MIT Industrial Liaison Program Faculty Knowledgebase Report

2019 MIT Startup Workshop: Real-world IoT and edge computing

September 10, 2019 9:00 am - 12:15 pm

8:30am	Coffee and Registration
8:55am	Welcome James Gado Senior Director, Corporate Relations

James Gado

Senior Director, Corporate Relations

James E. Gado manages relations with US, European, and Middle Eastern companies with a focus on developing a broader MIT presence in the MENA region. Gado has oversight responsibility for the MIT Startup Exchange program and managers.

Gado comes to MIT after more than 25 years in the specialty materials and chemical industry. His experience spans the sectors of construction, microelectronics, automotive, and food/beverage packaging all on a global basis. The majority of his career was spent at W.R. Grace & Co., with positions also at American Cyanamid Company and Teradyne, Inc.

Gado has held leadership positions at the director level for mergers and acquisitions, strategic planning, marketing, and research and development management. He has developed new business, both organically and via acquisition, across the globe including the emerging markets of China and India. His domestic investment experience includes collaboration with Grace/Horn Venture Partners.

9:00am

MIT Startup Exchange - How we connect 1700+ MIT startups & corporates
Rebecca Xiong

Program Director, MIT Startup Exchange

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Dr. Rebecca Xiong joined Corporate Relations as Program Director, Startup Exchange in October 2018.

Dr. Xiong comes to Corporate Relations with more than 15 years of experience in the MIT Startup Ecosystem, having co-founded and worked at multiple MIT startups. Most recently, as Co-founder and Chief Scientist at SocMetrics, she leads product management, data science, and machine learning for SocMetric's personalization and marketing campaign products. Before SocMetrics, Xiong co-founded Going.com. Going.com connected people via local events to enhance their offline social life, and through Rebecca's leadership grew to 1M members, tens of millions of monthly pageviews, and finally its acquisition by AOL. Before these two entrepreneurial endeavors, Xiong held positions as Product Marketing Manager (DataPower, acquired by IBM), Senior Program Manager (Performaworks, acquired by Workscape), and Team Lead (Akamai Technologies). She also has research experience at Microsoft, Silicon Graphics, and Xerox Palo Alto Research Center.

Dr. Xiong earned her B.S. in Computer Science at the University of California at Berkeley, and her Ph.D. in Computer Science at the Media Lab at MIT with her thesis "Visualizing Information Spaces to Enhance Social Interaction." She was a National Science Foundation (NSF) Fellowship Recipient. She holds multiple patents and is very involved in the community, as the Lead Organizer of the Cambridge Parent Summit.

9:05am

Real-world IoT: IoT in practice

From implementing mission critical IoT to trailblazing detection-as-service, our industry speaker brings 20+ years of experience in IT to redefine how businesses operate and to reimagine how products and services can be delivered.

With IoT, the line between IT and "the business" has become quite blurry, as it represents the collision and intersection of Information Technology and Operational Technology. This increases the role and value of IT but also magnifies the importance and need for strong IT leadership. Now more than ever, IT leaders face a plethora of opportunities, challenges, solutions, platforms, and partners. Connectivity has become ubiquitous, and there is no shortage of data. Cloud platform providers offer low-risk consumption-based opportunities to accelerate powerful solutions that weren't previously possible. Navigating this landscape can be daunting, so how can your organization more effectively utilize IoT to solve real world problems?

9:25am

Nonintrusive Sensors

Steven Leeb
Professor of Mechanical and Electrical Engineering and Computer Science

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Steven B. Leeb received his doctoral degree from the Massachusetts Institute of Technology in 1993. He has served as a commissioned officer in the USAF reserves, and he has been a member of the M.I.T. faculty in the Department of Electrical Engineering and Computer Science since 1993. He also holds a joint appointment in MIT's Department of Mechanical Engineering. He currently serves as MacVicar Fellow and Professor of Electrical Engineering and Computer Science in the Laboratory for Electromagnetic and Electronic Systems. In his capacity as a Professor at M.I.T, he is concerned with the design, development, and maintenance processes for all kinds of machinery with electrical actuators, sensors, or power electronic drives. A major thrust in his current research is the development of power electronic drives and supplies for servomechanical and industrial applications, including medical drug delivery devices, battery chargers, motion controllers and fluorescent lamp ballasts. Another research interest related to power quality issues and on-line machine diagnostics involves the development of a Nonintrusive Load Monitor (NILM). The NILM determines the operating schedule of the major electrical loads in a commercial or industrial building from measurements made solely at the electrical utility service entry. He is currently working to develop the NILM into a virtually sensorless platform to determine power quality, perform critical load diagnostics, and monitor manufacturing processes and actuator performance on ships, aircraft, automobiles, and satellites. He is the author or co-author of over 200 publications and 20 US Patents in the fields of electromechanics and power electronics.

View full bio

When did it become normal for our personal data to automatically become the property of others? Why have we returned to a "server" model of information exchange for many of our data services, where "someone else" is responsible for data security and service availability? As an alternative, nonintrusive sensors could offer several potential advantages, including central installation with the ability to monitor the aggregate behavior of a collection of devices. The behavior of individual devices could be disaggregated, and the data from these sensors would be inherently collated. This talk will review three different examples of nonintrusive sensors and will examine approaches for deploying and coordinating the operation of these sensors to secure data, minimize the need for communication bandwidth, and ensure the presentation of actionable information for enhancing system operation.

9:45am

Startup Lightning Talks Part I
John Greenfield
Director, Business Development & Partnerships, Everactive

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Everactive

John Greenfield is the Director of Business Development and Partnerships at Everactive. During his time with the company, he has held various leadership roles, including having responsibility for the sales and people operations functions. Prior to Everactive, Greenfield worked in management consulting in Washington, D.C., where he helped Fortune 100 healthcare and technology clients tackle their most challenging problems related to customer acquisition and retention. he received his MBA from the University of Virginia's Darden School in 2016, where he was a William Michael Shermet Scholar, the recipient of the Class of 1986 Peter J. Niehaus Scholarship, and the President of the Entrepreneurship and Venture Capital Club. He earned his BA, magna cum laude, from Colgate University, where he studied economics and political science.

Ashish Yadav
Director of Software, Prescient Devices, Inc.

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Ashish Yadav is the Director of Software at Prescient Devices, Inc. He leads the full-stack software development of Prescient's IoT design automation platform. Yadav is an expert in distributed IoT systems, applications, and various software and hardware technologies. He holds an MS in electrical engineering and computer science from the University of California, Merced.

Cody Falcon
Vice President of Product, Arundo

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Arundo

Cody Falcon has more than 15 years of experience in high-tech solution design, product implementation, and operations. Prior to Arundo, Falcon led product development and global field operations for a leading Big Data Analytics provider. He served 11 years active duty in the U.S. Navy in electronic warfare, satellite communications, and cryptography, including a five-year assignment at the White House as an Advance Lead for two Presidents of the United States.

Ryan Davis
CEO, Secure AI Labs

Startup Lightning Talks Part II
Harrison Bralower
Cofounder & CEO, Abstract Manufacturing
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Harrison Bralower is cofounder and CEO of Abstract Manufacturing (MassChallenge 2018), which helps legacy manufacturing operations discover the hidden factory with non-invasive sensor retrofits and computer vision. He has led development of complex hardware systems in all physical engineering fields, including astronomical camera systems in the MIT Space Systems Lab. Bralower served as entrepreneur-in-residence in 2018 at The Engine, the MIT-backed venture capital firm.

Elliott Gould
Director of Data Operations & Analytics, LineVision
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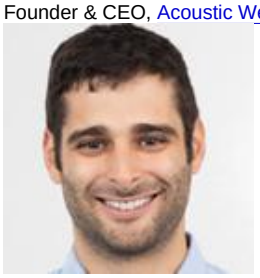
Director of Data Operations & Analytics
LineVision

Elliott Gould manages the end-to-end data pipeline for LineVision, ensuring accurate, reliable data and powerful analytics for their clients. He holds a MS in engineering management from Tufts University and previously worked at EnerNOC, Genscape, and IBM.

Sébastien Mannai
Founder & CEO, Acoustic Wells



Sébastien Mannai
Founder & CEO
Acoustic Wells

Dr. Sébastien Mannai is the inventor of the technology behind Acoustic Wells. He is a postdoctoral associate in the field of AI and holds a PhD in aerospace from MIT, an MS from Ecole Centrale Paris, and an MS in quantum physics from University of Paris XI. Mannai has worked at Siemens and Schlumberger and is now focusing on industrial IoT and automation.

Industry applications
- **Taktile:** *Immediate manufacturing improvement without disruptive digital transformation*
- **fringeAI:** *Turnkey, intelligent inspection solution for factories*
- **IIoT-OXYS:** *End-to-end IoT solution, from sensors to analytics*
- **LineVision:** *Sensor & analytics for monitoring utility transmission*
- **Acoustic Wells:** *Oil & gas well automation*

10:20am Networking Break

10:50am

Corporate Investor Talk
Bimal Mehta
VP, Startups Partner, Global Innovation, Schneider Electric Venture

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VP, Startups Partner, Global Innovation
Schneider Electric Venture

Bimal Mehta currently leads Corporate Innovation at Schneider Electric, driving and incubating both internal and external innovation. Mehta builds diverse, high performance teams and helps them develop a strategy and scale their business models. He also connects corporate partners with leading startups to enable co-innovation opportunities. Mehta has a proven ability to lead, innovate, and launch products that outperform the competition, win markets, and drive revenue.

11:10am

Startup Journey
Mike Phillips
CEO and Co-founder, Sense

11:25am

Panel Discussion
John Carrier
Senior Lecturer, System Dynamics, MIT Sloan School of Management

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Senior Lecturer, System Dynamics
MIT Sloan School of Management

John Carrier is a senior lecturer in the System Dynamics Group at the MIT Sloan School of Management and Managing Director of 532 Partners. His expertise is in shaping the dynamics of operating environments to improve productivity, quality, safety, and morale simultaneously. He has helped companies save hundreds of millions of dollars by helping them find and eradicate the hidden systems lurking inside every operation. His current focus is to help prepare companies to compete in the new environment of Industry 4.0.

He has educated over five hundred top-level leaders in the MIT Sloan Executive Education program in Oil & Gas, petrochemicals, mining, and healthcare. When not teaching, he spends most of his time in the operating environment, working directly with the front line to deliver measurable results in less than sixty days.

Dr. Carrier holds a B.S. in Chemical Engineering from the University of Michigan, a Ph.D. in Control Systems from MIT, and an MBA from the Harvard Business School.

View full bio
Muhammad Asif
Manufacturing Industry Subject Matter Expert, Hitachi America Ltd.

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Hitachi America Ltd.

Muhammad Asif joined Hitachi's Global Social Innovation Business in January 2018 as a Manufacturing Industry SME, supporting Industry 4.0 initiatives. He was previously VP of Operations & Quality at Mark IV Automotive in Rochester Hills, Michigan responsible for ten tier-1 manufacturing sites. Asif has served as plant manager with a number of global tier-1 automotive and industrial product suppliers, built greenfield sites in Australia and Canada, and reengineered numerous brownfield sites with TPS philosophy. As a Director of Automotive Product Solutions at J.D. Power & Associates, Asif led a major Chinese automotive manufacturer in developing best practices with shop floor quality and production processes for global completeness.

Earlier in his career, he was a manufacturing engineer at Nissan, implementing complex engineering/manufacturing process and production control systems, managing new vehicle launches, and overseeing production control functions at vehicle manufacturing plants in Australia. In recent years, Asif has worked as a turnaround specialist, engaged in supporting challenged organizations with reengineering the shop floor and business processes to streamline for productivity and profitability with diverse clients, including automotive, petrochemical, nuclear power plants, food, and agricultural industries. He has extensive global business, technology, and cultural experience in Asia, Europe, and North America.

For four decades, Asif has remained a passionate lean and continuous improvement practitioner. He holds a BS in manufacturing engineering from Swinburn University of Technology in Australia.

Will Koffel
Head of Startup Ecosystem, Google Cloud

12:15pm	Networking