J-WAFS Food & Water News
August 2017

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J-WAFS and MIT News

Announcing: J-WAFS Grant for Water and Food Projects in India

J-WAFS is pleased to announce the J-WAFS Grant for Water and Food Projects in India, a new funding opportunity for current members of the MIT community interested in addressing a water or food challenge in India. This grant is intended to further work being pursued by individuals as part of their MIT research, innovation and entrepreneurship initiatives, coursework, or related activities, or to support a relevant new activity. 2017-2018 is our inaugural year; up to three grants, totaling $15,000, will be awarded. Interested applicants should read the J-WAFS Water and Food Projects in India call for proposals for instructions and application requirements. The deadline to submit is 5:00 PM EST on September 18th, 2017. Eligible applicants should submit a proposal by email to Andi Sutton, J-WAFS communications and program manager, at arsutton@mit.edu.

Karthish Manthiram Aims to Localize Fertilizer Production in Africa

In Community Jameel's online magazine, Opening Doors, Karthish Manthiram, Warren K. Lewis Career Development Professor in the Department of Chemical Engineering at MIT, was interviewed about his 2017 J-WAFS-funded seed grant project. Here he shares the motivations behind the proposed solar-powered electrochemical device that he and his team are building, one that can convert nitrogen from air and water to produce ammonia for fertilizer. Read more...

Mathias Kolle Engineers Optical Fibers for Algae Production

Opening Doors also includes an interview with MIT’s Mathias Kolle, assistant professor in the Department of Mechanical Engineering. He describes his 2017 J-WAFS seed grant, aimed at improving industrial algae production for use as both food and fuel. He intends to develop a new optical fiber to distribute light and CO₂ more efficiently in algae production tanks and, as a result, reduce the energy required and cost of algae as an alternative food and fuel source. Read more...
New MIT Course on Water Innovations for Developing Countries

This fall, Susan Murcott of MIT’s D-Lab will be joined by MIT alumna and water entrepreneur Kate Cincotta to teach a new class, Water, Sanitation, Hygiene and Environmental Innovations for the Common Good. Featuring weekly hands-on lab activities – such as how to drill a water well, how to test water quality, how to build a slow sand filter, and more – the course will cover both theory and real-world practice related to water/environment innovations in developing countries and underserved communities worldwide. The class is open to MIT graduate (1.474) and undergraduate (EC.715) students.

Join an MIT Course on Sustainability-Oriented Innovation

Are you an MIT graduate student interested in tackling big social and environmental problems with the tools of an entrepreneur? Do you have a business idea that could make the world a better place? Join Sloan School of Management senior lecturer Jason Jay for Sustainability-Oriented Innovation and Entrepreneurship (15.385). Students will be able to use tools learned in class to workshop their own ideas and will study live cases with social entrepreneurs. The class will help students sharpen their problem formulation, value proposition, business and impact models, and funding and hiring pitches. Offered in fall 2017.

J-WAFS Highlight

MIT Water Club gears up for fall ‘17

Interested in the next generation of water-related research? Head for the MIT Water Club. Here you’ll find motivated, creative, and solutions-oriented students who are passionate about how research, innovation, and policy can unite to solve pressing water sector challenges. The group puts on large-scale annual events, manages an innovation prize, and shares opportunities and resources across and beyond MIT, all while pursuing their own research in water. Their efforts result in thought-provoking and boundary-pushing ideas, and intellectual exchange among their members, other MIT students, faculty, and water sector leaders from across the globe.

The Water Club has announced its 2017-2018 leadership team, co-presidents Quantum Wei (PhD candidate in the Department of Mechanical Engineering) and Gualtiero Jaeger (PhD candidate in the MIT-Woods Hole Oceanographic Institution Joint Program). Quantum, Gualtiero, and others are already laying the groundwork for the upcoming year with three signature events: the头ining MIT Water Summit (November 6-7th), the MIT Water Innovation Prize (with a kick-off event on October 23rd), and MIT Water Night (March 22nd). In addition, the club organizes regular lectures by invited guests and local researchers, and is increasing its public outreach to schools and the local community.
About the Water Club Co-Presidents

The MIT Water Innovation Prize is a multi-stage business plan competition in which student entrepreneurial teams compete for $30,000 in prize money. After pitching initial ideas and forming teams at the kick-off dinner in October, competitors will participate in two rounds of judging, with finalists receiving advice from expert mentors in the water sector. Teams will deliver their final pitches in May for a shot at $30,000 in start-up prize money.

The re-imagined MIT Water Night is a chance for water researchers to connect with the general public as well as the science community. Scheduled on World Water Day (March 22, 2018), this annual research exhibition is becoming family-friendly, featuring water-related research and innovation from local universities as well as water-related demonstrations, art, and activities.

Wei and Jaeger are excited to develop on the past successes of these events as they plan to expand the educational outreach initiatives of the Water Club. Among their local collaborators are the Waterworks Museum and MIT Seagrant, both active in water education in the region. The Water Club will be facilitating engagement in these organizations by MIT students, and will also continue with the informal science outreach initiatives and high school student mentorship program that club members have participated in past years.

Waterworks Museum, Chestnut Hill, MA

To promote careers in the water sector, Wei and Jaeger are working with individuals and companies to showcase the variety of opportunities and diverse paths that can lead one to rewarding work outside of academia connected to water. This will be the focus of a new water-careers panel at the MIT Water Summit, which will feature a career fair showcasing water-related jobs.

Lastly, the whole leadership team plans to connect the club’s expanding network of alumni more closely with current club students and events. With an alumni group that extends from the club’s founding in 2012, the opportunities to share resources and make connections among people and ideas is exciting.

Joining this year’s leadership team are co-vice presidents Alexandre Tuel (PhD candidate in the Department of Civil and Environmental Engineering) and Samantha McBride (PhD candidate in the Department of Mechanical Engineering), Yvana Ahlhab (PhD candidate in the Department of Mechanical Engineering) is water summit director. Preston Kutney and Juan Bazet, who are students at the Sloan School of Management, will co-direct the Innovation Prize, and Cesar Cruz (Humphrey Fellow 2017-2018, Special Program for Urban and Regional Studies) and Milani Chatterji-Len (undergraduate in the Department of Civil and Environmental Engineering) are joining as lecture series chairs. Janelle Heslop (dual MBA/MS at the Sloan School of Management and the Department of Civil and Environmental Engineering) is marketing chair, and Rachel Schmidt (dual MBA/MS at the Sloan School of Management and the Department of Mechanical Engineering) is the club’s webmaster. As Quantum and Gualtiero step into their new role, they’d like to congratulate and thank Krithika Ramchander (PhD candidate in the Department of Civil and Environmental Engineering) and Samantha McBride (PhD candidate in the Department of Materials Science and Engineering) for their outstanding work as the 2016-17 Water Club co-presidents.

About the Water Club Co-Presidents

Quantum is a PhD candidate in the Department of Mechanical Engineering at MIT, studying energy-efficient water desalination. His current work focuses on batch reverse osmosis systems. He is also interested in science policy and public outreach. He earned his SM and SB at MIT in mechanical engineering. Quantum is excited to help expand the Water Club’s community outreach efforts. “The Water Club has played a critical role in shaping my understanding of water issues as well as my future role in helping to address those challenges. I’m excited to help other students make similar discoveries and connections.”

Gualtiero is a PhD Candidate in the MIT-Woods Hole Oceanographic Institution Joint Program, studying physical oceanography. He is intrigued by society’s interactions with the ocean. His research takes him to the Indian Ocean, with an international project investigating the ocean’s role in the monsoon rainfall patterns. Quantum received a SB in physics from the University of California Santa Barbara. “I’m excited to work with a team that shares a curiosity and passion for water issues far beyond the specific problems we each research, connecting people and ideas across fields and potentially influencing the paths we take.”

The MIT Water Club is supported by J-WAFS as well as a variety of other sponsors from MIT as well as outside companies and organizations who are each invested in their work and success.
MIT Water and Food Events

MIT Water Club BBQ Open House
Meet this year's Water Club leadership and learn more about the activities for the coming year as well as how to get involved.

When: September 13th, 4 PM
Where: Kresge BBQ Pits (near MIT Student Centre)

More info

MIT Water Innovation Prize Kickoff Dinner
Save the date for the kickoff dinner for this year's MIT Water Innovation Prize. Learn more about water innovation, pitch your own idea, or network with others to find teammates for a future water innovation team. The dinner will include invited speakers who will discuss the world's water challenges and new innovations to address them.

When: October 23rd, 6 PM
Where: MIT Media Lab (E14, 6th floor)

More info

MIT Water Summit
Save the date for the 2017 MIT Water Summit. The theme of this two-day summit is the water and food nexus. Panelists and keynote speakers from academia, government, industry, and other sectors will be present.

When: November 6 - 7th
Where: MIT Wong Auditorium

More info

Boston-area Water and Food Events

Northeast Graduate Student Water Symposium 2017
Attend the Northeast Graduate Student Water Symposium (NEGSWS) on September 8 - 10, 2017. The symposium includes student-led sessions and discussions on regional approaches to research needs, funding, and teaching needs on water-related subjects. More information is available here.

NEWIN Symposium on Water Innovation
Join the New England Water Innovation Network (NEWIN) for a two-day symposium on water innovation. This year’s focus is on innovating a new future for wastewater management and involves panels on technology and policy, the role of academia in innovation, innovation in large water technologies, and other presentations and networking opportunities. The event will also include a water technology start-up bootcamp on September 17th. Registration for both events is required.

When: September 18th, 8 AM - 7:30 PM
Where: Worcester Polytechnic Institute, Worcester, MA

More info and registration

Funding and Other Opportunities

Call for Abstracts: Ground Water Protection Council Annual Conference
The Ground Water Protection Council is currently accepting abstracts for poster presentations for the 2017 Annual Forum on September 27-29th in Boston. Individual students and academic groups may submit to present their research. The submission deadline is August 31, 2017; accepted participants will produce a 3x4' poster and present it at the Forum. A $500 prize will be awarded to the first-place winner; two $250 prizes will be awarded to the runners-up.

More information and submission guidelines
Pilot Program: Tipping Points Request for Applications

The Foundation for Food and Agriculture Research seeks applications for developing and testing computational and mathematical methods – with existing approaches – that deepen our understanding of the complex relationship between the food system, health, and the environment. The goal of this Request for Applications (RFA) is to support projects that encourage food system-level transformations that promote positive community-wide health outcomes and economic opportunities. Funded projects will examine multiple food-system interventions and environmental factors to address how components of a system function within the context of their environment. The collective behaviors that arise from individual elements of the food system working together to alleviate food insecurity and increase health outcomes will also be considered. A letter of intent and matching funds are required for this RFA; the deadline is September 13th, 2017.

More information and submission guidelines

Call for Community Input: Science Breakthroughs in Food and Agriculture

Throughout the next six months, the National Academies of Sciences, Engineering, and Medicine's Science Breakthroughs 2030 will explore new scientific approaches and ideas in food and agriculture. Individuals can share ideas, insights, and tools via the project's website. After collecting input the study committee will produce a report describing ambitious and achievable scientific pathways to address problems and opportunities in the food and agriculture system.

More information and idea submission

Sourcing Manager Position at Cambrian Innovation

Cambrian Innovation, an MIT spinout that develops and implements innovative solutions that improve the way industries use water and energy, is looking for a sourcing manager. This is a supply chain role that involves interfacing with engineers, suppliers, and customers, including breweries like Lagunitas, Bear Republic, and Russian River. Click here for more information.

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