



Abdul Latif Jameel  
Water & Food Systems Lab

*Securing humankind's vital resources*



MIT

## NEWS & ANNOUNCEMENTS



### J-WAFS community members awarded at 2022 IDA World Congress

The International Desalination Association awarded Jon Bessette, David Warsinger, & Junghyo Yoon.

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### MIT alum awarded for reducing pesticide pollution

Vishnu Jayaprakash won 1st place in the National Inventors Hall of Fame Collegiate Inventors Competition & the J-WAFS World Food Day Video Competition.

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### New technology from J-WAFS PI could monitor water pollution

Michael Strano and others at MIT have developed an electrical oscillation system that controls tiny autonomous robots that could be used as sensors for water monitoring.

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### J-WAFS PI warns of threat to European crops

Elfatih Eltahir says Europe & the Mediterranean are vulnerable to extreme heat and increasingly dry

### New device converts methane from dairy farms into CO2

MIT researcher Desiree Plata developed a zeolite filter to help reduce

summers, which have already led to withering crops.

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methane's disproportionate warming impact.

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## Robotic insects could pollinate crops in space

MIT researchers created a robotic flying lightning bug which could aid in search and rescue, pollination of plants, or detecting gas leaks.

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## MIT's MADMEC winner keeps greenhouses cool

SmartClime won the Department of Materials Science and Engineering competition for their materials to reduce energy usage in greenhouses.

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## MIT student works on a water sanitation system

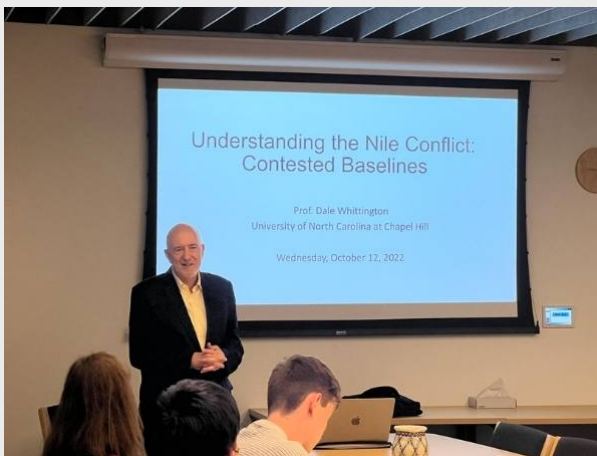
PhD candidate Alex Greene is developing a system for filtering excess fluoride from Pakistan's water supplies for a D-Lab class.

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## MIT students assist on a farming project in Africa

Students in MIT's Engineers Without Borders helped to find an alternative water source for an irrigated garden at a Tanzanian school.

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## J-WAFS hosts first lecture on the Grand Ethiopian Renaissance Dam

J-WAFS visiting scholar Dale Whittington examined the dam & water usage. He has [a new, relevant paper](#).

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# AWARDS & RECOGNITIONS

## J-WAFS PIs receive tenure

Congrats to Mathias Kolle & Otto Cordero who have been granted tenure by the MIT School of Engineering.

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## J-WAFS PI wins 2022 NIH New Innovator Award

Caroline Uhler was awarded a grant from the National Institute of Health for her high-risk, high-impact research.

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# IN-DEPTH LOOK

VIDEO PORTRAITS HIGHLIGHT THE 2022 J-WAFS FELLOWS

## The 2022 J-WAFS fellows discuss their inspiration for pursuing challenges in water and food systems

J-WAFS funder [Community Jameel](#) recently commissioned video portraits of the five 2022 J-WAFS Fellows to highlight the important work the fellows are pursuing in water and food systems. The fellows explain the problems they are trying to address, their inspiration, and their research methods for solving the problems.

“This year’s cohort of J-WAFS fellows show an indefatigable drive to explore, create, and push back boundaries,” says John H. Lienhard, director of J-WAFS. “Their passion and determination to create positive change for humanity are evident in these unique video portraits, which describe their solutions-oriented research in water and food,” Lienhard adds.

The fellows each work on unique challenges in water and food. Katharina Fransen develops new polymers that can be used for food packaging that’s biologically based and biodegradable. Aditya Ghodgaonkar works on designing emitters for drip irrigation systems that are resistant to clogging. Devashish Gokhale aims to filter micropollutants from drinking water through a novel, microparticle



system. James Zhang hopes to create clean water for communities lacking it through an innovative desalination method. And Linzixuan (Rhoda) Zhang fortifies food with micronutrients through a platform that is already showing positive results.

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# EVENTS

WATER AND FOOD



### COP27 event on food and climate

Friday, November 11, 4:30 a.m. ET, Online and In-person

J-WAFS' Greg Sixt will serve on a panel where he'll discuss ways research can better address stakeholder needs to ensure actionable results for sustainable food systems.

[MORE INFO](#)



### COP27 event on transformational adaptation technologies

Saturday November 12, 10:30-11:30 a.m. ET, Online and In-person

J-WAFS' Greg Sixt will present the J-WAFS-led FACT Alliance's approach to identifying implementation pathways for transformational adaptation technologies, policies, and practices for water & food systems. [MORE INFO](#)



### MIT Water Summit

Sunday, November 13, 9:00 a.m. - 5:00 p.m. ET, In-person

The MIT Water Club, supported in part by J-WAFS, will host its annual conference bringing together water professionals, experts, students, and researchers including speaker J-WAFS PI Jongyoon Han. [MORE INFO](#)



### MIT Drop-In Sustainability Chat Opportunities (MIT ONLY)

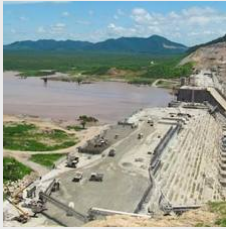
Tuesday, November 15, 1:00 - 2:00 p.m. ET, In-person

MIT's graduate student Martin Fellows for Sustainability will offer advice to undergrads about graduate school & careers in climate and sustainability. [MORE INFO](#)



## 2022 MIT Research and Development Conference Tuesday-Wednesday, November 15-16, All day, In-person

J-WAFS PIs John Fernandez & Fadel Adib will be speaking at this MIT Industrial Liaison Program event which seeks to address problems in global food supply and security, the environment, and more. [MORE INFO](#)



## J-WAFS Grand Ethiopian Renaissance Dam (GERD) Lecture Wednesday, November 16, 4 - 5 p.m. ET, In-person

J-WAFS visiting scholar Dale Whittington will give the 2nd of three lectures on the GERD, open to the MIT, Harvard, and Tufts communities. [MORE INFO](#)



## MIT VMS Boot Camp: Human Resources Thursday, November 17, 6:00 - 8:00 p.m. ET, In-person

Startups including those in water and food, should join this MIT Venture Mentoring Service event to learn basic tools for hiring success. [MORE INFO](#)

# FUNDING

AND OTHER OPPORTUNITIES

## J-WAFS 2023 seed grant letters of interest

**Open to: MIT Principal Investigators**

**Deadline: December 16, 2022**

\$75,000 per year, overhead free, up to two years, for early-stage projects related to water and/or food. New this year, letters of interest are first required. Full proposals will be invited based on reviews of the LOIs.

[MORE INFO](#)

## Martin Trust Center for MIT Entrepreneurship's IAP programs

**Open to: MIT students**

**Deadline: November 20, 2022**

Entrepreneurs, including those in the water and food space, can apply to spend January learning about entrepreneurship, customers, products, and markets.

[MORE INFO](#)

## Martin Family Society of Fellows for Sustainability

**Open to: MIT PhD candidates who successfully completed doctoral**

## MIT Media Lab Future Fellowship

**Open to: Those applying to MIT's master's or PhD program in Media**

## exams

Deadline: February 8, 2023

MIT faculty are invited to nominate outstanding students working in environment and sustainability to be considered for two semesters of full funding.

[MORE INFO](#)

## Arts and Sciences

Deadline: Ongoing

This new program supports the development of projects which promote wellbeing for current and future generations, including work in the water and/or food space.

[MORE INFO](#)

# IN CASE YOU MISSED IT



## J-WAFS World Food Day Student Video Competition



## J-WAFS World Food Day Student Video Winners

Last month we awarded MIT students working in food systems. Check out their videos that explain their research!

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## J-WAFS PI speaks at Cairo Water Week

Amos Winter co-chaired a session called "Water-Energy-Food Nexus for Climate-proofing MENA Agriculture."

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# INTERESTED IN SUPPORTING J-WAFS?

When you make a gift, you are making an investment in both the future of J-WAFS and our Institute-wide work to improve the productivity, accessibility, and sustainability of the world's water and food systems.

[DONATE ONLINE](#)

**FOR MORE INFORMATION  
ABOUT SPONSORSHIP OPPORTUNITIES, CONTACT:**

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J-WAFS is an Institute-wide effort that brings MIT's unique strengths to bear on the many challenges our food and water systems face.

Our program catalyzes MIT research, innovation, and technology for ensuring safe and resilient supplies of water and food while reducing environmental impact, to meet the local and global needs of a rapidly expanding and evolving population on a changing planet.





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