

# PROGRAM OF EVENTS

**Monday, June 4, 2018**

- 7:30 Registration Opens
- 8:00 Icebreaker Breakfast
- 9:00 Welcome

## Short Courses

- 9:10 Introduction to Stable Isotope Mass Spectrometry
  - Peter Stow, ISOMASS Scientific Inc.
- 10:10 Data origins (a.k.a. Where do the numbers come from?)
  - Kerry Klassen, University of Ottawa
- 11:10 Break and Refreshments
- 11:30 Introduction to Elemental Analysis (EA)
  - Scott Hughes, EA Consumables Inc.
- 12:30 Lunch
- 1:30 Introduction to Gas Chromatography (GC)
  - April Vuletich, Queen's University

## Presentations

- 2:30 How the Elemental Analyzer came to be a routine tool in geochemistry and ecology: How chromatography revolutionizes EA-IRMS
  - *Charles B. Douthitt*, Christopher Brodie, Oliver Kracht, Andreas Hilkert
- 2:50 Break and Refreshments
- 3:10 Stable EA consumables for stable isotope analysis
  - *Scott Hughes*
- 3:30 More for less in EA-IRMS: getting more signal from lower concentrations, a story of high sensitivity
  - *Christopher Brodie*, Oliver Kracht, Andreas Hilkert, Charles Douthitt
- 3:50 Introducing ArDB: the cutting-edge analytical results database and data visualisation software from Elementar
  - *Sam Barker*, Kyle W. R. Taylor, Michael Sudnik, Michael Seed
- 4:10 Does regulation or depletion of a high pressure CO<sub>2</sub> cylinder effect the <sup>13</sup>C and <sup>18</sup>O isotope ratios?
  - *Richard Socki*, Anuj Kumar, Tracey Jacksier
- 4:30 Improvements in sensitivity in IRMS measurements
  - *Helen Atkinson*, Steve Welsh
- 4:50 Closing remarks and instructions
- 6:30 Gala Banquet

## Tuesday, June 5, 2018

8:50 Welcome and Announcements

### Keynote Address

9:00 Out of this World: Stable Isotope Measurements in Planetary Science  
- Dr. Jennifer Stern, NASA Goddard

10:00 Poster presentations – authors available for discussion

10:20 Break and Refreshments

### Presentations

10:40 New carbonate reference material, USGS44, a replacement of LSVEC—a process in the determination of  $\delta^{13}\text{C}$  value  
- *Haiping Qi*, Tyler Coplen, Heiko Moossen, Willi Brand, Anita T. Aerts-Bijma, Harro A.J. Meijer

11:00 Developing 'in-house' hydrogen isotope organic reference materials  
- *Tessa Plint*, Fred. J. Longstaffe, Keith. A. Hobson

11:20 A tale of 3 sugars, part 2  
- *Michelle Chartrand*, Juris Meija and Zoltan Mester

11:40 Addressing data comparability in the creation of combined datasets of bioapatite C and O isotopic compositions  
- *Lesley A. Chesson*, Gregory E. Berg, and Laura A. Regan

12:00 Announcements and Instructions

12:10 Lunch

1:10 Board shuttles to Museum Conservation Institute (MCI)

### MCI Laboratory Tour

2:10 Group 1: MCI Lab Tour  
Group 2: Break-out sessions with refreshments

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Group 2: MCI Lab Tour

5:10 Instructions, board shuttles to downtown

6:00 User Forum | Holiday Inn – Capitol, Ballroom

## Wednesday, June 6

8:50 Welcome and Announcements

### Presentations

9:00 Do not be trumped by CSIA challenges from sample collection to sample measurement  
- *April Vuletich*

9:20 Safety concerns in the measurement of chloride stable isotopes  
- *Paul Eby*

9:40 Prototype coded aperture miniature mass spectrometer using a cycloidal sector mass analyzer  
- *Jason J. Amsden, Philip J. Herr, David M. W. Landry, William Kim*

10:00 Exploring isotopic variation in carbonates and hydrous minerals using laser spectroscopy: new insights on sample preparation and application to hydrothermal systems research  
- *John A. Mering, Shaun L. L. Barker, Ben Andrew*

10:20 Break and Refreshments

10:50 Dual analyses of carbon and oxygen stable isotopes in cellulose – by TCEA-IRMS  
- *Wei Huang, Laia Andreu-Hayles, Rose Oelkers, Caroline Leland*

11:10 Analysis of  $\delta^{15}\text{N}$  of wood by CF-EA-IRMS  
- *Stephen Taylor*

11:30 Postmortem isotope ratio fidelity of human hair throughout outdoor decomposition  
- *Tiffany B. Saul, Gwyneth W. Gordon, Brett J. Tipple, Lesley A. Chesson, Dawnie W. Steadman*

11:50 Fidelity of isotope ratios in burned bones  
- *Julianne Sarancho, G. Gordon, J. Eerkens, C. Hopkins, E. Cunha, D. Goncalves, I. Oliveira-Santos, A. Vassalo*

12:10 Round-robin study of lemon juice adulteration using cavity ring down spectroscopy and isotope ratio mass spectrometry  
- *Madhavi Mantha, Kevin Kubachka, John Urban, Christine France, William Mark, Michelle Chartrand, Haiping Qi, Anatoly Chernyshev, Sylvain Decoeur, and Jonathan Hache*

12:30 Lunch

1:30 Problem solving in compound-specific analysis of nucleic acid related molecules for anti-doping purposes: the case of AICAR  
- *Frédéric Séguin, Karine Lalonde, Christiane Ayotte, Yves Gélinas*

- 1:50     **Aerosol formation as a fractionation pathway in Titan's atmosphere**  
- *Scott T. Wieman, Melissa S. Ugelow, Melissa G. Trainer, Jennifer C. Stern, Madeline C. Roach, Josh A Sebree*
- 2:10     **Using stable water isotopes to characterize pathways of subsurface P loss in a ditch-drained field**  
- *Lauren R. Mosesso, Amy L. Shober, Casey Kennedy, Anthony Buda, Amy Collick, Shawn Tingle*
- 2:30     **Quantifying the transfer of terrestrial organic matter into New Zealand submarine canyons using bulk and compound-specific stable isotopes techniques**  
- *Andrew Kingston, Daniel Leduc, Max Gibbs, Andrew Swales*
- 2:50     **Eutrophication around a mega-city in a mega-estuary: the perspective of dual nitrate isotopes in Hong Kong**  
- *Naomi Geeraert, Yvonne Yu Yau, Benoit Thibodeau, Xiuli Yan, Shu-Ji Kao, David M. Baker*

### **Wadleigh Prize**

- 3:10     **Wadleigh Student Prize Presentation**
- 3:30     **Additional breakout groups and Refreshments**
- 4:30     **Adjourn**