

14th North American FT MS Conference

Granlibakken Tahoe
Tahoe City, California
March 30 – April 3, 2025

Conference Program

Sunday 5:00 p.m.-10:00 p.m. Check-in (Lobby) – follow signs to
Registration

March 30

Session I. Mountain Ballroom

7:00 p.m. **Welcome: Kristina Håkansson and Ryan Rodgers**
National High Magnetic Field Laboratory/Florida State University

7:05 p.m. **Jennifer Brodbelt**
University of Texas at Austin
“New Developments and Applications of Ultraviolet Photodissociation
Mass Spectrometry”

There will be a mixer (drinks and hors d'oeuvres) following in the GranHall.

Monday 7:30 a.m. - 8:25 a.m. Breakfast – GranHall
March 31 Registration Open

Session II. Mountain Ballroom

8:30 a.m. **Ron Heeren**
Maastricht University
“Innovations in FTMS Based Molecular Imaging”

9:00 a.m. **Rebecca Jockusch**
University of Toronto
“Fluorescence Spectroscopy and Tomography in an FT-ICR”

9:30 a.m. **Carlos Afonso**
University of Rouen
“Evaluation of an 18 T FTICR Mass Spectrometer for Comprehensive
Isobaric and Isomeric Level Analysis in Highly Complex Mixtures”

10:00 a.m. #1-5 Poster highlights

10:30 a.m. Break – Prefunction/Solarium

Session III. Mountain Ballroom

- 11:00 a.m. Pei Su**
Northwestern University
“Unravelling the Spatial and Single Cell Proteome using Orbitrap-Based Single Molecule Mass Spectrometry”
- 11:30 a.m. Thomas Borch**
Colorado State University
“Post-Wildfire Rainstorms Affect Stream and Drinking Water Quality”
- 12:00 p.m. David Goodlett**
University of Victoria
“Characterization of Lipopolysaccharides in Outer Membrane Vesicles and Vaccine Conjugates via FAIMS and KMD Analysis”
- 12:30-1:30 p.m. Lunch – GranHall**

Session IV. Mountain Ballroom

- 1:30 p.m. Christopher Wootton**
Bruker Daltonics
“A Gated-TIMS FT ICR-MS Instrument to Decipher Isomeric Content of Complex Organic Mixtures, Protein Conformations, and Imaging”
- 2:00 p.m. Lissa Anderson**
National High Magnetic Field Laboratory/Florida State University
“A Novel Approach to *De Novo* Sequencing for Top-Down Proteomics”
- 2:30 p.m. Petr Novák**
Charles University in Prague
“Beautiful Friendship of Hydroxyl Radicals and High-Resolution Mass Spectrometry for Structural Characterization of Protein-DNA Complexes”
- 3:00 p.m. #6-10 Poster highlights**
- 3:30 p.m. Break – Prefunction/Solarium**

Session V. Mountain Ballroom

- 4:00 p.m. Michael Goodwin**
Thermo Fisher Scientific
“Improved Signal Processing for Orbitrap-Based Charge Detection Mass Spectrometry”
- 4:30 p.m. Will Kew**
Pacific Northwest National Laboratory
“Opportunities for Omics with Hybrid Orbitrap 21T ICR Mass Spectrometry”
- 5:00 p.m. #11-14 Poster highlights**

6:15-7:30 p.m. Dinner- GranHall

8:00-10:00 p.m. **Poster Presentations (Mountain Ballroom).**

Tuesday 7:30 a.m. - 8:25 a.m. Breakfast – GranHall
April 1 Registration Open

Session VI. Mountain Ballroom

8:30 a.m. **Carlito Lebrilla**
University of California, Davis
“Probes for Revealing Protein-Protein Interactions in the Cell Membrane”

9:00 a.m. **Madeline Colley**
Vanderbilt University
“1,000,000 Resolving Power at 10 μm Spatial Resolution with a Prototype MALDI TIMS-FT-ICR MS”

9:30 a.m. **Yury Tsybin**
Spectroswiss
“High-Performance Data Acquisition in FTMS and CDMS”

10:00 a.m. **Boniek Gontijo Vaz**
Federal University of Goiás
Predicting Complex Mixture Properties Using FT-ICR MS”

10:30 a.m. **Alan Kádek**
Czech Academy of Sciences
Zapping Ions – Coupling an FTICR with UV and IR Lasers

11:00 a.m. Conference Photo – Mountain Deck

Open afternoon to explore Lake Tahoe

Wednesday 7:30 a.m.-8:55 a.m. Breakfast – GranHall
April 2 Registration Open

Session VII. Mountain Ballroom

9:00 a.m. **Scott McLuckey**
Purdue University
“The Development of an Electrostatic Linear Ion Trap as a Stand-Alone Tandem Mass Spectrometer”

09:30 a.m. **Ying Ge**
University of Wisconsin-Madison
“Advancing Native Top-Down Proteomics:
New Strategies in Structural Characterization and Proteoform Analysis”

10:00 a.m. **Germain Salvato Vallverdu**
Université de Pau et des Pays de l'Adour
Untargeted and Automatic FT-MS Data Processing of Complex Mixtures from Mass Differences Analysis: Classification, Calibration, and Attribution

10:30 a.m. **Break – Prefunction/Solarium**

Session VIII. **Mountain Ballroom**

11:00 a.m. **Christopher Rüger**
University of Rostock
“Chemical Characterization of Wildfire Aerosol Emissions and Products of Atmospheric Aging by Ultrahigh Resolution Mass Spectrometry”

11:30 a.m. **Kristina Håkansson**
National High Magnetic Field Laboratory/Florida State University
“Precursor Ion Size Effects in Tandem Mass Spectrometry of Post-translationally Modified Peptides and Proteins”

12:00 p.m. **Boone Prentice**
University of Florida
“Lipid Isomer Identification in Imaging Mass Spectrometry via Gas-Phase Ion type Manipulation”

12:30-1:30 p.m. **Lunch – GranHall**

Session IX. **Mountain Ballroom**

1:30 p.m. **Luca Fornelli**
University of Oklahoma
“On the Utility of Spectral Simplification for the Characterization of Proteoforms in Orbitrap FTMS”

2:00 p.m. **Francisco Fernández-Lima**
Florida International University
“Addressing DOM Complexity with TIMS-FT ICR MS/MS and Machine Learning”

2:30 p.m. **Ryan Julian**
University of California, Riverside
“Site-Specific Photodissociation of Peptide Bonds: a New Tool for Top-Down Proteomics”

3:00 p.m. **Break – Prefunction/Solarium**

Session X. **Mountain Ballroom**

3:30 p.m. **Franklin Leach, III**
University of Georgia
“Exploration of Orbitrap Instrumentation, beyond the limits...”

4:00 p.m. **Pierre Giusti**
TotalEnergies
“Advanced Molecular characterization of passivation layers in Lithium-ion batteries BY FTICR imaging Mass Spectrometry”

4:30 p.m. **Jeff Agar**
Northeastern University
“Replacing “OR” Logic and Mass Accuracy with “AND/OR” Logic and Mass Resolving Power, as the Basis for Peak Assignment in Dense Mass Spectrometry Data”

Session XI. Mountain Ballroom

5:15 p.m. Pre-Dinner Mixer

6:00 p.m. **Christopher Hendrickson**
National High Magnetic Field Laboratory/Florida State University
“~~51~~ 34 years of FT-ICR Mass Spectrometry, Beginning with the Teenage Years”

7:00-10:00 p.m. Conference Banquet and Final Mixer – GranHall

Thursday Checkout and Depart by 11:00 a.m.
April 3