

## State-of-the-art in Antenna System Simulation with CST Studio Suite.

### Organizers



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*Tamara Monti* is a Solution Consultant for the electromagnetic simulation tools of Dassault Systèmes. She earned a master degree in electronics engineering and a PhD degree in Electromagnetics. She has been visiting researchers in the Trieste Synchrotron, in Temple University of Philadelphia and in the University of Maryland at College Park working on microwave nanotechnology. She has held a postdoctoral position at the University of Nottingham from 2014 to 2017, before joining CST and focusing on computational electromagnetics.



*Theunis Beukman* is an Applications Manager at Dassault Systèmes in Germany. He holds a Ph.D. degree in Electronic Engineering from the University of Stellenbosch, South Africa. He joined CST in 2015 where he has been responsible for the product planning of software tools related to filters and antenna arrays. His interests include passive RF components, transitions, profiled horns and phased antenna arrays.

### Abstract

CST Studio Suite is a product of Dassault Systèmes for simulating electromagnetics. The workshop will focus on recent simulation trends to handle the full complexity of complete antenna systems, incorporated in Dassault Systèmes electromagnetic simulation suite. It will cover examples from various application areas within the cellular communications (5G handsets and base stations), automotive (vehicle-to-vehicle and radar) and aerospace industries.

Topics will include hybrid simulation using different EM solvers (e.g. time domain, frequency domain, method of moments, ray tracing), installed antenna performance, EM-circuit co-simulation, antenna array design solutions, filter design tools, co-site interference, range-Doppler maps, RF coverage and more.

### Programme outline

The workshop consists of both slide based presentations and online demonstrations.

It will start with a general overview of new features for antenna simulations in the new CST Studio Suite 2020 version, followed by detailed presentations on the described topics from 5G, automotive and aerospace domains.