

MINI SYMPOSIUM

2026



Dr. Dušanka Bošković is an IEEE Senior Member and IEEE Region 8 Director (Europe, Middle East and Africa). She is a Minister for Science, High Education and Youth of Canton Sarajevo, Bosnia and Herzegovina, and was the Vice Rector at the University of Sarajevo, Bosnia and Herzegovina 2020-2025.

Her academic interests are in the area of software engineering in cognitive and biomedical domains. In addition to being university teacher and researcher at the University of Sarajevo, she has a long professional experience in systems and business process analysis.

She is often engaged in multidisciplinary and challenging work environments requiring problem-solving and communication skills. She is highly motivated to learn about the problem domain and committed in achieving high level user experience. Being committed to promoting multidisciplinary research, she is active volunteer and the founding President for the Bosnia and Herzegovina national association for biomedical engineering. She has been engaged in several projects promoting accreditation activities to improve quality of engineering education. She received her diploma, master and doctoral degrees from the University of Sarajevo, Bosnia and Herzegovina.

She has been an active IEEE volunteer in the Region 8. While serving as the IEEE Region 8 Vice-Chair for Member Activities she focused on particular needs of different member groups, especially women, students and Young Professionals, demonstrated strong interpersonal skills with sensitivity to cross-cultural and transnational issues. She has a very strong and active cooperation with both IEEE Hungary Section and Óbuda University, Budapest in the fields of engineering education and systems analysis.

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Obuda University-Room F09

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Data, Devices, and Design: Building Human-Centered Systems from Biomedical Signals

This lecture encompasses several decades of research and practice at the intersection of biomedical signal processing, artificial intelligence, and human-computer interaction. The objective is to present a perspective on how purpose-built sensing devices, and robust signal processing pipelines combine into accurate, usable, and ethically responsible systems. Through representative case studies I will present technical advances in signal acquisition, followed by feature extraction supported by exploratory analysis, and interpretable and explainable machine learning using visualization tools. I will close with visualizations that support feature engineering and explainability — and discuss how these visual tools accelerate insight, debugging, and stakeholder communication.