

Find out more about J-WAFS' 2021 World Water Day video competition, including the MIT students and postdocs that have been selected as winners of this year's competition!



SPECIAL EDITION

WORLD WATER DAY 2021



On World Water Day, Celebrating MIT Research

This spring, J-WAFS launched our second student video competition, "[MIT Research for a Water Secure Future.](#)" View the prize winning videos below, which capture these MIT students' passion for water sector solutions.



**INVENTING
ADAPTIVE
HYDRAULICS
TO
IMPROVE
PUMP
EFFICIENCY**

FIRST PLACE WINNER

Congratulations to Hilary Johnson of MechE! Hilary is redesigning centrifugal pump systems for both water and energy efficiency. (\$1200 prize)

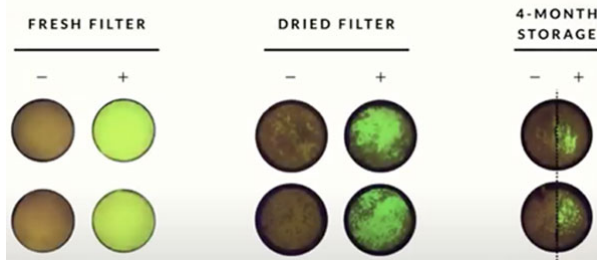
[WATCH VIDEO](#)

SECOND PLACE WINNER

Tzu-Chieh (Zijay) Tang of Biological Engineering has developed SynScoby, a kombucha-inspired home-grown biofilter that can detect and remove pollutants from water.

[READ MORE](#)

SYNSCOBY: GROWING LIVING SMART FILTERS FROM KOMBUCHA CULTURES



TREATING WATER FROM THE BOTTOM UP



JUDGES CHOICE AWARD: "Creative Communication"

Junghyo Yoon (Research Lab for Electronics) has designed a briefcase-sized portable solar-powered desalination unit that can provide safe drinking water in minutes.

[WATCH VIDEO](#)

JUDGES CHOICE AWARD: "Research Originality"

Sayed Saad Afzal and Waleed Akbar (Media Lab and EECS) are working on a new underwater self-charging ocean sensor that can be applied to everything from ocean exploration to

THIRD PLACE WINNER

Ty Christoff-Tempesta of Materials Science and Engineering is removing water contaminants like lead via self-assembled nanomaterials.

[READ MORE](#)

JUDGES CHOICE AWARD: "Potential for Impact"

Peter Godart (MechE) is transforming scrap aluminum into power for water desalination units, helping vulnerable communities increase climate resilience and clean water access sustainably.

[WATCH VIDEO](#)

JUDGES CHOICE AWARD: "Research Originality"

Fillippos Tourlomousis and Patrissia Stathatou (Media Lab) are using 3D bio-printing to remove inorganic micropollutants from drinking water, particularly lead.

monitoring marine life.

WATCH VIDEO

JUDGES CHOICE AWARD: "Elegant Solution"

Grace Conners (MechE) is designing a controls strategy that can improve the reliability of desalination powered by renewable energy while keeping water costs low.

WATCH VIDEO

JUDGES CHOICE AWARD: "Raising Awareness"

Andrew Bouma (MechE) and the MIT Water Club developed a water taste test to increase public understanding of the sustainability of tap water and encourage a move away from wasteful bottled water use.

WATCH VIDEO

WATCH VIDEO

JUDGES CHOICE AWARD: "Potential for Scalability"

Devashish Gokhale (ChemE) has developed a sustainable technology that aims to remove micropollutants from water using engineered polymers inspired by the properties of soap.

WATCH VIDEO

Discover More MIT Water Research Innovations

Interested in finding out more about how MIT students, postdocs, and alumni are meeting water sector challenges with research-based solutions? View all videos submitted to the competition here.

WATCH VIDEOS

MIT RESEARCH FOR A WATER SECURE FUTURE

INNOVATIONS PRESERVING A PRECIOUS RESOURCE

MIT Students Driving Solutions to Water Sector Challenges

Last Monday, March 22nd, 2021 was [World Water Day](#), an international day launched by the United Nations to advocate for sustainable water use and equitable water access. This day is about both inspiration and action to motivate people all over the world to tackle the global water crisis. In a [statement](#) released by the United Nations that day, the UN

Secretary-General António Guterres commented:

“For me, water means protection. A well-managed water cycle - encompassing drinking water, sanitation, hygiene, wastewater, transboundary governance, the environment and more - means a defense against ill-health and indignity and a response to challenges from a changing climate and increasing global demand.”



This year, J-WAFS joined the United Nations and the 150+ countries, ministries, research agencies, and organizations celebrating World Water Day with [“MIT Research for a Water Secure Future,”](#) a video competition showcasing the many exciting ways MIT students, post-docs, and recent alumni are applying the Institute’s expertise and research capabilities to the world’s water challenges. Their work was reviewed by [a distinguished group of judges](#) comprising water sector and science communications experts from across academia, the non-profit

sector, and industry.

The video submissions we received illustrate a wide variety of research-based solutions responding to the challenges named by the UN Secretary-General and more. The awarded videos featured above comprise only a small fraction of the excellent research presentations and stories that were submitted to the competition.

MIT is fortunate to have such dedicated students applying knowledge toward developing cross-sector water innovations and solutions. Including materials scientists, mechanical engineers, systems analysts, business students, and more, what they all share is a passion to solve hard problems for the betterment of humanity. We encourage you to [visit our website](#) and [follow us on Twitter](#) to watch the full set of submissions. We expect that you will be impressed by the students’ accomplishments. We hope—in addition—that you will be energized by their commitment, and inspired by their vision of a water secure future for all

WATCH VIDEOS

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**

RENEE J. ROBINS

Executive Director, J-WAFS
rrobins@mit.edu or (617) 324-6726



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.



Massachusetts Institute of Technology
77 Massachusetts Avenue, E38-325
Cambridge, MA 02139
E: jwafs@mit.edu
P: (617) 715-4222
W: jwafs.mit.edu

Copyright © 2021 MIT Abdul Latif Jameel Water and Food Systems Lab, All rights reserved.

