46th Annual Meeting and Symposium of the Antenna Measurement Techniques Association

2024 CINCINNATI • OHIO AMTA

Tuesday, October 29, 2024
Cincinnati, Ohio

STUDENT DAY PROGRAM

Sponsored by

RESONANT SCIENCES

STAR Dynamics

Supported by

DELTA SIGMA COMPANY

BOEING

Ansys

AFIT AIR FORCE INSTITUTE OF TECHNOLOGY

Welcome!

Tuesday, October 29
11 a.m. – 7:00 p.m.

Student Day Website

AMTA 2024 Student Day

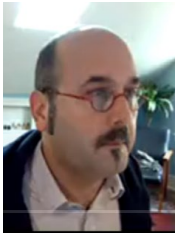
- **Sponsored by:** Resonant Sciences and STAR Dynamics
- **Student Day Coordinator:** Dr. Peter Collins, Resonant Sciences

During AMTA's Student Day, students will participate in presentations and discussions related to antenna measurement technology culminating in a design and measurement contest with prizes awarded to the winners. They will also have the opportunity to tour the vendor exhibit hall and view several technology demonstrations (bring your resumes). Throughout their time, the students will be able to engage with academic, government, and industry professionals who are leaders in the electromagnetic measurement fields.

Design Contest Instructors

Nat Roman
Boeing

Jonathan Frasch
Boeing



Jason Bommer
Ansys

Schedule of Events

Time	Event
11:00 -11:30 am	Registration and Welcome
11:30 -12:30 pm	Design Contest Introduction and Tutorial (Lunch)
12:30 - 2:00 pm	Student Groups Design, Fabricate, and Measure Their Antennas
2:00 - 4:00 pm	Exhibit Hall Vendor Demonstrations (Afternoon Snacks)
4:00 - 5:30 pm	Invited Speaker Talks with Q & A
5:30 - 6:00 pm	Special Live Drone Demonstration
6:00 - 7:00 pm	Design Contest Award Presentation (Dinner)

*** NOTE : All student day activities are absolutely FREE!**

Drone Delivery Problem

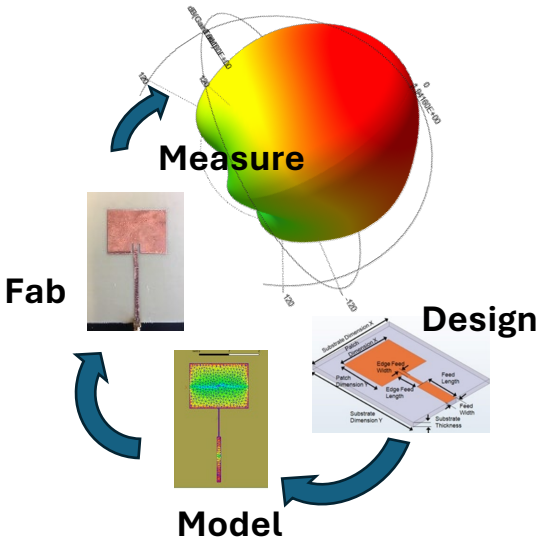
https://packagingfg.com/2023/04/24/food-delivery-drivers-replaced-by-drone/

Are you up for a Challenge?

Details forthcoming at Student Day, but as a teaser your team has been tasked to solve a nagging RFI problem. You need to bring your best engineering and teaming skills to beat the competition in finding a solution that will save your company!

Here's what you do...

- **LEARN** the basics of patch antenna design and modeling tools that will equip you to meet the challenge problem.
- **TEAM** with your fellow students to develop a winning antenna design.
- **FABRICATE** your team's antenna design and compare its key performance parameters to your modelled solution.
- **MEASURE** your antenna's pattern and boresight gain on the Delta Sigma range to prove your team is a winner!



Special Live Drone Demonstration!

QuadSAT

Quadsat enhances SATCOM with UAV-based antenna measurement systems, enabling network operators, integrators, and end-users to test and verify RF equipment at any time at any location. Applications span from antenna characterization and satellite emulation measuring radiation, pointing, and tracking performance, to waveform modulation and validation of electronic warfare systems. Quadsat's solution consists of highly advanced payload for transmitting and receiving, which are integrated onto a UAV and connected to a ground control station with automation and measurement software. Quadsat provides measurement systems directly to customers for in-house testing and Testing as a Service through its service partner network.

Student Day Keynote Mentoring Talks with Q & A

AMTA 2024
Invited Speaker

Dr. Julie A. Jackson

Air Force Institute of Technology (AFIT)

Tuesday, October 29
4:00 – 4:40 p.m.

Radar Research at AFIT

Dr. Jackson's talk focuses on radar research at AFIT covering a variety of topics including Synthetic Aperture Radar (SAR), Scattering Phenomenology, Compressive Sensing, and Passive/Multistatic RADAR. Along the way she'll share her experiences as an engineer in this challenging but exciting field.

Dr. Jackson is a Professor of Electrical Engineering at the Air Force Institute of Technology (AFIT), where she joined the faculty in 2009. She earned the B.S.E.E. degree from Wright State University, Dayton, OH, in 2002 and the M.S. and Ph.D. degrees from The Ohio State University, Columbus, OH, in 2004 and 2009, respectively. She is a Senior Member of the IEEE, member of Eta Kappa Nu and Tau Beta Pi, and Chief Advisor for the Ohio Eta Chapter of Tau Beta Pi. Dr. Jackson was elected in 2018 to the IEEE AES Society Radar Systems Panel and serves on the technical program committees of the IEEE Radar Conference and the MSS Tri-Service Radar Conference. Her research interests are in radar signal processing and imaging and exploitation of RF signals.

AMTA 2024
Invited Speaker

Dr. Michael A. Saville

Air Force Institute of Technology (AFIT)

Tuesday, October 29
4:40 – 5:20 p.m.

From There to Here in Applied Electromagnetics

Dr. Saville describes a research journey covering his experiences in studying and applying electromagnetics to a variety of interesting problems.

Dr. Saville is currently Professor of Electrical Engineering, Air Force Institute of Technology, Wright-Patterson AFB, Ohio. He was previously Associate Professor and Chair of Electrical Engineering at Wright State University, Dayton, Ohio. He earned the B.S.E.E. from Texas A&M University and was commissioned as Second Lieutenant under the Airman Education Commissioning Program. He earned the M.S.E.E. degree from the Air Force Institute of Technology, Ohio in 2000 and the Ph.D. degree in Electrical Engineering from the University of Illinois Urbana-Champaign in 2006. Dr. Saville has over 60 technical publications, is a Senior Member of IEEE, a registered Professional Engineer in the State of Ohio, and an ABET Program Evaluator. He is also a member of the national honor societies of Eta Kappa Nu, Tau Beta Pi, Sigma Xi, and a life member of the Society of Hispanic Professional Engineers.

Vendor Demonstrations

Delta Sigma Company

Delta Sigma is first and foremost an RF measurement systems developer. We can provide complete turnkey RCS, antenna and material test systems, near-field, far-field, both indoors and outdoors scenarios. Additionally, we can augment your existing range with advanced 21st century hardware and software to bring modern capacities to an aging facility.

ETS-Lindgren

ETS-Lindgren solutions include systems for Government/Aerospace, Automotive/EMC, and Wireless applications. We offer RF/Microwave Far-field, Near-field, and Compact Range Chambers for Radar Cross Section as well as Antenna Measurement Systems for 5G NR, OTA, and MIMO OTA performance testing. ETS-Lindgren antennas are available in standard and custom designs. Our diverse absorber line is known for its durability, high-performance, non-hygroscopic design, and high-power handling capabilities. We also manufacture positioners, probes, and monitors, to name a few. System solutions feature EMQuest™ Software for fully automated 2- and 3-D antenna pattern measurement for passive antennas and active wireless devices.

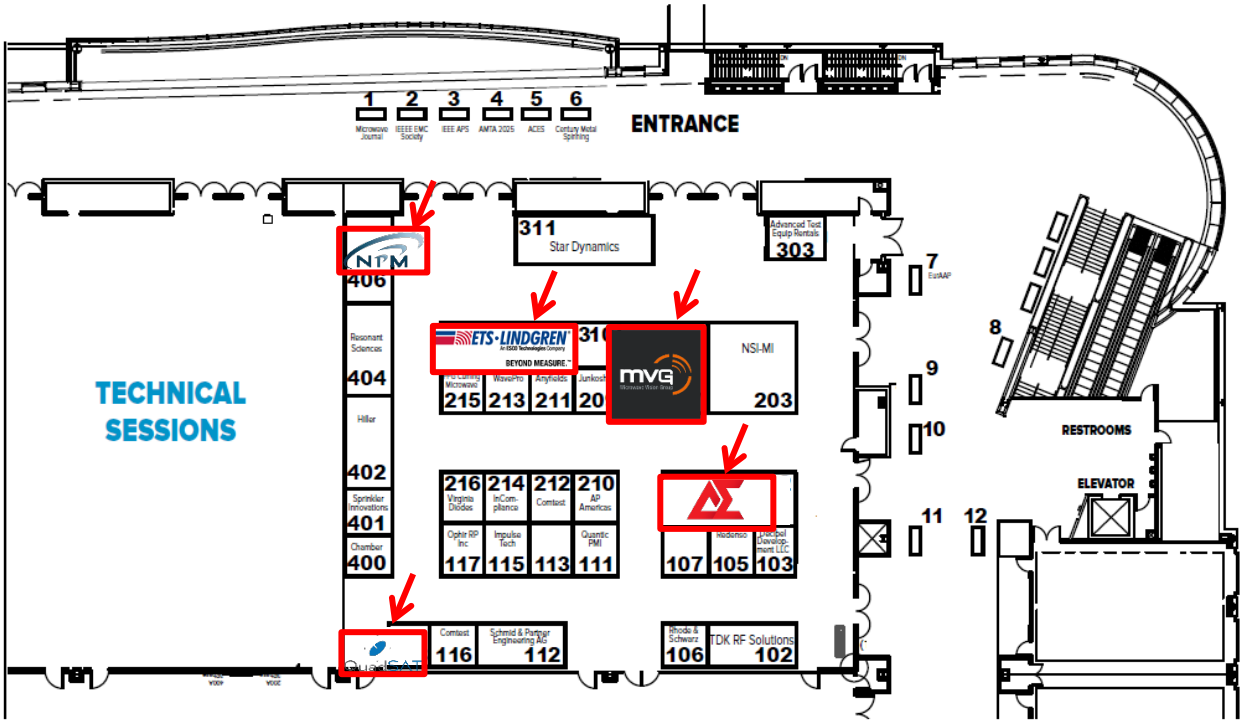
MVG

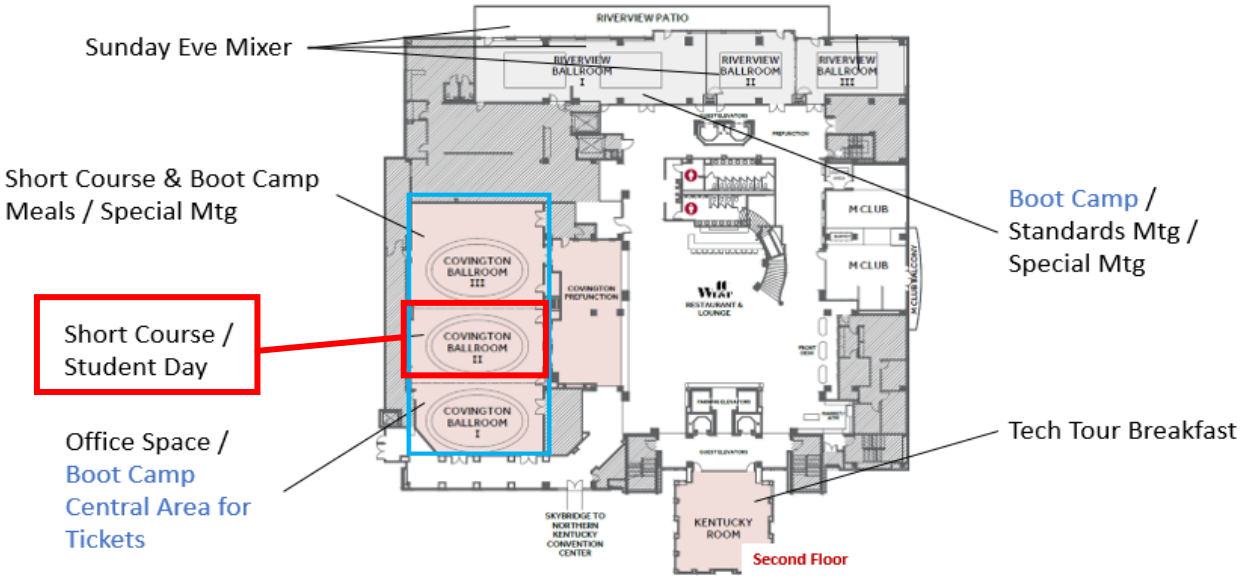
MVG, the Microwave Vision Group, offers cutting-edge technologies for the visualization of electromagnetic waves. With advanced test solutions for antenna characterization, radar signature evaluation and electromagnetic measurements, we support company R&D teams in their drive to innovate and boost product development. Dedicated to the aerospace & defense, satellite, telecommunications, automotive, EMC & CE industries as well as research institutes, we are the one-stop shop for turn-key systems, solutions and services for near-field and far-field antenna measurement, CATR, RCS, radar, 5G OTA test solutions, and EMC testing. MVG: fast, accurate and reliable test and measurement solutions.

NPM

Next Phase Measurements (NPM) is a California-based US company with a management team of industry pioneers recognized all over the world having over 100 man-years of experience in antenna measurement systems. NPM leverages world class established products like industrial robots and receivers integrating them with its state-of-the-art software to provide turnkey antenna measurements and upgrades for Near-Field, Far-Field, CATR, and RADOME systems. NPM is also the distributor and value-added-reseller across the American continents for Antenna Systems Solutions, providing antenna measurement systems to the worldwide Aerospace, Defense, Commercial, Automotive, Wireless, Academic and Research markets.

Maps with Event Locations





Thank you for coming! Stay in touch at https://www.amta.org/