

Ion Mobility Interest Group
Overcoming Challenges in Modern Ion Mobility

Wednesday, June 4, 2025

Baltimore, MD

Presiding: Christopher Chouinard (Clemson University) and Elyssia S. Gallagher (Baylor University)

Summary: The ASMS 2025 Ion Mobility Workshop focused on challenges in the ion mobility field. The workshop began with a ~10 min introductory talk from Erin Baker (UNC) to discuss the basics of ion mobility and introduce the challenges we face. We then had three “flash” talks (approximately 7 min each) from ion mobility researchers at various career stages, followed by a Q and A session with all of the speakers forming a panel; a fourth flash talk speaker had been invited, but had to cancel ASMS travel at the last minute due to illness. All speakers were selected based on their poster abstracts. Prior to presenting at ASMS, the presiders (Chouinard and Gallagher) met with each speaker individually on Zoom to give suggestions on their presentation, identify themes within the 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. Erin Baker (Professor, UNC) – Introductory talk on “Overcoming Challenges in Modern Ion Mobility Spectrometry”
2. Karly Serrano (1st Year Graduate Student, Vanderbilt) – “The Analytical Challenge of PFAS Isomer Separation: Solutions Through Ion Mobility–Mass Spectrometry”
3. Chao Pang (Post-Doc, BYU) – “Overcoming cIMS Limitations: Noncovalent Crown Ether-Assisted Separation of Glycosphingolipid Stereoisomers
4. Fanny Caroline Liu (Research Faculty, FSU) – “Protein Conformational Heterogeneity by Experimental and Computational Ion Mobility Spectrometry”

Workshop attendance: 140 people.