



Report on the SMCS Distinguished Lecture Visit by Prof. Tiago H. Falk at UFPE on December 4, 2025

Prof. Tiago H. Falk's IEEE SMCS Distinguished Lecture was successfully held at the Federal University of Pernambuco (UFPE) on December 4, 2025. The event was a joint initiative by the IEEE Systems, Man, and Cybernetics Society (SMCS), the IEEE Future Directions Telepresence Initiative, and the UFPE Biomedical Engineering Department (DEBM) alongside the Postgraduate Program in Biomedical Engineering (PPGEB) at UFPE.

The distinguished lecture was comprised of two parts. In the first part, Dr. Falk presented the mission and activities of the IEEE Systems, Man, and Cybernetics Society. He emphasized the importance of fostering local scientific communities and strongly encouraged the establishment of an SMCS Chapter in Northeast Brazil to facilitate regional collaboration and international integration. In the second part, he presented technical content and the talk was titled "Human Factors 'In-the-Wild': From Everyday Settings to Multisensory Immersive Experiences". Prof. Falk methodically addressed the transition of human factor monitoring from controlled lab environments to ecological, "in-the-wild" settings using wearable devices.

His presentation highlighted critical challenges in this domain, including movement artifacts, missing data, and confounding factors such as stress and fatigue. Furthermore, he showcased recent advancements regarding immersive environments. Specifically, he detailed the instrumentation of virtual reality headsets with biosensors to develop novel neuromarkers for user experience, focusing on metrics for time perception and cybersickness. Applications for healthcare, mental well-being, and the assessment of first responders were also demonstrated.

The lecture concluded with a dynamic Q&A session involving approximately 20 attendees, comprising faculty members, undergraduate, and graduate students from the Biomedical and Electrical Engineering programs at UFPE, as well as students from neighbouring institutions, such as the University of Pernambuco (UPE). The academic exchange covered topics ranging from the robustness of developed technologies to the interpretation of unpublished results. A focal point of the technical discussion was the methodological strategy employed, where environmental noise is not discarded but utilized as contextual information to identify key multisensory factors.

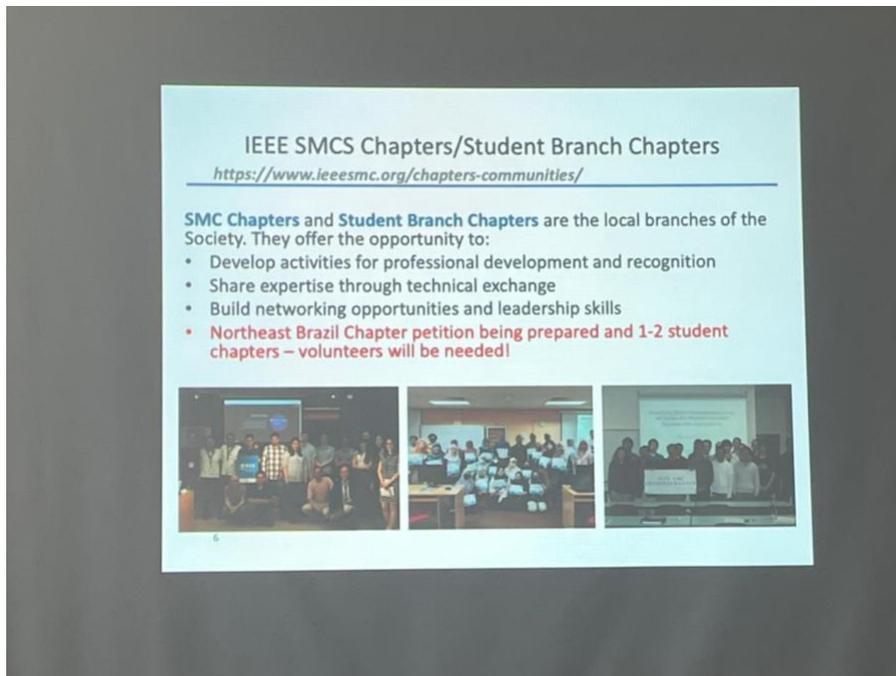


Figure 1: Prof. Tiago H. Falk introduced the IEEE Systems, Man, and Cybernetics Society (SMCS) and discussed the creation of a new chapter in Northeast Brazil.

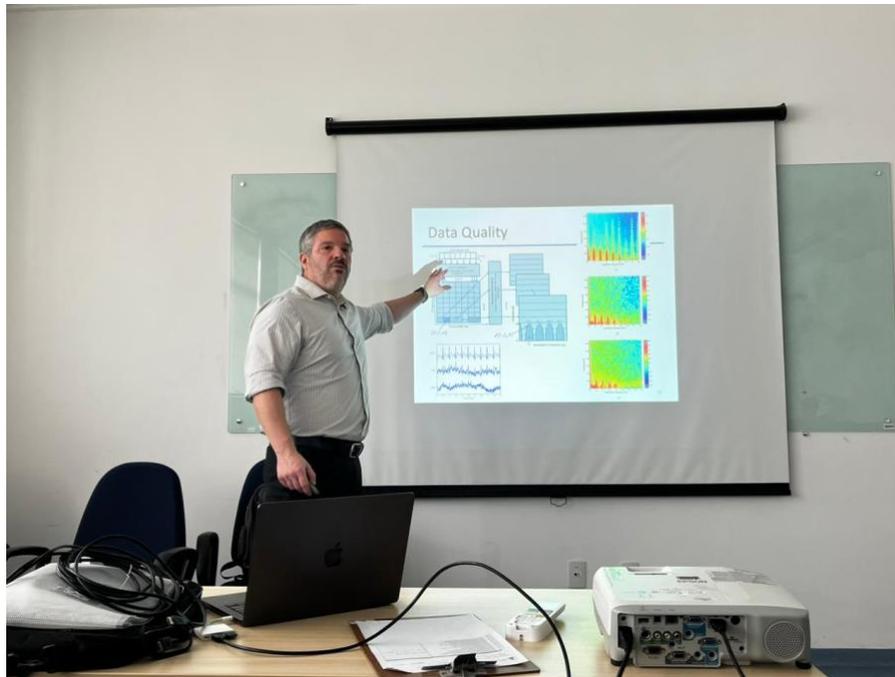


Figure 2: Prof. Falk delivering the Distinguished Lecture on "Human Factors 'In-the-Wild'.



Figure 3: Group photograph of faculty and students from the UFPE Biomedical Engineering department and surrounding institutions attending the Distinguished Lecture.