



Canadian Society
for Analytical Sciences and Spectroscopy

NEWSLETTER

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Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac															
		Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu		
		Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr		

National Executives of CSASS

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Marie-Pier Ouellet	Email: marie-pier.ouellet.4@umontreal.ca

This **Newsletter** is published by the Canadian Society for Analytical Sciences and Spectroscopy. The internet address of the society is : <http://www.csass.org>

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CSASS Announces the 64th International Conference and Analytical Sciences and Spectroscopy (**64th ICASS**)

August 10-12, 2020

**Ambassador Hotel and Conference Centre
1550 Princess Street, Kingston, Ontario K7M 9E3, Canada**

See <http://www.csass.org/ICASS.html> for details

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- ★ **2019 Gerhard Herzberg Award was given to *Yunjie Xu* (University of Alberta):** “Recent developments in quantitative chirality analysis”
 - ★ **2019 Thermo Fisher Scientific Spectroscopy Award was given to *Kevin Stamplecoskie* (Queen’s University):** “Atomically precise clusters: excited state properties and giant two-photon absorbance”
 - ★ **2019 Burgener Research Graduate Student Travel Award was given to *Alastair Kierulf* (Queen’s University):** “Developing the continuous on-line leaching method for use in bioaccessibility risk assessments of contaminated soils with inductively coupled plasma mass spectrometry”

Do you know...

Edgar F. Paski



Education:

B.Sc. Chemistry, University of Waterloo, Waterloo ON

Ph.D. Analytical Chemistry, University of British Columbia, Vancouver BC

Work Experience:

- Laboratory Manager, Rio Tinto Canadian Exploration Ltd., North Vancouver BC;
- Chemical and physical analysis of geological materials Chemist / Computer Scientist, Environment Canada, West Vancouver BC;
- Environmental materials, laboratory computer system Quality Manager, ASL, Vancouver BC;
- Laboratory Quality Management Instructor, British Columbia Institute of Technology, Burnaby BC;
- Created and instruct courses in Laboratory Quality Assurance, Analytical Atomic Spectrometry and Assayer Training (precious metals);
- Consultant for Rock and Minerals, Environmental Materials, Sampling for Chemical Analysis and Pulp & Paper;
- Assessor for ISO/IEC 17025:2017, Standards Council of Canada, CALA Canadian Association for Laboratory Accreditation;
- Assess laboratories to the ISO/IEC 17025:2017 Standard in North America, Central and South America, Africa, South-east Asia and Europe.

Professional interests:

- Analytical atomic spectrometry: FAAS, GFAAS, ICP-OES, MP-AES, ICP-MS, vapor generation Hg, As, Sb and Se;
- Precious metals by fire assay including gravimetric finish and instrumental finish using FAAS, MP-AES, ICP-OES, ICP-MS and INAA;
- Trace and ultra trace analysis of metals; speciation of metals in geological and environmental matrices;
- Classical wet analytical chemistry for inorganics;
- Ion Chromatography;
- Sampling for chemical analysis;
- Chemometrics;
- Luminescence spectrometry;
- FIS, SIA and other flow techniques;
- XRF, Elemental analysis techniques;
- Computer applications: Linux, Python, VB, VBA, Fortran;

Publications:

Over 140 presentations, national and international conferences.

Do you know...

Otto Herrmann



Education:

Ph. D. Analytical Chemistry (1979) McMaster University

B. Ed. Chemistry; Psychology & Sociology (1971) University of Toronto

B.Sc. Chemistry (1970) McMaster University

On-going post-graduate education via multiple short courses and seminars

Professional Affiliations:

- Member of American Chemical Society
- Director of Canadian Society for Analytical Sciences and Spectroscopy
- Utility Laboratory Managers Association (2 terms as chairman)

Expertise:

- Current Technical Specialties - atomic spectroscopy (AAS, ICPAES, ICPMS), UV-visible spectroscopy, Fourier transform infrared spectroscopy (all aspects of FTIR), continuous-flow analysis, fluorescence, classical wet chemistry (complexation, precipitation, titration, ion exchange, etc.), sample preparation, laboratory automation, chemical decontamination, chemical safety, laboratory information management system (LIMS), microcomputer hardware, laboratory design, project management;
- Lab audits – technical and operational;
- Lab design – layout, instrumentation, infrastructure needs (not engineering);
- Operate inter-laboratory QA program for power generation utilities;
- Provide instrument commissioning and staff training for clients;
- Provide advice regarding chemical safety and spill response;
- New product development under special projects;
- Develop MSDS for new products;
- Project Management including interdisciplinary teams;
- Application of the above to major environmental monitoring programs such as MISA (central lab coordinator for Ontario Hydro and serve on technical advisory committee with MOEEC) and Darlington New build Environmental Assessment; preventative maintenance programs, analysis of construction materials (alloys, cements, polymers), health and safety issues (e.g. identify unknown deposits for hazard evaluation and provide advice), generating station operation (troubleshooting, replacement materials for repair, QA programs; waste processing), heavy water processing and recovery;
- Served as department head for Kinectrics' Analytical and Waste Services, a multidisciplinary team of >40 professionals and technical staff who provide services ranging from environmental assessments to the design and implementation of processes for the separation of mixed waste (both nuclear and chemical hazard), the clean-up of heavy water to allow recycling and the identification and health assessment of unknown workplace contaminants as just some examples;
- Provide training on specialized topics for both internal and external technical staff.

Do you know...

Karen C. Waldron



Karen C. Waldron is currently a full professor in the Department of Chemistry at the Université de Montréal.

She obtained her B.Sc. at Queen's University in 1985 after which she did 4-month internship at the Nuclear Research Center (KFA) in Jülich, Germany. She returned to Queen's and completed her M.Sc. in Physical Chemistry in 1987 then worked as a lecturer at UNB-Saint John during 1987-88. She then went to U. of Alberta for her doctorate in Analytical Chemistry under the supervision of Norman J. Dovichi, working on new

detection and analysis methods coupled to capillary electrophoresis for protein sequencing applications. After obtaining her Ph.D. in 1993, Dr. Waldron completed 1-year NSERC Industrial Postdoctoral fellowship with SCIEX.

She joined the Department of Chemistry at U. de Montréal in November 1994 where her research since has focused on the development of micro scale analytical instrumentation and methods for biomolecule characterization and peptide mapping. She was a visiting professor at the ESPCI (Paris, France) in 2002-03, studying biological mass spectrometry with the group of Prof. Jean Rossier.

Dr. Waldron has mentored approximately 90 students and postdocs in the field of analytical chemistry, and has taught 14 different courses within the Faculties of Arts & Sciences, Medicine, and Pharmacy.

Outside the university, Dr. Waldron has been involved in several chemical societies, notably as vice president, then president, of the Division of Analytical Chemistry of the Canadian Institute for Chemistry from 2001 to 2007. She is currently on the Board of Directors of the Society for Microscale Separations and Bioanalysis, as well as being on the CSASS National Executive Committee as the Director for the Province of Quebec.

Kelly LeBlanc



Kelly LeBlanc received her PhD in Environmental Chemistry from Trent University in Peterborough, Ontario under the supervision of Professor Dirk Wallschläger. Soon after graduating, she joined the National Research Council in Ottawa where she is a Research Officer in the Chemical Metrology group.

Working in metrology – the science of measurement – has allowed Kelly to develop her skills in analytical chemistry, using techniques such as isotope dilution mass spectrometry to produce precise measurements with well-defined uncertainties. With the chemical metrology group, she works to produce Certified Reference Materials (CRMs), where her research focuses on trace metal speciation in these materials through the use of chromatography and mass spectrometry. Currently, her ongoing projects involve selenium speciation in various sample matrices.

Do you know...

Alan Lock



Alan Lock has over 15 years research experience as an environmental biogeochemist, with much of this experience focused on the analysis of soil/sediment, biological material, water, and air samples. He has completed more than 50 technical reports, conference manuscripts and peer reviewed publications.

A native of Sudbury, Ontario, he completed his B.Sc. in Environmental Earth Sciences and M.Sc. in Geology from Laurentian University. Following these achievements he accepted a position with the Centre for Environmental Monitoring at MIRARCO, Laurentian University where he developed to the position of projects leader while concurrently doing a part-time Ph.D. thesis in the Environmental and Life Sciences program at Trent University.

For the nearly 10 years at MIRARCO, Alan worked closely with undergraduate and graduate students, interns and post doctoral fellows training and guiding them in methods and techniques for environmental monitoring and analysis mostly related to mining impacts. He was an integral team leader building partnerships and collaborations with academia, governments and industries.

In 2010, Alan transferred to a new position as the manager of the Elliot Lake Research Field Station (ELRFS) laboratories of Laurentian University. Here he guided the day to day operations and quality control of the ISO:17025 accredited laboratory that provided services to both Laurentian University faculty and students and external industrial clients, particularly the analysis of 226Ra.

In 2016, “Doc Lock” completed his Ph.D., publishing three journal articles that investigated 1) advanced techniques for monitoring water quality; 2) validation of a sequential extraction procedure for soils and sediments that maintains inorganic arsenic species; and 3) time dependent batch reaction experiments to elucidate mechanisms and rates controlling arsenic mobility in lake sediments.

In 2017, Alan accepted the position as manager of the Perdue Central Analytical Facilities at Laurentian University and holds adjunct faculty positions with The School of the Environment at Laurentian University and with the Northern Ontario Medical School. Here he is leading the set-up of a new state-of-the-art analytical facility. Although involved with instruments like scanning electron microscope (SEM), DNA sequencers and liquid chromatography – mass spectrometry (LC-MS), his passion remains with inductively coupled plasma – mass spectrometry (ICP-MS), often coupled to an ion chromatography (IC) for speciation analysis of environmental samples (Cr, As, Hg). His current research interests focus on environmental chromium analysis. When not found in the lab “tinkering” with analytical equipment, Alan is likely drifting down the French River trying to catch his dinner.

Do you know...

Marie-Pier Ouellet



Marie-Pier Ouellet is currently a Ph.D. candidate in the Department of Chemistry at the University of Montréal.

Her home town is La Baie des Ha! Ha!, located in the region of Saguenay-Lac-Saint-Jean. As a French Canadian, she really started to learn English when doing her technical college (Cégep) diploma to be able to navigate the expanding world of analytical chemistry. As a doctoral student, she is currently working on improving the stability of immobilized proteolytic enzymes by crosslinking with glutaraldehyde in order to incorporate them into a microreactor or microfluidic format for peptide mapping and protein characterization.

She has several years of experience on student government at UdeM and is the former treasurer of the chemistry students association. As a student representative for CSASS, she will be the voice and ears of all students who are members of the Society. A fun fact about Marie-Pier: she owns two beautiful cats (actually they own her!). During her limited free time (from graduate studies obligations), she likes to play video games and read.

Don't be afraid to contact her by email, marie-pier.ouellet.4@umontreal.ca, for questions, advice or video gaming tricks (I'm currently stuck on the last level on Anno 1404 - please help me!). If you want to share pictures of cats, she will also be happy to hear from you! She hopes to meet you all at future CSASS related events.

Marie-Pier Ouellet est présentement une candidate au Ph. D dans le département de Chimie à l'Université de Montréal. Sa ville natale est La Baie des Ha! Ha!, située à l'embouchure du Fjord du Saguenay dans la région du Saguenay-Lac-Saint-Jean.

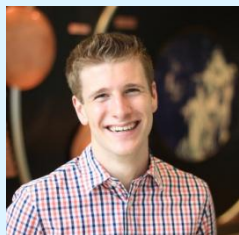
Étant une francophone, elle a commencé à apprendre réellement l'anglais durant ses études collégiales (Cégep) où est a réalisé un diplôme technique. Elle est maintenant capable de naviguer dans l'univers en extension qu'est la chimie analytique. Comme étudiante au doctorat, elle travaille présentement à l'amélioration de la stabilité des enzymes protéolytiques immobilisées par réticulation avec du glutaraldéhyde dans le but de les incorporer dans un microréacteur ou en microfluidiques pour la cartographie peptidique ou la caractérisation des protéines.

Elle a plusieurs années d'expériences dans son association étudiante à l'UdeM et en est même la précédente trésorière. En tant que représentante des membres étudiants du CSASS, elle sera la voix et les oreilles de tous les étudiants et étudiantes membres de la Société. Un fait amusant sur Marie-Pier : elle possède deux magnifiques chats (en fait se sont eux qui la possède!). Durant son temps libre limité (études graduées obligent), elle apprécie jouer à des jeux vidéo ou bien lire.

N'ayez pas peur de la contacter par courriel, marie-pier.ouellet.4@umontreal.ca, si vous avez des questions, des conseils ou des astuces de jeux vidéo (Je suis présentement coincée dans le dernier niveau d'Anno 1404 – Svp aidez-moi!). Si vous voulez partager des photos de chats, elle sera aussi très contente de vous en envoyer! Elle espère vous rencontrer chacun, chacune à de futurs événements reliés au CSASS.

Do you know...

Alastair Kierulf



Alastair Kierulf is a PhD candidate at Queen's University in Ontario, but was born and raised on the west coast of British Columbia.

His current research focuses on the development of a bioaccessibility method for contaminated soils using inductively coupled plasma mass spectrometry (ICP-MS).

Along with Marie-Pier Ouellet, he is one of the student representatives for the Canadian Society of Analytical Science and Spectroscopy (CSASS). As a student representative, his job is to have the voices of all undergraduate and graduate student members of the society heard. Through the student representatives, student members of the society can get the most out of their CSASS membership. Student members get access to special events organized by the local CSASS sections such as workshops, invited speakers, or visits to industries and government agencies. CSASS members also receive discounts on registration fees to workshops, ICASS, Spectr'Atom, and the Winter Conference on Plasma Spectroscopy. Students also receive a discounted rate on their CSASS membership! What student doesn't love a good discount?

When not in the lab, Alastair enjoys spending his time playing the trumpet, singing in the Kingston Chamber Choir, and getting eight hours of sleep a night (no easy feat when you're an analytical chemist!) Alastair is always available to contact over email (kierulf.a@queensu.ca) if you have questions, comments, concerns, or want to send a some quality spectroscopy memes (because who doesn't love a good meme?)

Highlights of the 63rd ICASS and Spectr'Atom 2019



▪ ORGANIZERS

- Diane Beauchemin (Queen's University), Chair
- Ahmed Al Hejami, Randa Althobiti, Alastair Kierulf, Ram Lamsal, Margaret MacConnachie, Patricia Maung, Calvin Palmer, Andrew Schug, Robert Teuma-Castelletti, Andrew Williams (Queen's University)
- Kingsley Donkor (Thomson River University)
- Eve Kroukamp (PerkinElmer Canada)
- Dominic Larivière (Université Laval)
- Sahar Mahshid (University of Toronto)
- Zhe She (Queen's University)
- Kevin Wilkinson (Université de Montréal)

▪ PARTICIPANTS

- 95 for ICASS + 24 for Spectr'Atom + 35 exhibitors (from 11 companies)
- 13 countries represented in addition to Canada: China, Czechia, France, Germany, Japan, México, The Netherlands, Scotland, Saudi Arabia, South Africa, Spain, Sweden, U.S.A.
- 7 sponsors: Agilent, Burgener Research Inc., Elemental Scientific, ICP Information Newsletter, Isospark, PerkinElmer, Thermo Fisher Scientific