

Activity Information

This information will be shared on the MechE Summer X 2020 website

Title: An intro to the magical world of metamaterials: from impossible to invisible

Instructor name: Svetlana Boriskina

Instructor email: sborisk@mit.edu

Brief bio of instructor: Dr. Svetlana V. Boriskina is a Research Scientist at the Department of Mechanical Engineering. She develops new materials and technologies to harvest and manipulate light and other forms of radiation for applications in energy, national security, communications, and fashion. Her research in smart meta-materials and award-winning textiles is funded by the US Army, Advanced Functional Fabrics of America (AFFOA), and the MIT Deshpande Center. As the Lead Editor for the Energy and Environmental Optics Express, Svetlana is leading the effort to disseminate the scientific knowledge and address challenges in the water-energy nexus, photonics, metamaterials, and environmental sensing. Visit website for more info: <http://sboriskina.mit.edu>

Description of the activity: A brief introduction to the concept of metamaterials with fun references from the history of new material and metamaterial discovery, description of the fundamental concepts, and instructive cross-disciplinary examples from optics and beyond. Both, researchers working on metamaterial-related projects and those who just want to learn about emergent properties offered by metamaterials and to discuss lessons from history of material discovery and innovation are welcome to attend.

Participant preparation: none

Materials, tools, or other requirements: Poll Everywhere free app will be used for quizzes

Specific safety considerations: not applicable

Enrollment limitations: none

Activity schedule:

Session No.	Topic	Date	Start time	Duration
Session 1	Lecture, discussion, fun quiz	August 5, 2020	1:00 pm	1:30 h