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## "Demystifying RF Measurements"

### Session Synopsis:

The integration of heterogeneous wireless technologies is on the verge of creating a revolution in healthcare delivery in hospitals and residential care. Many experts agree that wireless technologies could empower individuals to take a more active approach to their health and improve efficiency in gathering personal health information. A wide range of medical devices, systems, and applications incorporate radio frequency (RF), microwave and wireless devices and signals, so advancing ones fundamental knowledge is important for mastering many of today's test and measurement applications. This tutorial, for the researchers in the medical field and (with or without electrical engineering background) will review and introduce RF terminology, measurement, and instrumentation methods.

This tutorial is an introductory RF measurements tutorial providing essential information about analog and digital modulation, I/Q data, RF and microwave specifications, performing spectral measurements as well as a over-arching glossary of RF and microwave terms. Topics include:

- RF and Microwave Spectral Analysis
- Analog Modulation
- Digital Modulation
- Modulation Measurements
- Understanding RF & Microwave Specifications
- RF Measurements Terminology and Glossary

At the conclusion of this course, an attendee will be able to understand traditional RF measurements and their importance, examine modern system level tests and understand the basics of noise figure and phase noise in relation to RF measurements in design, verification, and manufacturing applications.