

STEX25 Accelerator Startups

July 21, 2020 - July 23, 2020

Tuesday, July 21: Robotics, IIoT, Advanced Manufacturing, and AI

11:00

Welcome, STEX25
Ariadna Rodenstein

Program Manager, [MIT Startup Exchange](#)



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Ariadna Rodenstein is a Program Manager at MIT Startup Exchange. She joined MIT Corporate Relations as an Events Leader in September 2019 and is responsible for designing and executing startup events, including content development, coaching and hosting, and logistics. Ms. Rodenstein works closely with the Industrial Liaison Program (ILP) in promoting collaboration and partnerships between MIT-connected startups and industry, as well as with other areas around the MIT innovation ecosystem and beyond.

Prior to working for MIT Corporate Relations, she worked for over a decade at Credit Suisse Group in New York and London, in a few different roles in event management and as Director of Client Strategy. Ms. Rodenstein has combined her experience in the private sector with work at non-profits as a Consultant and Development Director at New York Immigration Coalition, Immigrant Defense Project, and Americas Society/Council of the Americas. She also served as an Officer on the Board of Directors of the Riverside Clay Tennis Association in New York for several years. Additionally, she earned her B.A. in Political Science and Communications from New York University, with coursework at the Instituto Tecnológico y de Estudios Superiores de Monterrey in Mexico City, and her M.A. in Sociology from the City University of New York.



11:05

Startup Lightning Talks with Q&A

Abhijit Ghosh

VP of Engineering, [Akasha Imaging](#)



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VP of Engineering
[Akasha Imaging](#)

Abhijit Ghosh is the VP of Engineering at Akasha Imaging. Prior to joining Akasha Imaging, Abhijit led the engineering team at autonomous vehicle perception startup Deepscale, which was acquired by Tesla. Abhijit's background is in Deep Learning, High Performance Computing, and Distributed Systems. Abhijit has a Ph.D. in Computer Science from University of California, Berkeley.



Andy Wang
Founder & CEO, [Prescient Devices](#)



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Founder & CEO
[Prescient Devices](#)

Andy Wang is the founder and CEO of Prescient Devices, Inc., an MIT startup pioneering design automation technology for distributed and fragmented IoT systems. Wang was the co-founder and CTO of GTI IoT Technology, a leading supplier of low-power wireless IoT solutions, where he helped grow GTI from a two-person founding team to a profitable company with 150+ employees. Prior to GTI, he was a senior design engineer at Analog Devices, where he developed high-speed integrated circuits and systems. Wang graduated with a PhD degree from MIT.



Boaz Efroni Rotman
VP of Marketing & Business Development, [Lightelligence](#)



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VP of Marketing & Business Development
[Lightelligence](#)

Boaz Efroni Rotman is the VP of Marketing and Business Development at Lightelligence. He is a creative and forward-thinking professional with over 24 years of hands-on global technology in business development, product management, strategic marketing, and sales. Boaz oversaw operations to manage and lead over 20 semiconductor SoCs and products into Consumer, IoT, Cellular, Mobile, Media, Telecom, and Automotive markets through strong technical background and aggressive and innovative go-to-market strategies. Boaz holds a BS in electrical engineering from the Ben-Gurion University in Israel and an MBA from Netanya Academic College in Israel.



Tom Baran
Cofounder & CEO, [Lumii](#)



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Cofounder & CEO
[Lumii](#)

Tom Baran is Co-founder and CEO of Lumii, a Boston-based company focused on delivering deeply-engaging hologram-like 3D experiences to the world of printed media. Lumii was co-founded in 2015 along with MIT Ph.D.s Matt Hirsch and Daniel Leithinger, with the goal of using sophisticated algorithms and signal processing to empower designers to deliver hologram-like 3D experiences, using readily-available printers, media and ink. Tom's Ph.D. and M.S. degrees are from MIT and his S.B. degree is from Tufts University. Tom is also co-author of the widely-used MIT-based MOOC 6.341x: Discrete-Time Signal Processing, available on edX.org.



[Akasha Imaging](#): *We see what others can't*

- Akasha is developing breakthrough machine vision technology that is highly accurate in locating parts (and features on the parts), works under diverse factory lighting conditions without the need for any special lighting, and works for all types of materials, including challenging ones such as glass, black rubber or shiny metal. Our vision system consists of COTS components coupled with our new optical imaging modality and is capex light, easier to deploy than existing systems and applicable to a variety of tasks, including tasks that were previously beyond automation, enabling full automation in manufacturing

[Prescient Devices](#): *Solving the fragmented IoT challenge*

- Prescient Devices pioneers cutting-edge design automation technology for distributed and fragmented IoT systems. Our platform enables industrial customers to design, manage, and evolve customized IoT/IT/OT systems at scale.

[Lightelligence](#): *Accelerating AI at the speed of light*

- We're building optical chips that empower the next generation of high-performance computing tasks. By processing information with light, our chips offer ultra-high speed, low latency, and low power consumption that has not been possible in traditional electronic architectures.

[Lumii](#): *Holographic embellishments for packaging or security from any printing press*

11:30

Startup-Corporate Collaboration Panel Discussion 1

- Lumii's light field technology revolutionizes the printing industry by providing depth, motion and chromatic effects to numerous printing applications. The company's technology empowers product designers and printing press operators to create and launch highly effective holographic product labels and security features. Most of the printing embellishments and anticounterfeiting features require no expensive extra materials or foils, and no costly press set-up.

11:50



Daniel Theobald
Founder & CEO
[Vecna Robotics](#)

Daniel Theobald is the Founder and Chief Executive Officer of Vecna Robotics. He's been at the forefront of robotics R&D for over 20 years, partnering with DARPA, DoD, NASA, NIH, and USDA among many others to develop robust and agile autonomous systems for real-world applications.

Daniel's deep industry knowledge and practice of continuous innovation has made Vecna Robotics a leading provider of autonomous material handling and workflow optimization solutions. Vecna Robotics offers a fleet of autonomous mobile robots (AMRs) and the Pivotal™ orchestration engine to optimize and orchestrate the movement of goods through industrial settings, including warehouses, distribution centers, and manufacturing facilities.

Theobald is a co-founder and President of MassRobotics and holds a bachelor's and master's degree in Mechanical Engineering from MIT. He has received the Henry Ford II Scholar Award, NSF Fellowships, and a Hertz Fellowship award.



David Wentzloff
Cofounder & Co-CTO, [Everactive](#)



David Wentzloff
Cofounder & Co-CTO
[Everactive](#)

Dr. David Wentzloff founded Everactive, along with Dr. Ben Calhoun and Brendan Richardson, in 2012. The two currently serve as Co-CTOs, sharing overall responsibility for the company's continued technological innovation. Dr. Wentzloff earned his PhD at MIT in 2007 under Prof. Chandrakasan. Since August 2007, Dr. Wentzloff has been with the University of Michigan, Ann Arbor, where he is currently an Assistant Professor of Electrical Engineering and Computer Science. His research interests include ultra-low power RFICs for energy- and volume-constrained applications, clock generation and IC techniques to improve synchronization of sensor networks, wireless body area networks, channel modeling, and all-digital phase-locked loops for precision frequency generation. Dr. Wentzloff has numerous publications in the areas of ultra-low-power circuits and body sensor nodes.



John Wass
CEO, [Profit Isle](#)



John Wass
CEO
[Profit Isle](#)

John Wass is CEO of Profit Isle. He is the former Senior Vice President of Staples and CEO of WaveMark, an RFID company recently acquired by Cardinal Health. Wass was also a senior executive during Staples' growth from three stores to over 1,000 nationwide. He is a graduate of Princeton and MIT.



Jason Barton
Chief Commercial Officer, [Realtime Robotics](#)



Jason Barton
Chief Commercial Officer
[Realtime Robotics](#)

Jason Barton is Chief Commercial Officer at Realtime Robotics, and has 20+ years of sales and marketing leadership experience selling high-tech disruptive products and solutions into global markets. At Rethink Robotics, he helped create the collaborative robot category building a sales and support network that served manufacturing plants across the globe. Prior to this he has served as COO of EnergyHub, a leader in connected home energy management solutions. He also ran sales and marketing at Segway, and for Palm's US Enterprise business. Jason earned a BA Honors Degree from the University of Wales in the UK.



[Vecna Robotics](#): *Autonomous mobile robots for bulk materials handling*

- Vecna Robotics delivers autonomous material handling solutions via self-driving vehicles for the distribution, warehousing, and manufacturing sectors. Vecna Robotics' Pivotal™ technology safely transforms OEM material handling equipment into fully-autonomous self-driving vehicles, orchestrates tasks across resources for optimized workflow efficiency, and employs the power of AI to create a machine learning feedback loop for systemwide continuous improvement. By leveraging the best strengths of autonomous robots, intelligent AI systems, real-time data, human creativity, and 24/7 proactive monitoring, Vecna Robotics' solutions turn rigid workflows into dynamic and flexible operations.

[Everactive](#): *Self-powered insights for the physical world*

- Everactive combines batteryless wireless sensors and cloud analytics to deliver end-to-end Industrial IoT solutions. The company's technology allows for low-cost, long-lived, and maintenance-free instrumentation of industrial assets that have previously been too expensive or dangerous to connect. Everactive's first products are designed to monitor steam systems and a range of rotating equipment, such as motors, pumps, fans, and compressors.

[Profit Isle](#): *Uncover hidden profits that are invisible to company*

- Profit Isle is a cloud-based software solution that incorporates AI and advanced analytics to see below the averages of your P&L into profit peaks and drains all the way down to the invoice detail of your business. This critical new lens to profitability allows you to adapt faster to changing markets, focus your resources where you can produce the most profits, and implement profit-driven processes throughout your company. Leading companies have already secured 10-30% profit improvement in the first 12 months with sustained profit increases thereafter.

[Realtime Robotics](#): *Motion planning for autonomous robots & vehicles*

- Realtime Robotics is enabling robotics and automation to reach its full potential through a combination of vastly improved basic sensorimotor capabilities, ease of programming and design, and safe human-robot collaboration.

12:15 **Startup-Corporate Collaboration Panel Discussion 2**

12:35 **Wrap Up**

Thursday, July 23: Sustainability, Energy, Advanced Materials, and Life Science

11:00

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Startup Lightning Talks with Q&A

Eli Paster
CEO, [PolyJoule](#)



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CEO
[PolyJoule](#)

Eli Paster is Chief Executive Officer of PolyJoule, an energy storage startup that is currently working with two global utilities to pilot 1MW of PolyJoule's non-lithium energy storage over the next 24 months. At PolyJoule, Dr. Paster oversees research efforts, reconciles R&D schedules with commercialization targets, and provides foundational information for business and manufacturing strategy. He holds an S.M. and PhD from MIT, in the fields of electrochemistry, high-throughput instrumentation, and entrepreneurship. He is the author of several US and international patents, and has published monographs in chemistry, engineering, biology, literature, and advocacy.



Syzygy: First photocatalytic reactor for low-cost, on-demand hydrogen

Trevor Best
CEO, [Syzygy Plasmonics](#)



Trevor Best
CEO
[Syzygy Plasmonics](#)

Mr. Best is the founding CEO of Syzygy Plasmonics. Before starting Syzygy, he worked for Baker Hughes. There he steadily progressed into management, where he gained expertise in quality assurance (Six Sigma Black Belt), regulatory compliance, technology development management, project and personnel management, supply chain management, internal/external communications, and business process architecture. With Syzygy he has successfully raised two funding rounds and is currently focusing on bringing this revolutionary photochemical technology to market.



Sweetwater Energy:
[Sweetwater Energy](#)

Amogy:
[Amogy](#)

[PolyJoule](#): *Building high-power, low-cost, organic batteries for the grid*

- PolyJoule has developed a non-lithium, non-cobalt battery that is purposely built for renewables and the electricity grid, with a fundamental focus on widespread accessibility: lower cost, higher power, safer molecular design through brilliant chemistry, longer lifetime, and net-zero environmental impact.

[Syzygy](#): *Illuminating the future of the hydrogen industry*

- Syzygy Plasmonics is developing a new type of photochemical reactor that is powered by high-efficiency LED's to electrify the production of commodity chemicals. Our platform technology is broadly applicable to many chemicals and will help the chemical manufacturing industry reduce its reliance on fossil fuel energy. Our first go to market reactions are focused on hydrogen production and enable a dramatic reduction in both cost and emissions for hydrogen consumers such as fuel cell vehicles for logistics.

[Uncountable](#): *AI Platform for Material Development*

- Uncountable is an AI company that helps the world's largest material and chemical manufacturers innovate faster. Our customers leverage the Uncountable platform to store, visualize, and analyze data from past experiments - enabling new levels of collaboration and predictive power. Uncountable helps deliver a 2-3x speed up over the typical R&D process, enabling customers to get products to market faster.

[Stable](#): *Writing the blueprint for intelligent EV fleet charging*

- EVs in rideshare fleets are already drawing up to 23% of the power at public Fast Charging infrastructure today, and their demand is only increasing. Stable's suite of planning and automation tools helps Charge Point Operators (CPOs) scale and deploy to the growing needs of urban EV fleets by algorithmically balancing the utilization needs of fleets with the utilization needs of CPOs.

Startup Lightning Talks with Q&A

Michael Schrader
CEO, [Vaxess](#)



Michael Schrader
CEO
[Vaxess](#)

Michael Schrader is the CEO of Vaxess, an NIH and VC-backed company bringing healthcare out of the clinic and into patients' lives with the MIMIX Smart Release platform. The MIMIX patch combines ease of administration with dramatic efficacy enhancements enabled by the "mimicry" of natural infections. The company has a pipeline of immunotherapies and vaccines, both in-house as well as through partnerships. Prior to Vaxess, Michael spent time at Google and Honda where he helped bring a range of products to market and earned fifteen patents. Michael received his B.S. in Mechanical Engineering from Purdue University and his M.B.A. from Harvard.



Paulo Garcia
Cofounder & CEO, [Kytopen](#)



Paulo Garcia
Cofounder & CEO
[Kytopen](#)

Paulo Garcia is a Biomedical Engineer that co-invented the *Flowfect*[™] technology to realize high-throughput, automated, and scalable non-viral cell engineering. His professional career has been centered around impacting the life sciences and healthcare via engineering innovation as demonstrated through 27 peer-reviewed manuscripts, 7 issued US patents, and several more pending patents. There is nothing that motivates Dr. Garcia more than knowing that the ongoing efforts will help patients suffering from devastating diseases worldwide. At Kytopen, we exist to accelerate the translation from the bench to the clinic and ultimate impact patient's lives. Prior to being CEO & Co-Founder at Kytopen, he was a Research Scientist in the Laboratory for Energy and Microsystems Innovation (Prof. Buie's laboratory) in Mechanical Engineering at MIT.



Sweetwater Energy: Green no longer comes at a premium
Jack Baron
President & Cofounder, [Sweetwater Energy](#)



Jack Baron
President & Cofounder
[Sweetwater Energy](#)

Jack Baron co-founded Sweetwater Energy as Chairman and CEO in March of 2009, and now serves as the company's President. Prior to Sweetwater, Mr. Baron served as President of PAETEC Holding Corp., a Fortune 1000 telecommunications company acquired in 2011 by Windstream Corp. (NASDAQ: WIN), one of the largest national telecom carriers. Mr. Baron co-founded PAETEC in 1998 with Arunas Chesonis.

Mr. Baron currently serves on the Board of Directors for Sweetwater Energy and he is Chairman of the Board of Directors for Onestream Network Services. Mr. Baron is an active volunteer with a number of youth groups and schools, including BSA, Greentopia and Habitat for Humanity. Mr. Baron is an active musician in the Rochester, NY area, playing guitar and singing in his rock band, "Don't Know Jack".



Mori: A New Kind of Protection for All Kinds of Foods
Adam Behrens
Cofounder & CEO, [Mori](#)



Adam Behrens
Cofounder & CEO

[Mori](#)

Adam Behrens has spent his career developing and translating technologies in the areas of food, agriculture, healthcare, and nutrition. Previously, he was a postdoctoral associate in the Langer Lab at MIT where he managed several projects focused on improving healthcare and nutrition in the developing world. He was named to the Forbes 30 under 30 list in 2017.

Adam holds a BS in chemical engineering and a PhD in bioengineering from the Kofinas lab at the University of Maryland.



[Vaxess](#): *Unlocking the power of our immune system with MIMIX™*

- Vaxess is developing MIMIX™ smart-release therapies, which are engineered to release at the optimal rate in the skin, the frontline of our body's immune system, to stimulate powerful immune responses that fight diseases ranging from influenza to cancer. Engineered for stability, MIMIX™ therapies do not require refrigeration and can be ordered, shipped, and applied at home. The virtually painless patch is applied with a preloaded applicator and removed after a few minutes; no sharps bin required.

[Kytopen](#): *The future in cell therapy discovery and manufacturing*

- Kytopen is pioneering a novel and non-viral process to engineer human cells for applications in immuno-oncology and genetic disorders. This process can deliver genetic information encoded in mRNA, DNA, and CRISPR to billions of cells per minute while maintaining their therapeutic potential. Kytopen enabled engineered cell products will deliver cost-effective cell therapies for patients around the world.

[Sweetwater Energy](#): *Green no longer comes at a premium*

- Sweetwater Energy has developed a patented, commercial-scale process that promises to significantly reduce global greenhouse gas emissions. We can replace petroleum-based fossil fuels, chemicals and products with low-cost alternatives by breaking down renewable biomass such as wood and crop wastes into high value components for market-ready products. Our unique process also yields the lowest cost nanocellulose and microcrystalline cellulose in the world for broad product applications into markets such as packaging, food, and construction. Sweetwater's process is a breakthrough in efficiency and reliability, delivering cost-competitive products at scale and with feedstock flexibility for the first time in history.

[Mori](#): *A New Kind of Protection for All Kinds of Foods*

Startup-Corporate Collaboration Panel Discussion 2

12:15

- Mori is a technology company focused on innovations in the food, agriculture, and packaging industries. Through an innovative and proprietary process, Mori uses just

12:35

Wrap Up

- salt and water to extract the protein from silk to create an all-natural and edible protective layer that keeps food fresher for longer. The patented technology can be integrated at any time from farm to shelf, allowing food producers, food processors, and retailers to extend shelf lives, reach new markets, and reduce waste.