



## Brillouin Summer School-2024

**Application Deadline:** July 15, 2024

**Date:** September 7-8, 2024

**Place:** Wayne State University (6135 Woodward Ave, IBio building, Detroit, MI, 48202)

**Course description:** The field of Brillouin microscopy was established about 20 years ago. As an optical technology, Brillouin microscopy can probe mechanical properties of biological materials in a non-contact, non-invasive, and label-free manner with subcellular resolution. These unique features have positioned Brillouin microscopy as a complementary tool to existing mechanical testing techniques for biophysics and mechanobiology. Very recently, Brillouin technology was highlighted as “The 10 biggest science stories of 2022” by The Guardian, underscoring its growing potential in biomedical research. To promote the dissemination of this emerging technology, this summer course will offer comprehensive training on constructing and operating a confocal Brillouin microscope, as well as on analyzing and interpreting the data. The course is designed for young scientists, including PhD students, postdocs, and early-stage principal investigators, who are interested in using Brillouin microscopy for biomedical research.

**Tentative schedule:**

Day 1	Day 2
<ul style="list-style-type: none"><li>- Lecture 1: Principle of Brillouin microscopy</li><li>- Lecture 2: Application in biomedicine</li><li>- Lab demo 1: Run Brillouin microscope</li><li>- Lab demo 2: Data postprocess</li></ul>	<ul style="list-style-type: none"><li>- Guest lecture: Latest research advances</li><li>- Lab practice: Build your spectrometer</li><li>- Students presentation &amp; closing remarks</li></ul>

**Instructors:** Jitao Zhang (Wayne State) and Giuliano Scarcelli (University of Maryland).

**Cost:** No cost for the course. Trainees need to cover the cost of their travel and accommodation. The Diversity Travel Award is provided for trainees from underrepresented groups.

**Who can apply:** PhD students, postdocs, and early-stage investigators from research institutions in the United States.

**How to apply:** Please submit your resume and a personal statement (1 page limit) via <https://forms.gle/JX1p9UKEB8HM1H8h8> (Google account might be needed to fill out the form)

If you have any questions, feel free to contact Dr. Jitao Zhang ([zhang4@wayne.edu](mailto:zhang4@wayne.edu)).

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