



The Royal Society of Canada presents:

2019 RSC PACIFIC SEMINAR & RECEPTION

## WAYS OF KNOWING IN OUR DRAMATICALLY CHANGING WORLD

With RSC College speakers: Sara Ellison, Philippe Tortell and Val Napoleon

May 9, 2019, 4:00 pm – 6:30 pm  
Government House, 1401 Rockland Ave.  
Victoria, British Columbia

RSC Pacific will hold its first event in Victoria, May 9 at Government House from 4:00-6:30pm. Three members of the RSC College will present their work, followed by a wine and cheese reception. The event is free to attend, but registration is required.

Please register online before 12:00pm PDT, May 2.

4:00pm            Opening remarks

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4:10pm            Sara Ellison | How We Know the Universe

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4:30pm            Philippe Tortell | Ships, Satellites, Super Computers and Social Media:  
How We Understand Arctic Climate Change

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4:50pm            Val Napoleon | What's Law Got to Do With It? Indigenous Law in a  
Changing World

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5:10pm            Wine and Cheese reception



## RSC COLLEGE | SPEAKER SERIES PRESENTATION DESCRIPTIONS

### **Sara Ellison | How We Know the Universe**

Department of Physics and Astronomy, University of Victoria

We live in an age in which humans have deciphered some of the universe's grandest details. In the last century alone, we have come to understand that our universe was formed from a hot fireball "Big Bang", is expanding ever more rapidly driven by a force we call "dark energy" and is full of elusive "dark matter". We have also discovered that supermassive black holes lurk in the centres of almost all galaxies. On smaller scales, we have recently discovered that planets around other stars are abundant, and the race is on to find signs of life beyond the Earth. This talk will share the details of the instruments that astronomers use to make these discoveries - many of which are Canada-driven.

### **Philippe Tortell | Ships, Satellites, Super Computers and Social Media: How We Understand Arctic Climate Change**

Department of Earth, Ocean and Atmospheric Sciences, The University of British Columbia | In collaboration with Joel Heath, Arctic Eider Society, and Sarah Rosengard Post-Doctoral Fellow UBC

The Arctic Ocean is currently undergoing large-scale transformation, with unprecedented warming, sea ice loss, altered circulation and biological distributions. Understanding the trajectory and future implications of these changes is of utmost importance to Canada and all other nations. We must therefore seek innovative ways to collect robust scientific information about the Arctic Ocean, while engaging meaningfully with northern communities and sharing knowledge in culturally-appropriate ways. In this presentation, I will discuss our efforts to bridge ship-based oceanography, satellite remote sensing and computer models with local northern knowledge through the innovative social media app, SIKU. This new digital tool, developed by the Arctic Eider Society, provides a means of connecting state-of-the-art science with local communities in meaningful ways, while also encouraging local participation in knowledge creation. Such collaboration is critical if we are to fully understand the future evolution of the Arctic environment and its impact on human livelihood.

### **Val Napoleon | What's Law Got to Do with It? Indigenous Law in a Changing World**

Faculty of Law, University of Victoria

The rebuilding and restatement of Indigenous law generates so many questions – as it should! What might we learn about gendered politics, power, internal oppressions, expectations, and transsystemic teaching? Why do these questions matter to Canada today? To the world? How can we create more complicated conversations?



## RSC COLLEGE SPEAKERS | BIOGRAPHIES

### Sara Ellison

Sara Ellison received her undergraduate degree, an MPhys in physics with space science and French, from the University of Canterbury, Kent, and her PhD in astronomy at Cambridge University in 2000. After completing her graduate work, Dr. Ellison spent three years as a postdoctoral fellow with the European Southern Observatory based in Chile, where she combined an independent research program with supporting telescope operations at the Very Large Telescope. In 2003, Dr. Ellison joined the faculty at the University of Victoria as a Canada Research Chair, where she became a full professor in 2014. Dr. Ellison is the recipient of several honours and awards including the American Astronomical Society's Annie Jump Cannon award and the Royal Society of Canada's Rutherford Memorial medal in physics. She was elected to the RSC's College of New Scholars and Artists in 2015.



### Philippe Tortell

Philippe Tortell is an oceanographer with broad interests in marine productivity and ocean-climate interactions. His research focuses on developing new methods to measure trace gases and optical properties in marine waters, using this information to better understand biological productivity and chemical cycles in the oceans. He has worked on research vessels around the world, from the Arctic to the Antarctic, seeking to understand how changing ocean conditions are affecting marine ecosystems. Dr. Tortell received his BSc in Biology at McGill University, and an MA and PhD in Ecology and Evolutionary Biology at Princeton University. He is a Professor in the Department of Earth, Ocean and Atmospheric Sciences, and the Department of Botany at the University of British Columbia. He has previously served as Director of UBC's Peter Wall Institute for Advanced Studies, a leading center for inter-disciplinary scholarship.



### Val Napoleon

Val Napoleon's current research focuses on Indigenous legal and governance. Several of her major initiatives include establishing and directing the Indigenous Law Research Unit and developing and directing the JID (dual JD and indigenous law degree) program launched in September 2018. She works with numerous Indigenous community partners across Canada on a range of Indigenous law research projects (e.g., Indigenous water law, harms and injuries, gender in Indigenous law, and lands and resources) and also with several national and international Indigenous law research initiatives. Some of the courses she teaches are Indigenous feminist legal studies, Gitxsan land law, property and transsystemic property, Indigenous legal theories, and Indigenous legal methodologies. She is from Saulneau First Nation (BC Treaty 8) and is an adopted member of the House of Luuxhon, Ganada, from Gitanyow (northern Gitxsan)

