

# Next-Gen RF and Antenna Engineering: Simulation Solutions and Workflows for Comprehensive Systems

## Abstract



This workshop showcases Ansys simulation capabilities for RF and antenna design, focusing on filters, antenna arrays, and wireless system performance. We explore RF filter and frequency-selective surface (FSS) design, followed by advanced antenna workflows, including multiband interleaved arrays and FSS integration. The session highlights HFSS features for optimizing antenna and phased array designs, leveraging advanced solvers and parallel meshing. Finally, we demonstrate RF channel modeling and wireless KPI extraction, enabling end-to-end system analysis. Attendees will gain insights into efficient workflows for designing, analyzing, and optimizing complex RF systems with Ansys HFSS and Ansys STK.

## Speakers



**Dr. Hawal Rashid** received his M.Sc. in Engineering Physics and Radio and Space Science, and his Ph.D. in Electrical Engineering from Chalmers University of Technology, Sweden, in 2009, 2010, and 2016. He is a Sr. Principal Engineer for High Frequency applications at Ansys, focusing on 5G/6G massive MIMO, RF design, antenna modeling in large environments, and multi-physics simulations. His research interests include phased array antennas for 5G/6G, as well as cryogenic and room-temperature THz systems, including THz receiver design, characterization, and calibration.



**Dr. Alireza Kazemzadeh** received PhD degree in Electrical Engineering from Lund University, Lund, Sweden. He received the Young Scientist Paper Award at URSI 2010 for his research on Absorbers. He was a Postdoctoral Research Fellow in Electromagnetics group, Lund University. Dr. Kazemzadeh worked at GKN Aerospace as a Microwave Engineer. He was Technical Specialist Electromagnetics at Altair Engineering for several years before joining Ericsson as an RF Developer working with 5G antenna measurement standardization and antenna chamber qualification. He joined Ansys in 2022 where he is currently working as a Senior Application Engineer in HFSS/ Electronic group.