



Institute of Biomedical Engineering Seminar

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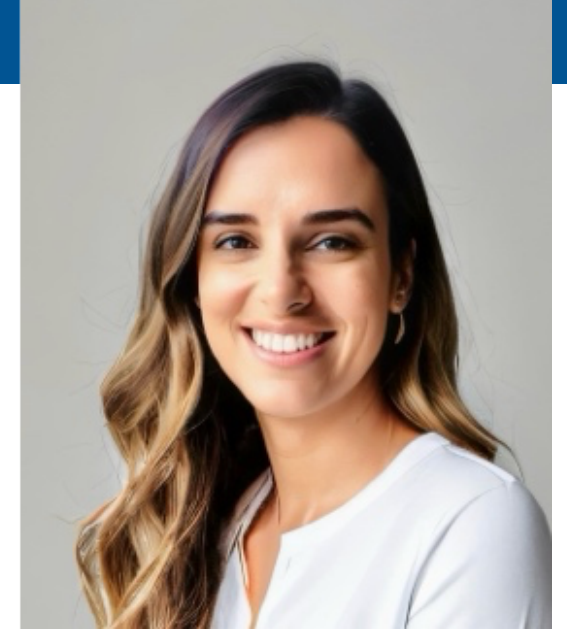
The Role of Solid-State Lasers in Microscopy Applications

08 OCT TUE at 1:00 PM (GMT+3)

Boğaziçi University Kandilli Campus, BME Building AZ19

About the Seminar: In this talk, I will talk about lasers and their applications in the field of microscopy. The first part starts with the basics of lasers, together with the introduction of essential elements. Later I will describe how ultrashort pulses are produced from solid-state lasers. As an example, I will talk about an ultrafast laser source operating in the mid-infrared and producing femtosecond pulses. After concluding this part, I will switch to the applications part. The second part discusses the application areas of solid-state lasers in photo-acoustic microscopy and multi-photon microscopy. Finally, I will show some of our experimental work performed with the photo-acoustic microscope at Boğaziçi University.

About the Speaker: Natali Çizmeciyan-Sözüdoğru graduated from Marmara University Physics Department in 2007. She received her doctoral degree at Koç University in 2014, with her thesis focused on mid-infrared femtosecond lasers. Between 2014 and 2016, she took full responsibility for an advanced laser lab containing ultrafast spectroscopy tools. After a year of industry experience, in 2018, she joined Prof. Burçin Ünlü's team at Boğaziçi University Physics Department. Here, she has been working on photo-acoustic microscopy, multi-photon microscopy, and particle manipulation topics. Her research interests include applications of novel solid-state lasers in microscopy and biomedical fields.



Natali Çizmeciyan-Sözüdoğru, PhD
Boğaziçi University

