



**ASMS Fall Workshop  
Ion Mobility Mass Spectrometry**

Co-Organizers: Matthew F. Bush, *University of Washington*  
& Alexandre A. Shvartsburg, *Wichita State University*

**November 6 - 7, 2014  
Seattle Crowne Plaza  
Seattle, WA**

Name: \_\_\_\_\_

**2014 ASMS FALL WORKSHOP  
ION MOBILITY MASS SPECTROMETRY**

Organizers: Matthew F. Bush, *University of Washington*  
& Alexandre A. Shvartsburg, *Wichita State University*

**THURSDAY, NOVEMBER 6**

8:00 - 9:00 Pick up name badges and workshop handouts, *Lobby*  
**Light Continental Breakfast**, *Evergreen Ballroom*

**FUNDAMENTALS & INSTRUMENTATION**, *Evergreen Ballroom*

9:00 - 9:50 Principles, Operational Parameters, and Performance Metrics  
Herbert H. Hill, *Washington State University*

9:50 - 10:40 Conventional IMS/MS Instrumentation  
David E. Clemmer, *Indiana University*

10:40 - 10:55 **Coffee Break**

10:55 - 11:45 Differential IMS (FAIMS): Fundamentals and Analytical Platforms  
Alexandre A. Shvartsburg, *Wichita State University*

11:45 - 12:15 Panel Discussion: Future of Ion Mobility Instrumentation

12:15 - 1:45 **Group Lunch**, *Parkside Room, provided by ASMS*

**TARGETED SEPARATIONS & DETECTION**, *Evergreen Ballroom*

1:45 - 2:35 Ambient Ion Mobility Spectrometers for Pharmaceutical Forensics  
Facundo M. Fernández, *Georgia Tech*

2:35 - 3:25 Environmental, Metabolomic, and Security Applications  
Herbert H. Hill, *Washington State University*

3:25 - 3:40 **Coffee Break**

3:40 - 4:30 Localizing Post-Translational Modifications and Sequence Inversions  
Alexandre A. Shvartsburg, *Wichita State University*

4:30 - 5:00 Panel Discussion: IMS in lieu of LC for Rapid Analyses?

5:00 - 6:00 **Happy Hour**, *Parkside Room, dinner on your own*

## FRIDAY, NOVEMBER 7

8:00 - 9:00      **Light Continental Breakfast**, *Evergreen Ballroom*

### **PROTEOMICS & SYSTEMS BIOLOGY**, *Evergreen Ballroom*

9:00 - 9:50      High-Throughput Separations of Proteolytic Digests  
David E. Clemmer, *Indiana University*

9:50 - 10:40    FAIMS Pre-Fractionation in Bottom-Up Proteomics  
Helen J. Cooper, *University of Birmingham, UK*

10:40 - 10:55    **Coffee Break**

10:55 - 11:45    Systems, Synthetic, and Chemical Biology Strategies and Applications  
John A. McLean, *Vanderbilt University*

11:45 - 12:15    Panel Discussion: Processing and interpreting IMS/MS data in “omics”

12:15 - 1:45      **Group Lunch**, *Parkside Room, provided by ASMS*

### **STRUCTURAL MASS SPECTROMETRY**, *Evergreen Ballroom*

1:45 - 2:35      Collision Cross Sections in Biomolecular Structural Analysis  
Matthew F. Bush, *University of Washington*

2:35 - 3:25      Peptide Assembly: Structures and Mechanisms  
Michael T. Bowers, *University of California, Santa Barbara*

3:25 - 3:40      **Coffee Break**

3:40 - 4:30      Determination of Glycans and Glycoconjugates Structure  
Catherine E. Costello, *Boston University School of Medicine*

4:30 - 5:00      Panel Discussion: State-of-the-Art Ion Mobility Calculations