Dr. Marzena Olszewska-Placha, QWED, Poland

***Multiphysics modelling of high power microwave systems and devices – dedicated modelling regimes in QuickWave software***

*Exemplified with use cases discussed in “Development of packaging and products for use in microwave ovens” book (Elsevier 2020).*

Summary:

The presentation will be dedicated to discussing opportunities and benefits growing from Multiphysics modelling of microwave power systems and devices and making it a vital part of design cycle, serving a role of a virtual laboratory. A role of coupled electromagnetic-thermal simulations, supplemented with dedicated modelling regimes dedicated to e.g. load dynamics or microwave source performance, is unprecedented in industrial environment allowing for “low-cost” virtual prototyping. The advanced modelling regimes of coupled EM-thermal simulations with QuickWave software, allowing for enhancing physical relevance of the simulation model will be visualised with modelling use cases discussed in Elsevier book “Development of packaging and products for use in microwave ovens”.

The presentation will be supplemented with a short online demo of dedicated modelling regimes.

The attendees who would like to explore advantages of coupled EM modelling in microwave power systems will be offered Trial licence for QuickWave software with essential user support to ensure a fast learning curve.