



# Women in Science Speaker Tour

**Fingerprinting dissolved organic matter:  
An approach to a better understanding of the chemical nature of  
reduced carbon in the ocean**

**Research Talk by**  
**Dr. Heather Reader,**  
*Assistant Professor,  
Department of Chemistry  
Memorial University*

**Saint Mary's University**  
**Friday, November 2, 2018**  
**11:30 a.m.**  
**Atrium Building**  
**Room AT 101**

Heather Reader is a marine chemist who is broadly interested in the biogeochemical dynamics of marine dissolved organic matter (DOM). Marine DOM is an active and complex pool of carbon in the world's oceans and her research aims to decipher its role in the global carbon cycle using analytical chemistry. She received her Bachelor's of Science in Chemistry from the University of Calgary, and her PhD in Marine Sciences from the University of Georgia (USA). She is now an Assistant Professor at Memorial University of Newfoundland.

Marine DOM is an enigmatic pool of reduced carbon is comparable in size to the pool of atmospheric CO<sup>2</sup>. DOM plays a variety of roles in the ocean, acting as substrate for microbial growth, altering the light environment of the marine system, and interacting with and changing the bioavailability of dissolved metals. The chemical nature of DOM is not well understood, as it consists of thousands of largely uncharacterized compounds. However, it is the chemical nature of DOM that drives its reactivity or lack thereof in the marine environment. She will present work from her investigations into the chemical nature of DOM using both advanced analytical methods and simple bulk measurements combined with chemometrics.



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