Institute of Biomedical Engineering Seminar

From Lab to Clinic: Ultrafast Fiber Lasers in Biomedical Applications

18 FEB TUE at 1:00 PM (GMT+3)
Boğaziçi University Kandilli Campus, BME Building AZ19

Seydi Yavaş, PhD
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About the Seminar: Ultrafast fiber lasers have emerged as a transformative technology in biomedical applications, offering unique capabilities for precise manipulation and imaging at the micro and nano scales. These lasers enable numerous cutting-edge applications in medical research and clinical practice, from cellular manipulation to advanced imaging techniques. This seminar will present practical applications of ultrafast fiber lasers in biomedical engineering, including nanosurgery for subcellular precision, microfluidic chip fabrication through glass welding, photoacoustic microscopy for medical imaging, and surface modification for biomimetic applications. We will discuss how these technologies are being implemented in real-world clinical and research settings, with a focus on recent developments and future possibilities in medical applications.

About the Speaker: Dr. Seydi Yavaş is a researcher specializing in ultrafast lasers and optics. He has been affiliated with the Department of Physics at Boğaziçi University and has also served as a researcher in the Faculty of Engineering at Özyeğin University. His work focuses on the development of femtosecond laser systems and their applications in material processing and biological sample manipulation. Notably, Dr. Yavaş is the founder and CEO of Lumos Laser, a company dedicated to laser technologies.