

## **Ion Mobility Interest Group**

### **Ion Mobility Spectrometry: Highlighting diverse applications**

Tuesday, June 4, 2024

Anaheim, CA

**Presiding:** Elyssia S. Gallagher (Baylor University) and Jim Prell (University of Oregon)

**Summary:** The ASMS 2024 Ion Mobility Workshop focused on different applications of ion mobility-mass spectrometry (IM-MS). The workshop included five “flash” talks (approximately 7 min each) from current graduate students, followed by a Q and A session with the graduate students leading the discussion with the audience. All speakers were selected based on their poster abstracts. Prior to presenting at ASMS, the presiders (Gallagher and Prell) met with each speaker individually (or with their research advisor) on Zoom to give suggestions on their presentation, identify themes within the five talks, and develop a series of questions to engage the speakers if the audience members were slow to participate in the Q and A.

The speakers were as follows:

1. David Williamson (a 5<sup>th</sup> year graduate student from the Nagy lab at the University of Utah) described effect of moments of inertia in high-resolution IM-MS.
2. Heidi Sabatini (a 1<sup>st</sup> year graduate student from the Chouinard lab at Clemson University) described the use of SLIM (structures for lossless ion manipulations) for analysis of PFAS compounds.
3. Robert Shepherd (a 2<sup>nd</sup> year graduate student from the Sanchez lab at UC Santa Cruz) described the use of trapped IM for high-throughput screening of enzyme products.
4. Thomas Tilmant (a senior graduate student from the Quinton lab at Université de Liège) described the impact of mobile protons in gas-phase unfolding of proteins.
5. Kacie Evans (a 2<sup>nd</sup> year graduate student from the Russel lab at Texas A & M University) described the of Fourier Transform-IM for the analysis of GroEL complexes.

**Workshop attendance:** 85-100 people.