Modelling Plastics in the Oceans

What is happening? What can we do about it?

Advances in sensing and computer modelling let us track the dispersion of plastics through the environment more accurately than ever before.

Join our distinguished speakers for an MIT Plastics and the Environment Program workshop exploring a critical challenge to the health of Earth’s oceans in the 21st century.

November 6–8, 2019 at the MIT Samberg Center

Register at tickets.mit.edu or tinyurl.com/oceanplastics2019

Featuring Speakers From:

- Woods Hole Oceanographic Institution
- Massachusetts Institute of Technology
- University of Oxford
- Brown University
- The Rozalia Project
- University of Quebec Rimouski
- University of Western Australia
- University of Auckland
- University of Alberta
Wednesday, November 6: Observations and Modelling Global Transport

Keynote Address: Kara Lavender Law
Sea Education Association, Woods Hole Oceanographic Institution

John Fernández, MIT Environmental Solutions Initiative: Opening remarks

Scott Gallager, WHOI: Autonomous instrument measurements of microplastics

Rachael Miller, Rozalia Project: Observations of micro- and nano-plastics
Daniel Bourgault, Christiane Dufresne and Sandy Gregorio, U. Quebec Rimouski: Modelling and observational resources to examine plastic transport from the St. Lawrence River
Glenn Flierl, MIT: Congregation of plastics in the surface ocean
Samuel Levang, WHOI: Dispersion of plastics in the global ocean
Jake Gebbie, WHOI: Why microplastics could constrain ocean circulation in inverse models
Carol Anne Clayson, WHOI: Ocean turbulence, mixing, and vertical distribution of microplastics

Thursday, November 7: Surface Waves and Settling and Resuspension

Ton van den Bremer, U. Oxford: Transport of floating marine debris by waves

Colin Whittaker, U. Auckland: Experimental investigation of surface wave transport
Michelle DiBenedetto, WHOI: Ocean wave and particle-shape effects on microplastics transport

Tom Peacock, MIT: Particle sedimentation and settling in deep sea mining

Bruce Sutherland, U. Alberta: Collective settling from fresh to salt water
David Deepwell, U. Alberta: Resuspension from shoaling internal solitary waves

Friday, November 8: Additional Considerations

Pierre Lermusiaux, MIT: Numerical modelling of particle transport
Aleksey Sadakov, U. Western Australia: Geochemistry of microplastic
Baylor Fox Kemper, Brown University: Submesoscale and Langmuir turbulent transport at the ocean surface of plastics, oil, and drifters

Agenda is preliminary.