

SERG/GRÉS News

Looking forward to CSSE 2019!

Dear SERG friends and members,

It is with great enthusiasm that we look forward to the next gathering of the Science Education Research Group (SERG) at the Canadian Society for the Study of Education (CSSE) conference in Vancouver. As usual we have planned a packed and engaging set of sessions that bring together scholars from across Canada and from international locations. You will find the SERG conference schedule on pages 6-12 of this newsletter. Please make a note of the keynote presentation by Professor Astrid Steele on Sunday June 2nd at 9:45 am and the Annual General Meeting (AGM) right after, on Sunday, June 2nd at 11:15 am. The annual SERG dinner will be held on Tuesday, June 4th at 6PM, at the celebrated *East is East Restaurant* on West Broadway (<http://eastiseast.ca/menu.html>).

We hope to see you all there!

See you soon in Vancouver!

Sincerely,

Michael-Anne (Mickie) Noble, Lilian Pozzer, Allison Gonsalves, Michel T. Léger, Ellen Watson, Roxana Yanez-Gonzales, Dawn Wiseman, and Todd Milford

Nous avons hâte de vous retrouver au SCÉE 2019!

Chers amis et membres du GRÉS,

C'est avec beaucoup d'enthousiasme que nous attendons la prochaine rencontre du *Groupe de recherche en éducation des sciences* (GRÉS) lors de la conférence de la *Société canadienne pour les études en éducation* (SCÉE) à Vancouver. Comme toujours, nous avons prévu une séquence de sessions animées et captivantes, rassemblant des spécialistes de partout au Canada et d'ailleurs. Vous trouverez l'horaire de la conférence du GRÉS aux pages 6-12 du présent bulletin. Veuillez prendre note du discours de Professeure Astrid Steele, dimanche, le 2 juin, à 9h45. Notez aussi la date de la *Assemblée générale annuelle*, soit après le discours d'ouverture, dimanche, le 2 juin, à 11h15. Après l'assemblée, nous nous rassemblons pour le souper GRÉS au *East is East* à partir de 18h00 (West Broadway, <http://eastiseast.ca/menu.html>). Nous espérons vous voir en grand nombre!

Au plaisir de vous voir bientôt à Vancouver!

Cordialement,

Michael-Anne (Mickie) Noble, Lilian Pozzer, Allison Gonsalves, Michel T. Léger, Ellen Watson, Roxana Yanez-Gonzales, Dawn Wiseman, and Todd Milford

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SERG/GRÉS

SERG President's Message

Dear SERG/GRÉS community,

I have had the pleasure of serving as president of SERG/GRÉS for 2018/2019. I am excited to see the variety of submissions to this year's conference including papers, posters, a symposium, round tables, a book symposium, a workshop and a pre-conference workshop!

I would like to take this opportunity to thank the members of the executive committee for their commitment and tireless effort over the year. Without their support and guidance, SERG/GRÉS would not continue to be the positive organization that it is. **Lilian Pozzer** serves as Conference Program Chair and Vice President. She has worked hard behind the scenes to manage the intricacies of the conference submissions and planning. **Allison Gonsalves** serves as Secretary, bringing you the newsletter and keeping us all aware of what is going on in the community. **Michel Léger** continues to serve as our Francophone Representative, with the important role of supporting our efforts for linguistic diversity in our community. **Roxana Yanez Gonzalez** joins **Ellen Watson** in the role of Graduate Student Representatives this year. Their voices are important additions to the SERG/GRÉS executive. Additionally, **Dawn Wiseman** continues to support us all in her role as Communications Officer. Lastly, I would like to thank our Past President **Todd Milford** who continues to support the executive team. His willingness to step up and help wherever needed is very much appreciated.

We are excited to have Dr. Astrid Steele (Nipissing University, Ontario) delivering the SERG/GRÉS 2019 keynote this year in Vancouver. Her talk, **Science Education - Perspectives and Purpose** will focus on elements of science education that, in her experience, are gradually developing and evolving to break down barriers between science and other disciplines. The notion of complexity and interconnectedness will be highlighted, with examples taken from her practice; the implications for teacher education will be explored. This keynote address will be followed by poster presentations – I hope that as many people as possible will join us for the conversations that this session is sure to spark.

For an update on other developments of the past year and to help us elect our new executive members, I encourage all SERG/GRÉS members and interested friends to attend the SERG/GRÉS AGM on Sunday June 2 at 11:15 am. Please review the minutes of our last meeting on the SERG/GRÉS website (<http://serg-gres.ca/>). At the AGM, we will be formally congratulating the winners of this year's SERG Awards. I am pleased to announce that the winner of the SERG Dissertation/Thesis Award is **Allison Ritchie (University of Toronto; Ontario Institute for Studies in Education (OISE))** for her dissertation *Participation, Positioning, and Power: Opportunities to Learn in a University Kinesiology Classroom*. The winner of the graduate student paper award is **Latika Raisinghani (University of British Columbia)** for her paper *Teaching science in cultural diversity-rich classrooms: Teachers' encountering religious oppositions*. Please join us to recognize the accomplishments of our junior colleagues.

After the AGM, we hope that everyone will join us for the annual SERG/GRÉS dinner at **East is East**, (3035 West Broadway). I would especially like to encourage graduate students to join us and meet other members of SERG/GRÉS in this less formal setting.

Thanks to all those who submitted papers and award applications to SERG/GRÉS this year as well as those of you who reviewed the many submissions. Special thanks go to the dissertation award adjudication committee: Astrid Steele, Todd Milford and Allison Gonsalves.

Finally, if I do not have the opportunity to thank you in person, allow me to take this opportunity to thank you for your continued involvement with and support of the SERG/GRÉS community.

Mickie Noble, President

congress 2019
OF THE HUMANITIES AND SOCIAL SCIENCES
June 1 - 7 | Vancouver, British Columbia



SERG Conference Welcome

Dear SERG members,

I hope you can join us in Vancouver for the 47th CSSE Conference, to take place from June 1st to 5th, at the University of British Columbia, in the beautiful Vancouver Point Gray campus. This year, the Science Education Research Group will have a strong presence at CSSE, with 46 presentations in the form of multiple paper sessions, symposiums, workshops, round tables and posters. We also have a pre-conference on Saturday, June 1st, from 9:00-12:30, which will take you for a walk through the beautiful Point Gray peninsula. Make sure you register for the pre-conference.

Our keynote speaker this year is Dr. Astrid Steele, from Nipissing University, who will present on Sunday morning, June 2nd. Her presentation will be on "Science Education – Perspectives and Purposes." Following our keynote speaker and concomitant poster session, we will hold our 2019 SERG Annual General Meeting, and you are all invited to participate.

This year, our SERG dinner will take place on Tuesday, June 4th at 6PM, at the celebrated East is East Restaurant on West Broadway. Members and guests joining us for dinner will enjoy live entertainment and complete dinner for a set price of \$40.00. Please RSVP to Lilian.Pozzer@umanitoba.ca by May 25th.

I would like to thank all the authors who submitted proposals to SERG, and, especially, I want to express my sincere appreciation and gratitude to each of the wonderful volunteers who diligently and thoroughly reviewed the more than 50 proposals we received for this year's conference; without your work, we would not be able to offer such a diverse and exciting program for this year's SERG conference sessions. A draft program of the conference can be found at the CSSE website (<https://tinyurl.com/y6r4fkqp>), and a draft schedule of all the SERG related sessions, as well as other sessions of interest to SERG members is attached to this newsletter (page 6). A revised version of the SERG conference sessions schedule will be available on the SERG website closer to the date of the conference.

I look forward to seeing you in Vancouver!

Lilian Pozzer

Grad student get together Tuesday, June 4th @ 4:30pm. Come and meet your peers! Contact the SERG grad student representative Roxana Yanez-Gonzales (ryane009@uottawa.ca) for more information.

SERG Annual General Meeting / Assemblée Générale Annuelle du GRÉS

Sunday, June 2nd / Dimanche 2 juin
11:15 am – 12:15 pm / 11h15 – 12h15

Agenda

1. Approval of Agenda
2. Approval of Minutes of 2018 AGM
3. Reports
 - a. President: Mickie Noble
 - i. Budget and membership
 - ii. Presentation of awards and travel bursaries
 - b. Vice-President/Conference Program Chair: Lilian Pozzer
 - c. Secretary: Allison Gonsalves
 - d. Francophone Representative: Michel Léger
 - e. Graduate Student Representatives: Ellen Watson and Roxana Yanez-Gonzales
 - f. Communications Officer: Dawn Wiseman
4. Nominations and Elections
 - a. President: Lilian Pozzer
 - b. Vice President: Allison Gonsalves
 - c. Secretary:
 - d. Graduate Student Representative:
 - e. Past President: Mickie Noble
5. Business arising from 2018 AGM
6. New Business
7. Motion to Adjourn

Ordre du jour

1. Adoption de l'ordre du jour
2. Adoption du procès-verbal de l'Assemblée Générale Annuelle 2018
3. Rapports
 - a. Présidente: Mickie Noble
 - i. Budget et adhésion
 - ii. Présentation des lauréats et des bourses de voyage
 - b. Vice-Président/Responsable à la programmation-Conférence : Lilian Pozzer
 - c. Secrétaire: Allison Gonsalves
 - d. Représentant francophone: Michel Léger
 - e. Représentants étudiants gradués: Ellen Watson and Roxana Yanez-Gonzales
 - f. Responsable aux communications: Dawn Wiseman
 - i. Nouveau URL
4. Nominations et élections
 - a. Président: Lilian Pozzer
 - b. Vice Président: Allison Gonsalves
 - c. Secrétaire:
 - d. Représentants étudiants gradués:
 - e. Président sortant: Mickie Noble
5. Affaires émergeantes de la Réunion annuelle générale 2018
6. Nouvelles affaires
7. Motion d'ajournement

2019 Keynote Address

Science Education: Perspectives and Purpose



Dr. Astrid Steele is an associate professor of education at Nipissing University in North Bay, Ontario. Her career as a formal educator began when she worked with incarcerated youth in an outdoor experiential education program in Calgary, Alberta; since then she has been a teacher and a learner in the Ontario college system, in a First Nations fly-in community in Northern Ontario, and in the Ontario Public School system in Northern Ontario. In 2009, Dr. Steele made the move to post-secondary education, doing what she loves - which is to share her passion for science and environmental education with teacher candidates. Dr. Steele's research continues to focus on the many intersections of environmental education with other school disciplines, and how these are enacted by educators.

Dr. Steele's address will focus on elements of science education that, in her experience, are gradually developing and evolving to break down barriers between science and other disciplines. The notion of complexity and interconnectedness will be highlighted, with examples taken from her practice; the implications for teacher education will be explored.

Graduate Student Travel Bursaries

SERG will be awarding two graduate student travel bursaries this year. One bursary will be designated for a student who is attending SERG for the first time, while the other will be available to any graduate student member of SERG. The bursaries will cover registration fees for CSSE and Congress. All attendees who are graduate members of SERG are eligible for the travel bursary whether they are presenting at the conference or not. Students may self-nominate by **May 20, 2019**, using the form available at

https://docs.google.com/forms/d/1Tgj5ZM_jyu64ZlwwtBmRLrcoG7tkn1JBSUQ8s8edjKo/viewform

Recipients will be randomly selected at the SERG AGM. Winners must be present.

Note: An individual may only receive a paper award or the travel bursary in any given year.

Bourses de voyage pour étudiants gradués

Cette année, le GRÉS offrira deux bourses de voyage à des étudiants gradués. Une première bourse sera décernée à un étudiant participant pour la première fois à la conférence du GRÉS. Une deuxième bourse sera offerte à un étudiant gradué membre du GRÉS. Ces bourses couvriront les frais d'inscription pour la SCÉÉ ainsi que pour le Congrès. Tous les étudiants gradués membres du GRÉS qui assistent ou qui présentent à la conférence sont éligibles pour la bourse de voyage. Pour toutes candidatures, veuillez remplir le formulaire suivant au plus tard, le **20 mai 2019**

https://docs.google.com/forms/d/1Tgj5ZM_jyu64ZlwwtBmRLrcoG7tkn1JBSUQ8s8edjKo/viewform

**Les récipiendaires seront sélectionnés au hasard lors de la réunion annuelle générale du GRÉS.
Les gagnants devront être présents.**

NB: Un individu ne peut recevoir qu'un seul prix au cours d'une année donnée.

SERG Sessions & Sessions of Interest Overview: June 1- June 5, 2019

Saturday, June 1st / Le Samedi, 1 juin

	Sunday/ Dimanche 2 June/ Le 2 juin	Monday/ Lundi 3 June/ Le 3 juin	Tuesday/ Mardi 4 June/ Le 4 juin	Wednesday/ Mercredi 5 June/ Le 5 juin
09:00-12:30	Pre-Conference: Stepping Toward a Sense of Place: A Forest 'Walk'shop. <i>Michael-Anne Noble (Royal Roads), Elizabeth Beattie (UBC), Sandra Scott (UBC), Hilary Leighton (Royal Roads)</i> <i>Christine Tippett (Ottawa), Dawn Wiseman (Bishop's)</i>			
08:15-09:30	CACS-ACÉC/ SERG-GRÉS Session/ Séance 1.3 Room/Salle ANGU 241 CATE-ACFE/ SERG-GRÉS Session/ Séance 1.11 Room/Salle SCRF 202	CACS-ACÉC/ SERG-GRÉS Session/ Séance 8.3 Room/ Salle ANGU 343 CASIE-ACÉEA/ CATE-ACFE Session/ Séance 8.8 Room/Salle PCOH 1001	IGEMM-GISÉMM Session/ Séance 15.22 Room/ Salle SCRF 310	CACS-ACÉC/ SERG-GRÉS Session/ Séance 22.4 Room/ Salle ANGU 295
09:45-11:00	SERG-GRÉS Session/ Séance 2.16: Keynote Speaker & Posters Room/ Salle ANGU Birmingham Centre	Session/ Séance 9.1: CCGSE- CCÉÉCSÉ Round Tables/ Tables rondes Room/ Salle PCOH Ballroom	Session/ Séance 16.2: Round Tables/Tables rondes Session/ Séance 16.3: Posters/Présentations visuelles Room/ Salle PCOH Ballroom	Session/ Séance 23.1 Round Tables/ Tables rondes Session/ Séance 23.2: Posters/Présentations visuelles Room/Salle PCOH Ballroom
11:15-12:15	SERG-GRÉS Session/ Séance 3.14: AGM/ AGA Room/ Salle ANGU 350	SERG-GRÉS Session/ Séance 10.19: Book Launch: The Current State of Science Education in Canada Room/ Salle ANGU 345		SERG-GRÉS Session/ Séance 24.13: Science & Technology Education for Critical and Active Civic Engagement Room/ Salle ANGU 343
12:15-13:15		CACS- ACÉC Session/ Séance 11.11: CACS AGM/AGA Room/ Salle ANGU 343	Session/ Séance 18.1: CSSE-SCÉÉ AGM/AGA Room/ Salle PCOH Ballroom	CAEP-ACP Session/ Séance 25.2 Room/ Salle SCRF 209
13:30-14:45	SERG-GRÉS Session/ Séance 5.17: STEM Teaching and Learning Room/ Salle ANGU 350	SERG-GRÉS Session/ Séance 12.17: Methods & Strategies in Science Teacher Education Room/ Salle ANGU 350 SERG-GRÉS Session/ Séance 12.18: Posters Room/ Salle ANGU CPA Hall	SERG-GRÉS Session/ Séance 19.16: Round Tables Room/ Salle PCOH 1002	SERG-GRÉS Session/ Séance 26.19: Technology Use in Teaching and Learning Science Room/ Salle ANGU 343
15:00-16:15	SERG-GRÉS Session/ Séance 6.18: Workshop: Publishing in CJSMTÉ Room/ Salle ANGU 350 SERG-GRÉS Session/ Séance 6.19: Engagement and Participation in Science Room/ Salle ANGU 343		SERG-GRÉS Session/ Séance 20.18: Conceptualizations of/ on Science Room/ Salle ANGU 343	
16:30-17:45	CSSE-SCÉÉ Plenary/ Plénière Room/ Salle SCRF 100	Grad Student Get-together – Location TBA		
18:00	CSSE-SCÉÉ Reception Room/ Salle PCOH Ballroom	UBC President's Reception Room/ Salle TBA	SERG-GRÉS Dinner <i>"East is East"</i>	

SERG Sessions and Sessions of Interest to SERG members at CSSE

Saturday 1 June / Le samedi 1 juin

<p>9:00 AM – 12:30 PM 9h00 – 12h30</p>	<p>Pre-Conference: <i>Stepping Toward a Sense of Place: A Forest 'Walk'shop.</i> <i>Michael-Anne Noble (Royal Roads), Elizabeth Beattie (UBC), Hilary Leighton (Royal Roads), Sandra Scott (UBC), Christine Tippett (Ottawa), Dawn Wiseman (Bishop's)</i></p> <p>Interested in exploring how to incorporate place identity/sense of place into your teaching? Have some ideas that you'd like to try but no idea how to implement them? Join us as we share our teaching experiences ranging from using lab and field science as an access point, to lessons that explore the interactions between ourselves and other members of the biosphere and help us to develop our own place identity/sense of place. In this 'walk'shop, we will go out onto the coniferous campus at UBC to nearby nature, into the thickets, through a swath of old growth, onto antlered paths at the brink of the beach. This walkshop is suitable for all mobility levels as the route is mostly flat and is wheelchair accessible. So, please join us as we spend time in some of UBC's special places, sharing our experiences and insights as we go; to develop a more conscious connection beyond the classroom by showing up, paying attention, and listening closely, to discover an integral, interactive relationship with the living world and begin to reclaim a sense of our place within that place.</p>
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Sunday 2 June / Le dimanche 2 juin

<p>8:15 – 9:30 AM 8h15 – 9h30 Room/ Salle: Henry Angus Building ANGU 241</p>	<p>CACS-ACÉC/ SERG-GRÉS Session/ Séance 1.3: Symposium-Panel/ Colloque-Panel Moving Beyond the Colonial Frontier Logics in STE(A)M Education: A Dialogue Between Indigenous People & Allies on Turtle Island Through Critical-Transdisciplinary Heuristics</p>
<p>8:15 – 9:30 AM 8h15 – 9h30 Room/ Salle: Neville Scarfe Building SCRF 202</p>	<p>CATE-ACFE/ SERG-GRÉS Session/ Séance 1.11: Multi-paper/ Plusieurs communications Environmental Education Praxis</p>
<p>9:45 – 11:00 AM 9h45 – 11h00 Room/ Salle: Henry Angus Building ANGU Birmingham Centre</p>	<p>SERG-GRÉS Session/ Séance 2.16: Keynote Speaker & Posters Session Science Education – Perspectives and Purposes Keynote Speaker: Dr. Astrid Steele (<i>Nipissing</i>) Posters Session</p> <p>Compiling 24 years of misconceptions in Canadian high school biology. <i>Travis Fuchs (UBC)</i> Reviewing Digitally Simulated Learning Environments and Cross-Curricular Competencies in Kinematics Education. <i>Stephanie Hladik (Calgary), Man-Wai Chu (Calgary), Marie-Claire Shanahan (Calgary)</i> The influence of science clubs in low-income communities on children's relationships toward school science. <i>Lydia E Carol-Ann Burke (OISE-UT), Ana Maria Navas Iannini (OISE-UT)</i> Crossing Cultural Borders in Science: Impact of Community Based Learning. <i>Virendra Verma (College of Mironesia), Latika Raisinghani (UBC)</i></p>

	<p>Focusing Efforts to Improve Gender Equity in Physics Education: A Pan-Canadian Physics Education Research Network. <i>Lindsay Mainhood (Queen's)</i></p> <p>Defining Scientific Competencies for Use in the Classroom. <i>Jessica Cockburn (Calgary), Man-Wai Chu (Calgary)</i></p> <p>Where STEM binds, and ST(eee)EM flows: A case for the where in STEM discourse and practice. <i>Hartley Banack (UBC)</i></p> <p>Investigating a School STEM Lab as a Site for Collaborative Inquiry: Exploring Makerspace Potential and Imbedded Creativity Through Reflective Practice. <i>James Gauthier (UBC), Marina Milner Bolotin (UBC), Douglas Adler (UBC), Samson Nashon (UBC)</i></p> <p>Understanding small-group interactions amongst students in a chemistry tutorial setting. <i>Shaily Bhola (Calgary), Marie-Claire Shanahan (Calgary)</i></p>
<p>11:15 AM – 12:15 PM 11h15 – 12h15 Room/Salle: Henry Angus Building ANGU 350</p>	<p align="center">SERG-GRÉS Session/Séance 3.11 SERG/GRÈS AGM/AGA</p>
<p>12:15 – 1:15 PM 12h15 – 13h15</p>	<p align="center">LUNCH / DÉJEUNER</p>
<p>1:20 – 2:45 PM 13h30 – 14h45 Room/ Salle: Henry Angus Building ANGU 350</p>	<p align="center">SERG-GRÉS Session/ Séance 5.17: Multi-paper/ Plusieurs communications: STEM Teaching and Learning</p> <p>STSE and STEM in Canada: Analysis of STEM teaching resources from three provinces. <i>Darren Hoeg (Alberta)</i></p> <p>Understanding Networks of Support for Underrepresented Students in STEM. <i>Allison Gonsalves, Hannah Chestnutt, Abigail Spilkevitz (McGill)</i></p> <p>Stewardship of the Land, Water and Ice: Implications for STEM Educational Opportunities In and Outside of the Classroom in Inuit Nunangat. <i>Jrene Rahm (Montréal), Jackie Kidd (Arctic Eider Society), Shirley Tagalik (Aqqiumavvik Society), Vincent L'Hérault (ARCTICConnexion), Tim Soucie (Expanded Leadership to Study Water Quality, Pond Inlet)</i></p> <p>The READ Dress Project: Student-directed STEAM inquiry and change in practice. <i>Dawn Wiseman (Bishop's)</i></p> <p>Utiliser la pensée design comme stratégie d'enseignement pour résoudre un problème environnemental dans le cadre des STIM. <i>Michel Leger (Moncton)</i></p>
<p>3:00 – 4:15 PM 15h00 – 16h15 Room/ Salle: Henry Angus Building ANGU 350</p>	<p align="center">SERG-GRÉS Session/ Séance: 6.18: Workshop The Elements of a High Quality Article: Publishing in the Canadian Journal of Science, Mathematics and Technology Education. <i>John William Wallace (OISE-UT)</i></p>

<p>3:00 – 4:15 PM 15h00 – 16h15 Room/ Salle: Henry Angus Building ANGU 343</p>	<p>SERG-GRÉS Session/ Séance 6.19: Multi-paper/ Plusieurs communications: Engagement and Participation in Science</p> <p>Using UDL (Universal Design for Learning) to create inclusive science classrooms. <i>Karen Goodnough (Memorial)</i></p> <p>Controversial science exhibitions: Deconstructing public engagement. <i>Erminia Pedretti, Daniel Atkinson, Ana Maria Navas Iannini (OISE-UT)</i></p> <p>Processes of Social Learning in Sustainability Research Teams. <i>Gabriela Alonso-Yanez (Calgary), Haydee Peralta, Marcella Ohira (Inter-American Institute for Global Change Research)</i></p>
<p>4:30 – 5:45 PM 16h30 – 17h45 Room/ Salle: Neville Scarfe Building SCRF 100</p>	<p>Session/Séance 7.1: CSSE Plenary /SCÉE Plénière Chair/Prés.: Lynn Thomas (<i>Sherbrooke</i>)</p>
<p>6:00 – 8:00 PM 18h00 – 20h00 Room/ Salle: Ponderosa Common Oak House PCOH Ballroom</p>	<p>CSSE Reception/ SCÉE Réception</p>

Monday 3 June / Le lundi 3 juin

<p>8:15 – 9:30 AM 8h15 – 9h30 Room/ Salle: Henry Angus Building ANGU 343</p>	<p>CACS-ACÉC/ SERG-GRÉS Session/ Séance 8.3: Multi-paper/ Plusieurs communications Equity and Identities in Education</p>
<p>8:15 – 9:30 AM 8h15 – 9h30 Room/ Salle: Ponderosa Commons Oak House PCOH 1001</p>	<p>CASIE-ACÉÉA / CATE-ACFE Session/Séance 8.8: Multi-paper/ Plusieurs communications Decolonizing Environmental Education for Different Contexts and Nations</p>
<p>9:45 – 11:00 AM 9h45 – 11h00 Room/Salle: Ponderosa Commons Oak House PCOH Ballroom</p>	<p>CCGSE-CCÉÉCSÉ Session /Séance 9.1: Round Tables/ Table rondes</p>
<p>11:15 AM – 12:15 PM 11h15 – 12h15 Room/ Salle: Henry Angus Building ANGU 345</p>	<p>SERG-GRÉS Session/ Séance 10.19: Symposium/ Colloque: Book Launch: The Current State of Science Education in Canada <i>Christine Tippett (Ottawa), Todd Milford (Victoria), Editors</i></p>
<p>12:15 – 1:15 PM 12h15 – 13h15 Room/ Salle: Henry Angus Building 343</p>	<p>LUNCH / DÉJEUNER CACS- ACÉC Session/ Séance 11.11: CACS- ACÉC AGM/AGA</p>

<p>1:30 – 2:45 PM 13h30 – 14h45 Room/ Salle Henry Angus Building ANGU 350</p>	<p align="center">SERG-GRÉS Session/ Séance 12.17: Panel: Methods & Strategies in Science Teacher Education</p> <p>Methods and strategies for understanding diversity, social and cultural history for elementary Science: the nature of food classification. <i>Sara Scharf, Erin Sperling (OISE-UT)</i></p> <p>Methods and Strategies for Exploring Engineering with Primary/Junior/Intermediate Teacher Candidates. <i>Michelle Dubek, Lydia E Carol-Ann Burke, Christina Phillips (OISE-UT)</i></p> <p>Methods and strategies for practice-based pedagogy in science teaching methods. <i>Allison Gonsalves (McGill), Dawn Wiseman (Bishop's)</i></p> <p>Methods and Strategies for STEM Inquiry: Science and Mathematics Integration (SAMI) Project. <i>Yovita Gwekwerere, Nahid Golafshani (Laurentian)</i></p> <p>Methods and Strategies to include nature in science: Engaging with nature in the lab, and outdoors. <i>Lorraine Lastiwka, Darren Hoeg (Alberta)</i></p>
<p>1:30 – 2:45 PM 13h30 – 14h45 Room/ Salle: Henry Angus Building ANGU CPA Hall</p>	<p align="center">SERG-GRÉS Session/ Séance 12.18: Posters</p> <p>Les environnements d'apprentissages riches en technologie et leur impact sur les compétences du 21e siècle. <i>Caitlin Furlong (Moncton)</i></p> <p>Exploring International College Students' Affective Experiences in a Biotechnology Pedagogical Context. <i>Sarah El Halwany (OISE-UT)</i></p> <p>The Integration of Science Process Skills: A Content Analysis of the 2016 Ontario Kindergarten Program. <i>Roxana Yanez-Gonzalez (Ottawa)</i></p> <p>Cooking, shopping, budgeting and tasting: Insights from a simple foods and intuitive eating workshop series in Toronto. <i>Daniel Atkinson (OISE-UT)</i></p> <p>How Science Curriculum Documents in British Columbia and South Korea Influence the Use of Laboratory Activities for Middle School Science Teachers. <i>KyungHo Jung (Victoria)</i></p> <p>Factors effecting career choices in Punjab, India. <i>Harleen Kaur, Bonita Davidson (Vancouver Island)</i></p>
<p>4:30 – 5:15 PM 16h30 – 17h15</p>	<p align="center">Grad Student Get-together – Location TBA Rassemblement des étudiants de 2e et 3e cycles – Lieu à déterminer</p>
<p>6:00 – 8:00 PM 18h00 – 20h00</p>	<p align="center">UBC President's Dinner (Location TBA)</p>

Tuesday 4 June / Le mardi 4 juin

<p>8:15 – 9:30 AM 8h15 – 9h30 Room/ Salle: Neville Scarfe Building SCRF 310</p>	<p align="center">SIGEMM-GISÉMM Session/Séance 15.20: Multi-paper/ Plusieurs communications Teachers & Museums</p>
<p>9:45 – 11:00 AM 9h45 – 11h00 Room/ Salle: PCOH Ballroom</p>	<p align="center">Session/ Séance 16.2: Round Tables/ Tables rondes Session/ Séance 16.3: Posters/ Présentations visuelles</p>
<p>12:15 – 1:15 PM 12h15 – 13h15 Room/ Salle: PCOH Ballroom</p>	<p align="center">LUNCH / CSSE AGM PETIT DÉJEUNER / AGA SCÉÉ</p>
<p>1:30 – 2:45 PM 13h30 – 14h45 Room/ Salle: Ponderosa Commons Oak House PCOH 1002</p>	<p align="center">SERG-GRÉS Session/ Séance 19.16: Round Tables</p> <p>A Teacher's Journey Through Inquiry and Into the Science Classroom. <i>Dana Bell (Victoria)</i></p> <p>Understanding Students Web-based Information Problem Solving (IPS). <i>Qingna Jin, Mijung Kim, Suzanna Wong (Alberta)</i></p> <p>Teaching Science in Cultural Diversity-rich Classrooms: Teachers' Encountering Religious Oppositions. <i>Latika Raisinghani (UBC)</i></p> <p>Learning Study in Teacher Education: Pre-service Teachers' Experiences in Planning Lessons with Variation Theory. <i>Miechie Leo, Yuen Sze Michelle Tan, Douglas Adler (UBC)</i></p> <p>Undergraduate Science Majors' orientations to science and teaching in an out-of-school-time science outreach program. <i>Alexandre Cavalacante, Allison Gonsalves (McGill)</i></p> <p>"Talking science": Exploring dialogue in the Franco-Ontarian high school science classroom context. <i>Josee Lebel (Ottawa)</i></p>
<p>3:00 – 4:15 PM 15h00 – 16h15 Room/ Salle: Henry Angus Building ANGU 343</p>	<p align="center">SERG-GRÉS Session/ Séance 20.18: Multi-paper/ Plusieurs communications: Conceptualizations of/ on Science</p> <p>A Journey of Change and Hope: An Autoethnography of my 40-Year Career as a Science Educator. <i>David Blades (Victoria)</i></p> <p>Touching the future: Enhancing university student's emotional and ethical understanding of the impact new science and technology has on society. <i>Alena Kottova (Victoria/ Vancouver Island)</i></p> <p>Twelfth Grade Students' Understandings of Scientific Inquiry: An International Collaborative Study. <i>Yovita Gwekwerere, Gary Holliday (Akron), Judith Lederman (Illinois Institute of Technology), Norman Lederman (Illinois Institute of Technology)</i></p>

	Representations of Science and Scientists in the Television Sitcom "Friends": Contributions to the Public Understanding of Science. <i>G. Michael Bowen (MSVU), Todd Milford (Victoria), Christine Tippett (Ottawa)</i>
6:00 – 9:00 PM 18h00 – 21h00	SERG-GRÉS Dinner <i>East is East Restaurant 3035 West Broadway</i>

Wednesday 5 June / Le mercredi 5 juin

8:15 – 9:30 AM 8h15 – 9h30 Room/ Salle: Henry Angus Building ANGU 295	CACS-ACÉC/ SERG-GRÉS Session/ Séance 22.4: Multi-paper/ Plusieurs communications: Sustainability in Education
9:45 – 11:00 AM 9h45 – 11h00 Room/Salle: PCOH Ballroom	Session/ Séance 23.1: Round Tables/Tables rondes Session/ Séance 23.2: Posters/ Présentations visuelles
11:15 AM – 12:15 PM 11h15 – 12h15 Room/ Salle: Henry Angus Building ANGU 343	SERG-GRÉS Session/ Séance 24.13: Symposium / Colloque: Science & Technology Education for Critical and Active Civic Engagement <i>John Bencze (OISE-UT), Sarah El Halwany (OISE-UT), Mirjan Krstovic (Peel District School Board), Minja Milanovic (OISE-UT), Kirby Mitchell (OISE-UT), Dave Del Gobbo (Peel District School Board), Nurul Hasan (OISE-UT), Zoya Padamsi (OISE-UT), Majd Zouda (OISE-UT), Kristen Schaffer (OISE-UT)</i>
12:15 – 1:15 PM 12h15 – 13h15 Room/ Salle: Neville Scarfe Building SCRF 209	CAEP-ACP Session/ Séance 25.2: Multi-paper/ Plusieurs communications: Motivation
1:30 – 2:45 PM 13h30 – 14h45 Room/ Salle: Henry Angus Building ANGU 343	SERG-GRÉS Session/ Séance 26.19: Multi-paper/ Plusieurs communications: Technology Use in Teaching and Learning Science The Effect of Modelling Innovative Technology Use in STEM Teacher Education on Teacher-Candidates' Knowledge for Teaching and Views on the Nature of Science. <i>Marina Milner-Bolotin (UBC)</i> Challenges and opportunities of a 'blended' professional development program with K-12 science teachers. <i>Xavier Fazio, Kamini Jaipal-Jamani (Brock)</i> Development of Scaffolding Indicators from Archival Problem-Based Learning Online Discussions of Distance and Blended Undergraduate Science Students. <i>Michael-Anne Noble (Royal Roads)</i> The Design and Use of Mobile Learning Apps in Marine Science Education for Youth at a Marine Science Centre in British Columbia. <i>Rachel Moll (Vancouver Island), Michael Hammond-Todd (Vancouver Island), Deanna Ferguson (Deep Bay Marine Field Station)</i>

SPECIAL AERA EVENT: The Canadian Science Education Research Group (SERG) and OISE's Science, Mathematics and Technology (SMT) Centre co-host a cross-Canada forum

Tuesday 9 April 2019

STEM in Teacher Education – A Canadian Perspective

Over the last decade or so, the STEM acronym has gained momentum as a hot new term in educational and public spheres in Canada. Despite the term's ubiquity, education systems have been slow to formally identify ways in which we should approach STEM education, much less how we should conceptualize what STEM means in a Canadian context. Meanwhile, teachers are being prepared for classrooms where they are expected to introduce the STEM construct to their students. In the cross-Canada forum ***STEM in teacher education: A Canadian perspective***, panelists and audience members will explore ways in which teacher educators in Canada are preparing pre-service teachers for this new avenue of teaching and learning while examining the potential challenges and affordances attending STEM education.

Panel members:

- Jesse Bazzul, University of Regina
- Karen Goodnough, Memorial University
- Marina Milner-Bolotin, University of British Columbia
- Carol Rees, Thompson Rivers University
- Christine Tippett, University of Ottawa

Afterthoughts provided by David Blades, University of Victoria

Moderator: Doug McDougall, OISE, University of Toronto; Editor-in-Chief, Canadian Journal of Science, Mathematics and Technology Education.

Please join us for a lively discussion and feel free to invite friends and colleagues. This event will be video-recorded in front of a live audience. Free admission. Light refreshments available. [RSVP](#).

4:30 pm to 6:00 pm, Tuesday 9 April 2019. NEXUS Lounge (12th floor, Room 12-130), Ontario Institute for Studies in Education (OISE), University of Toronto, 252 Bloor Street West, Toronto, ON

Graduate students and early-career researchers are invited to a post-AERA social! Come meet other fellow colleagues with interests in science, mathematics and technology education on Tuesday, April 9 from 6-8pm at the Nexus Lounge (12th floor) in OISE (252 Bloor Street West) following the panel event.

Please check your SERG membership details for this year! If they do not include SERG as a Special Interest Group, please contact Barb Ford at mmb_services@csse.ca so that she can make the necessary changes.