

January 23 – 24, 2017
The Florida Hotel & Conference Center | Orlando, Florida

TE-14 | Tuesday, January 24 | 8:00 AM - 5:00 PM | One Day

Course Title: Understanding RF Power Calibrations at 1mW and 250W

Instructor: Charlie Sperrazza, TEGAM, Inc.

Type: Electrical

Track: Technician, Engineer

Technical Level:

Beginner – course content is designed for students with no previous experience

Intermediate – students must possess as a basic understanding of course concepts

Course Description:

This one day workshop provides a practical introduction to 1mW RF power transfer between two coupled ports with discussions on key components and methods for power sensor calibrations. It includes Gamma correction and how to use Gamma correction to calculate power transfer and port match, and the importance of vector measurements to the precise knowledge of power transfer. The workshop will also cover typical arrangements of RF Power Sensor Calibration stations; the step-by-step process of calibrating thermocouple, thermistor and EEPROM power sensors; contributing factors to uncertainty of a calibration factor; practical examples, with Excel Spreadsheet and real data of calculating expanded uncertainty of a calibration factor; and understanding linearity of power sensors including new developments and designs in RF Power Sensors design has allowed for large power dynamic ranges.

The workshop will also include an introduction to 250W power measurements and calibration techniques for wattmeter element test and calibration. Workshop will include a discussion of the components required to produce these measurements and the factors that contribute to uncertainties as well as the unique challenges of measurement and calibration at these power levels and methods to mitigate them.

Instructor Biography:

Charlie Sperrazza began 20+ year career in RF with 6-year enlistment in US Navy. After his enlistment he then focused on developing product test systems for 802.11 and WCDMA devices. In 2003, started supporting T&M products, also in 802.11 and WCDMA. Charlie joined TEGAM in 2008 supporting all RF products. Charlie is also knowledgeable in many automated programming languages; including MET/CAL, VB, LabVIEW, and C#. applications and for the specific treatment of Glioblastoma Multiforme.