCS) and served as the director of educational computing for SCS and the associate director of the Master of Science in Computer Science program.

After two years at the University of California San Diego, Professor Kesden returned to CMU. He specializes in software systems, including distributed systems, networks, cloud computing, and operating systems, as well as certain areas within software engineering and forensic computer science.

### **Why he's excited to be back at Carnegie Mellon:**

➤ "The people. 'My heart is in the work' may be our motto – but it certainly isn't cliché. It is amazing to be back and part of a community with so much spirit and drive."

### **His approach to being a teaching professor:**

➤ "I get to spend my days with the best, brightest and most interesting people from all across the globe. Life doesn't get better than that! My advice to students is to immerse yourself in what you do and do it with passion."

## Faculty & Staff Updates

INI teaching professor **Martin Carlisle** gave a keynote speech – "Challenges and Opportunities in the Internet of Things" – at the IEEE CCWC Conference in Las Vegas, NV, on January 8, 2018.

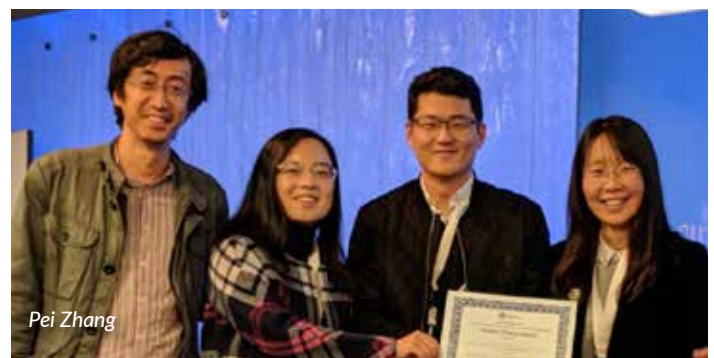
**Pei Zhang** earned the "Test of Time Award" at the 15<sup>th</sup> ACM Conference on Embedded Networked Sensor Systems (SenSys 2017) for his pioneering work in mobile sensor networks.

INI professors **Pei Zhang** and **Patrick Tague** received the audience choice award for "SenseTribute: Smart Home Occupant Identification via Fusion Across

On-Object Sensing Devices" at ACM BuildSys.

**Lorrie Cranor**, the FORE Systems Professor of Computer Science and of Engineering and Public Policy, received the FORE Systems Professorship on December 15, 2017.

**Dena Haritos Tsamitis** was honored with an award from the Executive Women's Forum (EWF) on October 25, 2017 recognizing her leadership and commitment to increasing diversity in the field of information security through the decade-long fellows initiative: EWF INI Fellowship.



Pei Zhang



Lorrie Cranor



Dena Haritos Tsamitis



# Q&A

## with Professor Patrick Tague

*What's the most interesting thing you're working on right now?*

One of our largest research projects aims to provide security guarantees using contextual properties rather than identity properties. This is particularly relevant for Internet of Things and Cyber-Physical Systems applications, such as smart homes, connected vehicles and smart cities.

*What do you like most about CMU Silicon Valley?*

The Silicon Valley culture and the wealth of opportunity to connect and work with brilliant and innovative people from industry and academia. The "fail fast, fail often" culture leads to so many interesting ideas and new technologies, and I believe there's

a great place for that mindset in parts of graduate education.


*Do you have any hobbies?*

I have a lot of hobbies (maybe too many), as I strongly believe in the importance and value of work-life balance. A few of my favorite things to do outside of CMU are woodworking (and general home improvement, now that I'm a homeowner), hiking/backpacking, going on road-trips and baking.

*What is your favorite part of being a professor?*

The flexibility to create new research projects together with students and colleagues and the ability to incorporate aspects of my research into my graduate courses.



 Patrick Tague is the INI's associate director and an associate research professor for INI and ECE at CMU Silicon Valley.

He's pictured here in the Easter Creek area in Gates of the Arctic National Park.

## New Faces at the INI



**Aleecia M. McDonald, PhD**

*Assistant Professor of the Practice, CMU Silicon Valley*

Professor McDonald is no stranger to Carnegie Mellon, with four degrees from three different CMU colleges. Her research area is online privacy but she cannot keep it a secret that she is thrilled to be teaching practicum starting this fall.



**Jayshree Ranka**

*Senior Director of Strategic Initiatives*

With over 25 years in engineering and business development, Jayshree is an expert at managing projects and initiatives, identifying and pursuing strategic business opportunities and establishing and maintaining partnerships to support diverse organizations.

# Alumni News



## INI Alumni Leadership Council

The Alumni Leadership Council (ALC) was formed in 2009 as a group of valued advisors and passionate advocates seeking to engage and strengthen the INI alumni network and help the INI achieve its strategic goals,

### ***A Message from the ALC Chair, John Droggitis***

INI alumni are all around the world, 2,000+ and growing. The ALC helps foster communication and engagement among alumni, and between alumni and students.

As incoming council chair for 2018, I am extremely excited to find creative ways to harness the energy and creativity in this unique group. If you would like to be a member of something great, learn more about us here: [cmu.edu/ini/alumni/alc.html](http://cmu.edu/ini/alumni/alc.html).

### **Call for participation!**

We're creating an INI diversity committee and seeking input from alumni of all backgrounds.

If you're interested contact,  
**Dena Haritos Tsamitis**  
[dena@cmu.edu](mailto:dena@cmu.edu)

### Meet Our Members

*John Droggitis, Chair*  
1991, MSIN, BNY MELLON

*Yen-Ming Chen*  
1999, MSIN, MICROSOFT

*Diwakar Goel*  
2010, MSIT-MOB, AMAZON

*Hana Habib*  
2014, MSIT-IS, CMU PHD STUDENT

*Vic Kapur*  
2001, MSIN, EARLY-STAGE INVESTOR

*Marachel Knight*  
1996, MSIN, AT&T

*Patrick Lanigan*  
2006, MSISTM, NREC

*Eric Pfefferle*  
1990, MSIN, PROOFPPOINT, INC

*Tyelisa Shields*  
2010, MSIT-IS, APPLE

*Roseanne Silva*  
1991, MSIN, PNC

*John Studarus*  
1996, MSIN, JHL CONSULTING

*Evan Wright*  
2008, MSIS, ANOMALI

# ROHIT ANTAO

## Transforming IT for the Digital Era

As a Partner at PricewaterhouseCoopers (PwC), **Rohit Antao** (MS16) is on the bleeding edge of helping companies grow in the digital era. Antao co-leads PwC's Digital Transformation Practice, advising clients in the technology, media and telecommunications sectors on optimizing their organizations.

*"What I love most about my job is the privilege to collaborate with some of the brightest digital leaders in the industry to solve some of their most important problems, and to drive change within their organizations. In today's fast-paced world, it requires me to be constantly learning, connecting the dots and challenging the status-quo," said Antao.*

Antao earned his bachelor's in electronics (robotics) from Bombay University, India and his post-graduate diploma in IT from Monash University, Australia before graduating from the INI in 2005 with a master's degree in information security.

At the INI, he says the broad spectrum of courses, from strategic planning to being hands-on with technology, prepared him well to toggle between, and tie, strategy to execution.

"What I cherish the most [about the INI] was meeting friends from a diverse set of backgrounds and cultures that continue to be some of my most trusted confidants even to this day, having the opportunity to work with world-renowned professors and being part of the Carnegie Mellon ecosystem and legacy," he said.

Connect with Rohit on LinkedIn:  
[www.linkedin.com/in/rohitantao/](http://www.linkedin.com/in/rohitantao/)

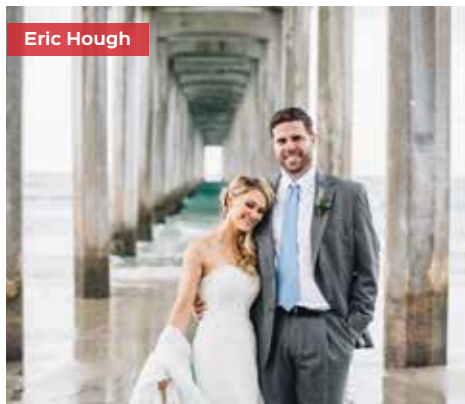


**“THE INI WAS  
WHERE I HONED  
THE WORK ETHIC  
THAT I CARRIED INTO  
MY PROFESSIONAL  
LIFE.”**



# CLASS NOTES

News in the lives of INI alumni around the world.



## MARRIAGES

**Eric Hough**, MS16, married Melissa Matis on 3/4/17.

**Anish Parikh**, MS25, married Prashana Desai (CIT alumna).



**Chris Dorros** (MS23) and **Astha Singhal** (MS22) married on 2/4/16 in India, and on 6/19/16 in the U.S.

**Roseanne Silva**, MS02, married Michael Tonkin on 3/4/17.



## GENERAL NEWS

**Panagiotis Zikos**, MS13, joined the Board of Directors of OTIS Greece.

**Rich Yueh**, MS21, accepted into inaugural cohort of Doctoral Fellows for the Hawaii International Conference on System Sciences, one of the flagship conferences for the information systems field.



## CAREER MOVE

**Jorge Noyola-Picazzo**, MS09, joined Activision Blizzard as Global Information Security Risk Management Lead.

**Leo Boulton**, MS15, joined ADP as Vice President of Competitive Intelligence.

## JOB PROMOTIONS

**Siddharth Dhar**, MS18, is now Associate Director at Macquarie.

**Aneeket Shah**, MS19, is now Vice President, Investment Banker, at Guggenheim Securities.

Want your news shared?  
Submit your information at  
[bit.ly/INIclassnotes](http://bit.ly/INIclassnotes)



## THE INI'S NEWLYWEDS

The first time Qing Liu saw her future husband, INI student Xiaodu Ding, was her first day at Carnegie Mellon. They met under the "Walking to the Sky" sculpture.

"It was my second day in America. I was nervous and upset about everything," she said. "That smile made my day because it made me believe there are good things in store for me in my new journey at CMU. It turns out there really is: I got him! It's the best thing that had ever happened to me."

The couple took many classes together, and value each other as the perfect teammate. When Ding struggled in his first semester, Liu was his support system. "She makes me feel like I can achieve anything," he said. The couple married in Las Vegas on May 27, 2017.



## LUCA ZOIA (1969-2018)

We were deeply saddened to learn of the sudden passing of Luca Zoia, a 2011 graduate of the bicoastal program. Luca was a cherished member of the INI and CMU community. He will be greatly missed but we will remember fondly his humor and larger than life personality.



## An INI Love Story



Chris and Astha celebrated their marriage with ceremonies in India and California in 2016.

Two weddings,  
one happy couple.

INI alumni **Chris Dorros** (MS23) and **Astha Singhal** (MS22) met during the INI Open House and hit it off. She enjoyed their fun conversation, and he was immediately taken away by her adventurous and jumpy nature.

Fun fact: Astha was a year ahead of Chris, and was his TA at one point. They also worked at the CERT Division, and took many breaks to get frozen yogurt together at Razyzy Fresh.

After Chris moved to the Bay Area for his INI practicum five years ago, they started dating and were married in 2016. They celebrated with two ceremonies: one in Udaipur, India and one in Saratoga, California.

Today, the couple lives in San Francisco, where Chris is an engineering manager at Cisco and Astha is an engineering manager at Netflix.

As for the trend of INI students meeting and falling in love, the couple remarked: "INI is such a tight-knit group of students trying to get through the incredible amount of work and taking breaks together to get their minds off of it. You're bound to make some great friends, and maybe more!"

*"INI is such a tight-knit group of students. You're bound to make some great friends, and maybe more!"*



Fellow INI MS22 alumni **Andrew Santell** (top left) and **Travis Safford** (top middle) with Astha on her wedding day.





# Invest in the INI

The success of the INI is a credit to the strong network of generous donors - alumni, students, parents, faculty, friends and staff - who give back and make a real difference.

In this edition of *The Network*, we spotlighted three INI students whose education at Carnegie Mellon was made possible through the generosity of donors. If you were inspired by these students' commitment to advancing the fields of information networking, security and mobility, then consider making a donation to support the education of future INI students.

Your investment in the INI enables us to attract and enroll the brightest students while enhancing the academic and student experience. Only then can we pioneer the innovative and collaborative initiatives for which the INI and Carnegie Mellon are known.

*"As an international student with a modest upbringing, I realized a transformative benefit from INI that jump-started my career. Now I help continue the INI's mission through giving and as incoming chair of the ALC."*

John Droggitis, MS02  
Managing Director, BNY Mellon

## Investment Opportunities

### *Institute Naming*

- INI Building
- Interview Room
- Project Room
- Interactive Studio Area
- Interactive Teaching Cluster
- DEC@CIC and DEC@Henry

### *Expendable Fellowships*

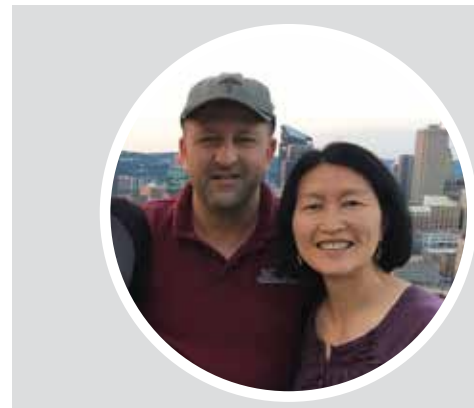
- INI-EWF Fellow Fund
- Graduate Student Fellowship Fund
- INI Strategic Fund
- Named Graduate Legacy Fellowship

## Endowment Opportunities

- Joyce Brocaglia - EWF Endowed Fellowship
- Strategic Initiative Endowment Fund
- Innocent Habiyaemye Memorial Award

## Make a Gift Online

[giving.cmu.edu/INIimg](http://giving.cmu.edu/INIimg)







The Class of 2017, the MS27s, graduated on May 21, 2017, with INI alumnus and Arconic CISO Ryan Shaw as the keynote speaker.

### Why I give to the INI:

“As a fellowship recipient, I am keenly aware of how big a role the generosity of others played in allowing me to be at CMU. Giving back is my way to show how grateful I am.”

Goldy Lim (MS28), PwC, Cybersecurity and Privacy Implementations and Operations

### Why we give to the INI:

“The INI is family to us. The program has given us lifelong friendships. Plus, we met each other at the INI, so it will always have a special meaning for us.”

Sin-Kuen and Keith Hawkins (MS01), IEEE and Bloomberg



#### Questions?

Contact Jennifer Feyrer  
Director of Corporate and Alumni Engagement  
[jfeyrer@cmu.edu](mailto:jfeyrer@cmu.edu) | 412-268-9292

## 5 Things Every INI Alum Should Do

1. Connect on social media:



INI Alumni



[bit.ly/linkedinINI](https://bit.ly/linkedinINI)

2. Update your contact info.

Submit updates to the CMU Alumni Association and explore the Online Directory:



[cmu.edu/alumni](https://cmu.edu/alumni)

3. Submit an INI Class Note.

Share your news with us to be featured in the next edition of the magazine.



[bit.ly/INIclassnotes](https://bit.ly/INIclassnotes)

4. Invest in the INI.

To those who have made a gift to the INI, thank you. To those who have not yet done so, consider contributing to an INI fund and make a Carnegie Mellon education possible for another student.

5. Recruit at the INI.

Present a tech talk, promote open positions, request resume books or host an on-site visit – we offer a range of recruitment opportunities!

Contact Jessica Zlotcavitch, Associate Director of Career Services, [jbudik@andrew.cmu.edu](mailto:jbudik@andrew.cmu.edu) or 412-268-1289.

# #inigram

Share your INI photos on social media using our hashtag: #inigram!



Caleb de la Cruz Paulino (MS28) worked to make everyone's favorite virtual pinboard faster as a software engineering intern at Pinterest.



"Being adventurous. @inicmu has got my back!" – Prasoon Telang (MS28)



Arconic CISO Ryan Shaw (MS21) spoke at the 2017 INI Diploma Ceremony.



"Away from our families and friends, we have been courageous enough to follow our hearts and pursue our dreams." – Aditi Jannu (MS28) at the Fearless Girl



Simran Gujral (MS28), #inigram caption:

"Trust in yourself, believe that your voice matters, and know that your words are good enough."



Team building was a highlight of the INI's annual staff and faculty retreat.