

IW4 - ARRAY - Purpose-Built Software For Phased Arrays, 5G/6G Base Stations, and AESA Radar Systems

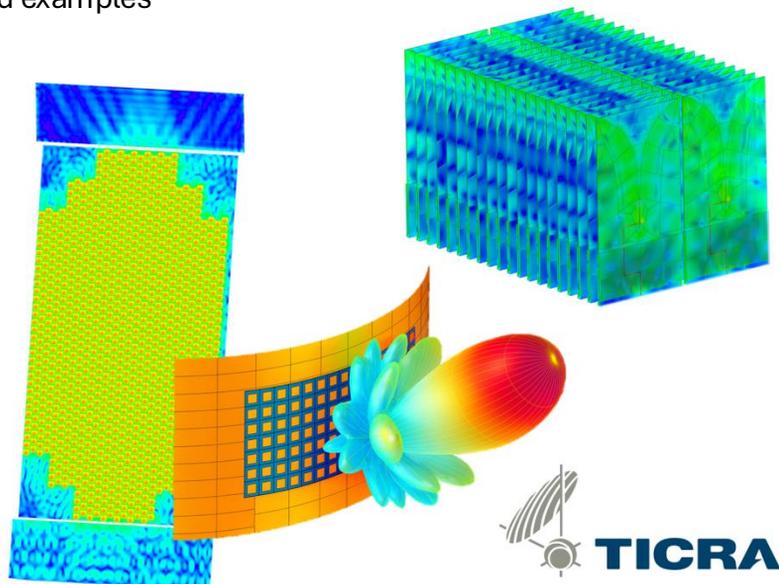
Abstract:

ARRAY is the latest addition to TICRA Tools, the powerful suite of electromagnetic solvers developed by TICRA, dedicated to the design, analysis, and optimisation of phased array antennas. Recognising that the needs of the antenna designer in fields such as telecoms, defence, astronomy, and earth observation were not being fulfilled by general purpose EM solvers, TICRA has developed ARRAY with the end-user in focus. This workshop will showcase the capabilities of ARRAY, providing engaging examples taking the audience through a typical design chain to a completed array antenna, including aspects of optimisation. Our motivation is to highlight this new solver and exchange with tomorrow's antenna designers.

Workshop Outline:

The workshop will follow a presentation format and will have the following agenda:

- An introduction to TICRA and TICRA products
- Description of ARRAY and capabilities
- Array Generator and rapid array creation and layout
- Demonstration of the new CAD Editor
- Simulation models
- Infinite array simulation
- Full-wave methods for finite arrays
- Optimisation capabilities
- Application cases and real-world examples
- Q&A





Instructors:



Mark Whale is part of the Applied Electromagnetics team where he works on R&D, analysis, and design of antennas for space and ground applications. Prior to joining TICRA, he worked at Ericsson AB, as well as on postdoctoral research projects at the University of Bern, Switzerland, and the Chalmers University of Technology, Gothenburg. Mark received his PhD in Physics from the National University of Ireland, Maynooth, in 2010.



Pasquale Giuseppe Nicolaci joined TICRA in 2021, and he is part of the AEM team, where he is involved in the development of R&D projects for space and ground segment antennas, customer technical support, and consultancy services in the antenna design domain. Before joining TICRA, Pasquale worked for AIRBUS Italy, where he gained experience in the design, manufacturing, and testing of active and passive antennas. Pasquale received his PhD in Information Engineering from Università Mediterranea of Reggio Calabria in April 2019.