Dear colleague,

The IEEE Technical Committee for Micro/Nano Robotics and Automation presents a series of online seminars. One selected speaker will present cutting-edge research in the micro/nano robotics field. Join us **Tuesday, May 6th, at 1 PM (UTC)**, for one hour. We will welcome: Dr. Quentin Boehler, Senior Researcher - Multi-Scale Robotics Lab, ETH Zurich, Switzerland

Please check full announcement enclosed or information below, and do not hesitate to forward it to your colleagues and/or students.

Looking to seeing you online,

Yours sincerely,

Aude Bolopion, on behalf of the co-chairs of the IEEE Technical Committee for Micro/Nano Robotics and Automation

Title: From Bench to Bedside: Addressing Unmet Clinical Needs with Robotics

Abstract: In the last fifteen years, medical and surgical robotics have surged, with thousands of clinical systems installed worldwide, and millions of procedures performed. The emergence of tethered and untethered micro-devices for performing complex surgical tasks and accessing deep regions within the human body created unprecedented opportunities to address unmet clinical needs in minimally invasive interventions and targeted drug delivery.
Translating robotics research findings into clinically ready products is challenging and requires a sustained collaboration between clinicians, researchers, and engineers, making it a highly interdisciplinary journey. In this talk, I will share with you some of the past and ongoing efforts I and the members of the Multi-Scale Robotics Lab at ETH Zurich have been deploying to bring robotics research to the bedside.
Our research focuses on the design and control of soft continuum robots to increase the safety and the dexterity of endoluminal and endovascular navigation, which has the potential to improve a variety of procedures ranging from neurovascular interventions to fetal surgeries. These navigation capabilities also open the way to the local delivery of drug-loaded microrobots for targeted therapies, which is a particularly promising solution to prevent the off-target effects caused by a conventional systemic administration.

Bio: Quentin Boehler is a Senior Researcher leading the medical robotics activity at the Multi-Scale Robotics Lab, ETH Zurich since 2020.
He was born in Strasbourg in 1990. He received an engineer's degree in mechatronics from INSA Strasbourg, and an M.Sc. degree in robotics in 2013. He received a Ph.D. degree in robotics in 2016 from the University of Strasbourg, with a doctoral work focused on tensegrity mechanisms and variable stiffness devices for MR-compatible robotics. He was awarded the Best thesis Award from the research commission of the University of Strasbourg, and the First Prize at the 2016 Ph.D. thesis awards by the French Robotics Research Group.
He joined the Multi-Scale Robotics Lab at ETH Zurich in 2017. His current research focuses on magnetic actuation and continuum robots for medical robotics, including the development and analysis of electromagnetic navigation systems, and the simulation, control and localization of soft magnetic devices.

He was awarded the Young Scientist Award from the iCANX Association in 2024 and has been recognized as an Outstanding Reviewer by the IEEE Robotics and Automation Letters for two consecutive years in 2022 and 2023. He is an IEEE Senior Member and serves in the editorial board of the IEEE Robotics and Automation Letters as an Associate Editor since 2024.

Link for the connection:

https://cnrs.zoom.us/j/93066396013?pwd=Vu4RW0ba1zhaJUoz2VSuRrPGlK9krT.1