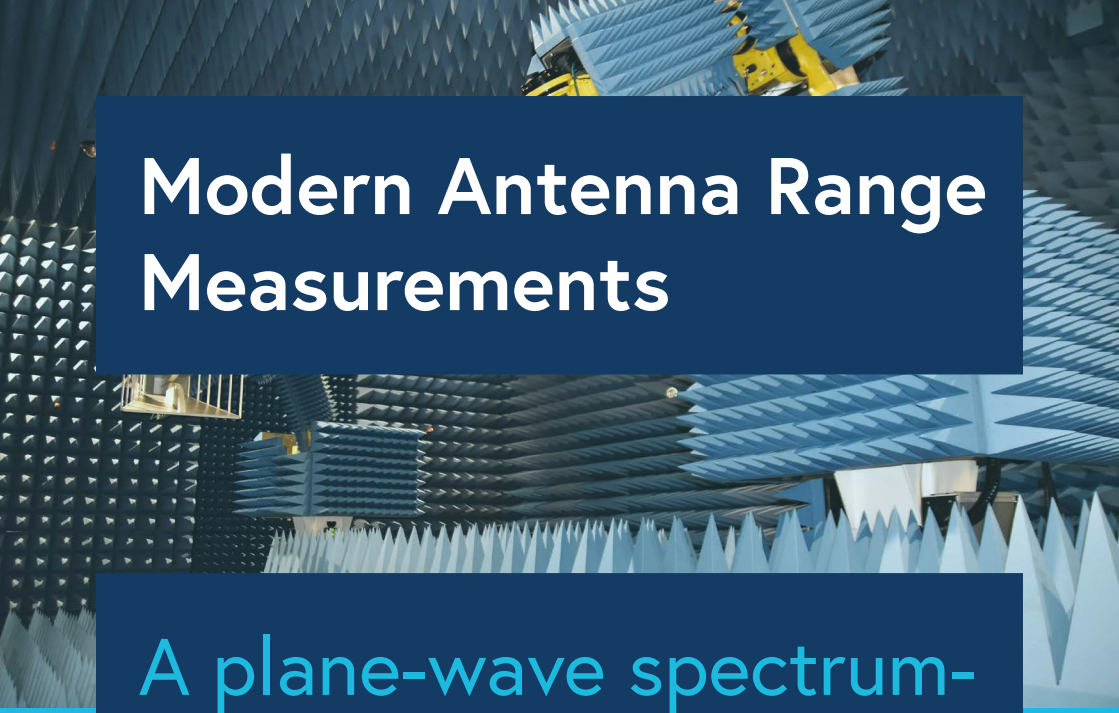

Modern Antenna Range Measurements

A plane-wave spectrum-based approach

Course Programme - Please note programme is subject to change.

The course runs over three half-days from 14:30 to 18:00 GMT, making it also suitable for attendees joining from across Europe and North America.
Check the time of the event where you are online.

Day One

Antenna Fundamentals	Our opening session offers an introduction to antennas and EM radiation, highlighting the important properties that are typically measured.
Intro to Antenna Measurements	This session will introduce antenna measurements and antenna measurement systems.
Planar Near-field Theory (Measurement View)	Gain a thorough grounding in standard planar near-field theory, the near-field to far-field transformation, and aperture diagnostics.

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Day Two

Coordinate systems and polarisation bases	In this session you'll learn about the measurement coordinate systems and polarisation bases that are most widely used in modern antenna measurements, including discussing conversions between them and antenna pattern rotations.
Gain measurement	An overview of gain and efficiency measurements covering all the main methods in common use today.
Probes for antenna measurements	Covers all the most commonly used near-field probes, together with a discussion of when to use them, how to calibrate them, and what errors they can give rise to.

Day Three

Advanced antenna measurements	This session will give a thorough introduction to range assessments and uncertainty, focusing on the planar near-field case.
Range assessments and error budgets	An introduction to some more recent advanced techniques including scattering suppression, phase retrieval, non-canonical transformations, and compressive sensing.
Applications	Our final session considers a number of new applications involving the use of multi-axis industrial robots, UAV drones, and the utility of the digital twin and CEM simulation.

Day Four – Optional Technical Visit

Timings TBC

Our technical visit for this course is to the Queen Mary University of London Antenna Measurement Laboratory (AML). This is an exiting opportunity to tour one of the most advanced antenna laboratories in university use today, and the chance to see a wide range of different antenna measurement systems and related technologies. You'll also have the chance to attend a networking lunch with Prof. Stuart Gregson and your fellow course delegates.

The tour will be filmed, and a recording shared afterwards for those unable to attend in person. Spaces are limited and offered on a first come first served basis.

Book Now

Learn more at: theiet.org/antenna-course