

SEPTEMBER 21-23 2023

UNIVERSITY OF CENTRAL FLORIDA | ORLANDO, FL, USA



# Nanoscale Infrared Spectroscopy Course

An educational forum for current and future users of nanoscale infrared spectroscopy

University of Central Florida

L3Harris Corporation Engineering Center (HEC) Rm. 101 and Research 1 Building Rm. 101  
Orlando, Florida

## Thursday, September 21<sup>st</sup>, 2023

8:30 am – 9:30 am Registration *HEC 101*

9:30 am – 9:45 am Opening Remarks (*C. Phillips, L. Tetard, F. S. Ruggeri*) *HEC 101*

### Session I: Introduction to Nanoscale Infrared Spectroscopy

9:45 am – 10:15 am Presentation of the Course  
*L. Tetard HEC 101*

10:15 am – 11:45 am Nanoscale Infrared Spectroscopy – an Introduction  
*C. Phillips HEC 101*

11:45 am – 12:00 pm Break or NanoIR Lab Tour *Research 1*

12:00 pm – 1:30 pm Lunch *Research 1 101*

### Session II: Introduction to Data Analysis, Tours and Hands-on Tutorials

1:30 pm – 4:00 pm Sample Preparation, Imaging and Spectroscopy, Tours  
*Group join different stations for activities See sign-up sheets*

4:30 pm – 6:00 pm Tutorial on Data Analysis  
*F. S. Ruggeri, C. Phillips Research 1 101*

## Friday, September 22<sup>nd</sup>, 2023

### Session III: Applications of Nanoscale Infrared Spectroscopy

- 9:00 am – 10:00 am** Applications of Nanoscale Infrared Spectroscopy for Life Sciences  
*F. S. Ruggeri HEC 101*
- 10:00 am – 11:00 am** Applications of Nanoscale Infrared Spectroscopy for Polymers  
*L. Gong HEC 101*
- 11:00 am – 12:00 pm** Applications of Nanoscale Infrared Spectroscopy for Condensed Matter  
*L. Tetard HEC 101*
- 12:00 pm – 1:00 pm** Lunch *Research 1 101*
- 1:00 pm – 8:00 pm** Kennedy Space Center (registration required)  
Bus departs at 1.00pm – *meeting in Research 1 101*

## Saturday, September 23<sup>rd</sup>, 2023

### Session IV: Advances in Nanoscale Infrared Spectroscopy and Imaging

- 10:00 am – 11:00 am** Multifrequency Infrared Atomic Force Microscopy  
*L. Tetard HEC 101*
- 11:00 am – 12:00 pm** PeakForce Infrared Microscopy  
*X. G. Xu HEC 101*
- 12:00 pm – 1:00 pm** Lunch *Research 1 101*

### Session V: Demonstrations and Applications of Nanoscale Infrared Spectroscopy

- 1:00 pm – 4:00 pm** Instrument demonstration  
*NanoIR2, IconIR - Research 1 101 and 232*