

J-WAFS Food & Water News

November 2016

In this issue....

- **J-WAFS announces Call for Proposals for 2017 Seed Grants**
- **J-WAFS Highlight: Low Carbon Desalination Workshop**
- **Upcoming MIT Events**
- **Boston-area water and food events**
- **Funding and other opportunities**

J-WAFS News

J-WAFS Announces Call for Proposals for 2017 Seed Grants to the MIT Community

J-WAFS will shortly release its 2017 call for proposals for its next round of seed grant funding. We are open to proposals that further the overall J-WAFS mission. Only proposals from eligible applicants will be considered: *the Principal Investigator submitting the proposal may be an MIT professor or a member of the research staff with principal investigator privileges* (generally senior or principal research scientist, or senior or principal engineer). Some specific areas of interest are outlined in the RFP. Interdisciplinary proposals and proposals with international reach are particularly welcome.

Proposals will be due by 5 pm on Tuesday, January 17.

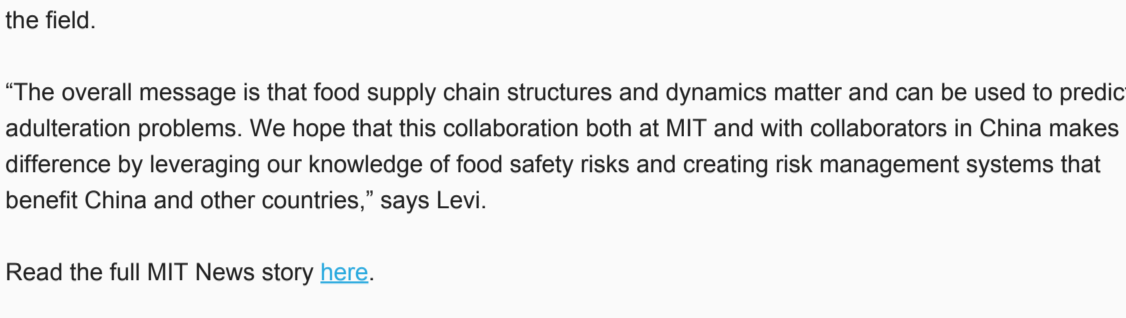
As part of this RFP process, J-WAFS will hold a "Research Speed Dating" event. The purpose of this session is to introduce prospective applicants to other water- and food-related research efforts around the Institute so as to broaden general knowledge of water- and food-related research at MIT and facilitate potential new collaborations, particularly collaborations across disciplines.

The Research Speed Dating event is intended for eligible applicants only. The event is not open to a general audience, to students, or to researchers from other institutions. Further details including sign-up information can be found in the RFP, which will be available on the J-WAFS website later this week.

J-WAFS Seed Grant researchers launch large-scale collaboration with the Walmart Foundation on food safety in China.

Two teams of Principal Investigators currently funded by J-WAFS for innovative new research addressing food safety have partnered with the Walmart Foundation to build on this research, developing new models and robust testing capabilities that will help strengthen the food system in China and support industry food supply chain design, best practices, and government oversight. The project's main focus is on safety risks in core primary food supply chains in China, particularly economically motivated adulteration. The upstream parts of these supply chains are particularly risky because they are highly distributed with little visibility.

Retsef Levi, the J. Spencer Standish (1945) Professor of Management at the Sloan School of Management and a principal investigator in the food safety project is joined by Yasheng Huang, the International Program Professor in Chinese Economy and Business at MIT Sloan, and MIT Professor Anthony Sinskey, faculty director of MIT's Center for Biomedical Innovation (MIT CBI). Stacy Springs, program director/research scientist at MIT CBI is a co-principal investigator on the team.



Both the [Sloan team](#) and the [CBI team](#) currently have J-WAFS seed grants on related work addressing food safety in China. J-WAFS Seed Grants fund innovative research that has the potential to have significant impact on issues of water and food supply, providing initial support to help researchers establish proof of concept or gather critical data that will position their project to attract other sources of future funding.

The MIT team seeks to create new systemic solutions to predict, monitor, and mitigate risks by developing supply chain predictive risk analytics tools that leverage real-time monitoring of socioeconomic and environmental risk drivers, as well as new robust and rapid testing capabilities that are deployable in the field.

"The overall message is that food supply chain structures and dynamics matter and can be used to predict adulteration problems. We hope that this collaboration both at MIT and with collaborators in China makes a difference by leveraging our knowledge of food safety risks and creating risk management systems that benefit China and other countries," says Levi.

Read the full MIT News story [here](#).

MIT launches new venture for world-changing entrepreneurs

The Engine will provide funding, space, and expertise—powering a network of innovation networks.

In his announcement of the launch of The Engine – an accelerator that will provide funding, space, and expertise for new ventures – MIT President Rafael Reif emphasized MIT's intent to deliver serious technological solutions to urgent global challenges, like clean water, climate change, and sustainable energy. Read more about President Reif's announcement [here](#).

J-WAFS Highlight

Low Carbon Desalination Workshop

In this issue we spotlight the two-day low carbon desalination workshop that took place at MIT last month and was attended by experts representing 11 nations. Organized by J-WAFS and its director, John Lienhard, these specialists convened to discuss the technological, economic, and regulatory issues, work toward a roadmap for future research, development, and demonstration projects, and frame a report to be delivered at the 22nd session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, COP22, in Marrakesh, Morocco, taking place November 7 through 18.

Among the speakers was Boris Lieberman, vice president and chief technology officer of IDE Technologies, the Israel-based company responsible for the design and construction of giant new seawater desalination plants both in California and Israel, including Sorek, the largest such plant in the world.

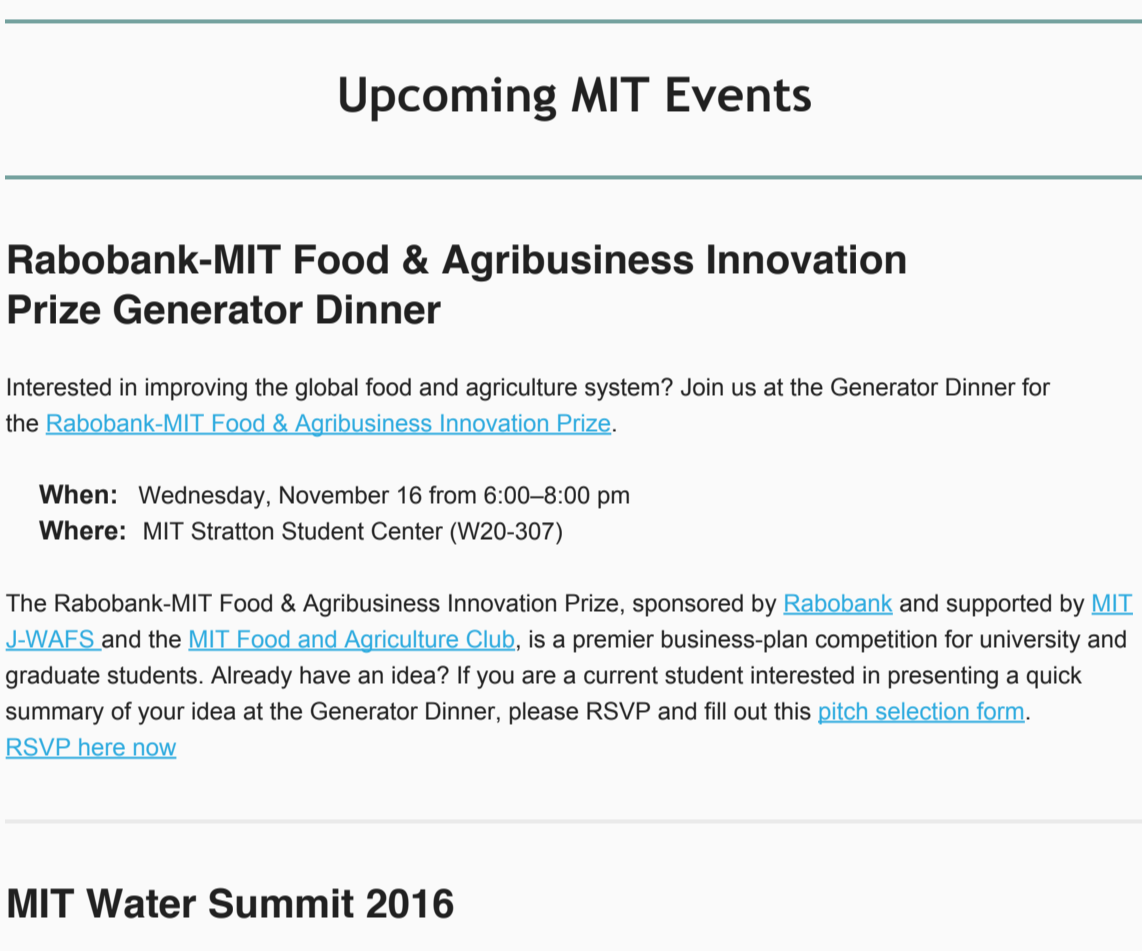
The participants deliberated on potential solutions, and challenges, to the problem of providing access to clean water with a minimal carbon footprint, considering desalination at all scales, from small, local installations to megaprojects. For instance, they examined the idea of coupling desalination facilities with carbon-free or low-carbon power sources such as solar, wind, and nuclear power plants. But in order to overcome the problem inherent with wind and solar power sources – that of non-continuous power generation which can lead to operational difficulties for some types of desalination technology – the suggestion of further coupling with storage systems would only result in higher costs.

Boris Lieberman, outlining the success of his company's largest seawater desalination plant in Israel, explained that the key is proper design and operation.

Participants discussed examples of the many other potential pairings of power sources with desalination facilities, such as geothermal energy for providing both electricity and heat possibly suitable for many different kinds of locations, the use of wave or tidal power, and thermal plants that store the sun's heat in vats of molten salt delivering heat when it's needed. And desalination could even be thought of as a kind of storage technology in itself, with excess power used to make and store fresh water, since, according to Lienhard, water is cheaper than electricity to store.

To read more about the workshop, see the [MIT News article](#) from October 19th.

A preliminary report from the workshop, based on the input from all of the participants, has been produced, outlining the priorities for research funding, the barriers, and how to prioritize the work. The report will be available on the [J-WAFS website](#).



Upcoming MIT Events

Rabobank-MIT Food & Agribusiness Innovation Prize Generator Dinner

Interested in improving the global food and agriculture system? Join us at the Generator Dinner for the [Rabobank-MIT Food & Agribusiness Innovation Prize](#).

When: Wednesday, November 16 from 6:00–8:00 pm
Where: MIT Stratton Student Center (W20-307)

The Rabobank-MIT Food & Agribusiness Innovation Prize, sponsored by [Rabobank](#) and supported by [MIT J-WAFS](#) and the [MIT Food and Agriculture Club](#), is a premier business-plan competition for university and graduate students. Already have an idea? If you are a current student interested in presenting a quick summary of your idea at the Generator Dinner, please RSVP and fill out this [pitch selection form](#). [RSVP here now](#)

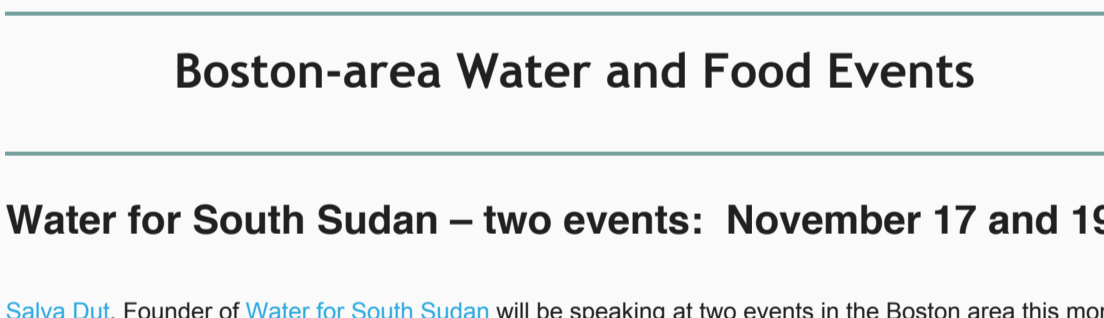
MIT Water Summit 2016

The MIT Water Club and its sponsors announce the fifth annual MIT Water Summit, a gathering of students and faculty with leaders from industry, finance, and government to explore current problems and potential solutions surrounding water resources.

When: November 17–18
Where: Tang Center (E51), Wong Auditorium – 70 Memorial Drive, Cambridge, MA 02142

This year's Summit will delve into the "Future of Water Utilities" and reflect on how the economic, policy and technology infrastructure needs to evolve to respond to our water challenges. In addition to keynote addresses and panel discussions featuring leaders from industry, academia, and federal agencies, the Summit will include a poster presentation session, working group discussions, and a technology showcase, with lots of opportunity for networking. Ticket prices include breakfast, lunch, and snacks over both days.

Registration along with more details about the program and the speakers can be found on the Summit [website](#). Please write to watersummit@mit.edu if you have questions.



CEE/J-WAFS Water and Food Security Student Research Symposium

When: Monday, November 21, 3:00–4:30 pm
Where: Building 2, Room 2-139

At the Civil and Environmental Engineering/J-WAFS Water and Food Security Student Research Symposium, five graduate students from across various programs at MIT will present the results of their research in water and food security, and the audience will have an opportunity to ask questions and provide inputs to enhancing the water and food security research agenda at MIT. A reception will follow.

This is the final event in the CEE/J-WAFS Water and Food Security seminar series. Presented by Chandra A. Madramootoo (visiting professor, Department of Civil and Environmental Engineering (CEE), and visiting scholar, J-WAFS), the seminar series has provided senior undergraduate and graduate students in CEE, as well as other MIT graduate students, with a background on some of the challenges of global food security, particularly in relation to issues around water management engineering and agro-ecologic challenges. More information can be found [here](#).

Boston-area Water and Food Events

Water for South Sudan – two events: November 17 and 19

[Salva Dut](#), Founder of [Water for South Sudan](#) will be speaking at two events in the Boston area this month.

Water for South Sudan (WFSS) began drilling well in 2005 and has completed 282 wells in 2014, and 250,000 people all in the face of very challenging conditions. A hygiene program began in 2014, and sanitation is in pilot. Salva's life is told in the bestselling book *A Long Walk to Water* by award winning author Linda Sue Park which has been translated into 12 languages and is required reading for schools across the US and around the world. It has sold over a million copies!

Watering the Seeds of Change Celebration: Salva Dut will be the guest of honor at the Watering the Seeds of Change Celebration and pre-event VIP reception **Thursday evening November 17th at the Metropolitan Waterworks Museum** on the Boston/Newton line. Proceeds are to raise funds for WFSS's \$1.5 million capital campaign. Visit <http://www.waterforsouthsudan.org/waterworks/> for tickets and sponsorship opportunities.

TEDx: Salva Dut will be speaking at **TEDxBeaconStreet on Saturday morning November 19th in Brookline**. The event is free and open to the public but [registration](#) is required.

Smart Water – Smart Cities: A Cleantech Event

MIT Enterprise Forum of Cambridge
December 1st, 2016 | 5:30-8:30pm
MassCEC, 3rd Floor
63 Franklin Street, Boston

Can Smart Water Technologies Quench the Thirst of our Modern Cities?

Advances in sensors, data analytics, and strategic collaborative planning will help cities to supply the needed amount of revenue producing clean water at reasonable rates. Join us to learn more about these and other related topics.

RSVP Required: Find more info and registration [here](#).

Funding and Other Opportunities

The Advanced Environmental Solutions Prize

The Eni Award Scientific Secretariat announces the Advanced Environmental Solutions Prize. The purpose of the Prize is to promote technological innovation for pollution prevention and action against air, water and land pollution, as well as for rehabilitation and reuse of industrial sites. The Prize – a specially struck gold medal of the Italian State Mint in the indivisible sum of €200,000 – is awarded to the researcher or group of scientists that achieves internationally significant research and development results in the field of environmental protection and recovery. (There are also prizes in a few energy categories.)

Last day to register for an account with the Scientific Secretariat: November 11, no later than 5.00 p.m. CET (Central European Time). Awards are due on November 25, no later than 5.00 p.m. CET. For more information, click [here](#).

H₂O Challenge

The World's Greatest Acceleration Program For Ideas Disrupting The Water Industry – the [H₂O Challenge](#) is a global pioneering program created with the objective of identifying and empowering the top ten entrepreneurial projects with disruptive, viable and sustainable solutions within the water industry. **The application period ends November 15th, 2016** and you can apply [here](#).

The Water Award for Young Investigators

MDPI, the Multidisciplinary Digital Publishing Institute, has announced the initiation of the annual Water Award for Young Investigators. This prize is given to a young investigator in recognition of her/his excellence in the research field of water science, technology, management, and governance. The prize consists of 2,000 CHF (Swiss francs), an engraved plaque, and an offer to publish a paper free of charge and without a fixed deadline in *Water*. To be eligible, candidates must:

- 1) Be under 40 years old or no more than 10 years after receiving their PhD by Dec. 31, 2016
- 2) Have contributed significantly to the advancement of a water resources-related field through ground-breaking research
- 3) Submit a Curriculum Vitae including an updated publication list
- 4) Submit a nomination letter from an established senior scientist

To apply, email your application to water@mdpi.com by **November 30**. Awards will be granted by the end of January 2017. For more information about the prize and how to apply, click [here](#).

MIT Innovation Prize: Enter by December 31st

Thanks to everyone who came out to the Water Innovation Prize Kickoff Dinner to check out pitches by some of the potential entrants in this year's program!

Registration for the prize will be open until December 31st. If you have an idea which will help solve a water problem, we want you to apply! Not only will you receive mentorship from seasoned professionals in the water space, but you will have a chance to pitch your refined idea to win prizes from a \$30k pool at the culminating Pitch Night in April.

Learn more and register [here](#).

BARD Funding Opportunities

The US-Israeli Binational Agricultural Research and Development (BARD) Fund is offering a few agriculture-related funding opportunities. The individual opportunities are detailed below. More information and the application guidelines can be found at [Bard-Isus.com](#).

- **Postdoctoral Fellowship Program Award Duration:** 1-2 years. *Submission date: Jan. 16, 2017*
 - Funds postdoctoral fellowships for US citizens to perform agricultural research with established Israeli scientists. Recipients travel to Israel to carry out their research.

- **Senior Research Fellowship Program Award Duration:** 2-12 months. *Submission date: Jan. 16, 2017*
 - The program promotes joint agricultural research between established scientists from the US and their Israeli hosts.

- **Graduate Fellowship Student Program Award Duration:** 3-6 months. *Submission date: Jan. 16, 2017*
 - The program enables PhD students in one country (US or Israel) to travel to the other country to acquire new skills and techniques in their field of study.

- **Workshop Award Submission date: Jan. 16, 2017**
 - Funds workshops whose purpose is to identify research needs and to promote increased contact between scientists throughout the world in areas related to the binational and agricultural interests of the US and Israel.

