

Student Research

**Graduate Student  
from Chemistry  
Department**



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Advisors

**Dr. Gayan Rubasinghege  
&  
Dr. Scott Elliott**

**Modeling Functional Organic Chemistry in Arctic  
Rivers: An Idealized Siberian System**

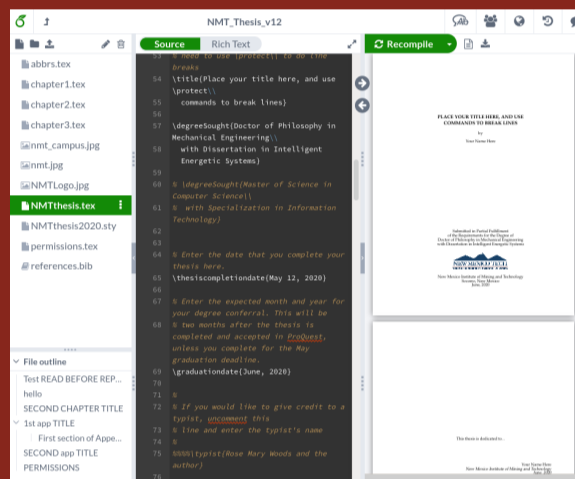
Arctic rivers play a crucial role in determining high latitude amplification of global climate change with the associated feedbacks. Polar discharge is massive and transports significant continental dissolved organic content to the climatologically sensitive Arctic Ocean. Dissolved organics in turn carry various functional groups along their macromolecular backbones which are capable of impacting biophysical properties, from the coast all the way out to the ice edge. In our own polar research here at NMT, we have performed reduced kinetic modelling for components of the generalized organic matter (protein, sugar, lipids, humics, etc.) as they interact structurally moving along idealized Arctic rivers. Our results suggest relatively slow transformation of the individual chemical species along any one flow system, while mixing and channel recombination dominate the determination of outlet concentration for most species. Threshold values for biophysical influence such as light attenuation are typically surpassed in the coastal riverine plume extending to the scale of peripheral seas -whether with regard to attenuation, surfactant level or other effect. Conclusions are mapped directly from headwaters all the way to the various outlets, so that in next-generation studies we can highlight the impact of permafrost degradation.

[Full Paper](#)

**Workshop**

**Thesis/Dissertation  
Formatting and  
Completion**

In this workshop we will go over thesis/dissertation formatting requirements and what is required by the center for Graduate Studies. We will go over both MS Word Template and Latex. All students and faculty are cordially invited.



**Friday Nov. 5th 2021  
12pm-2pm MST**

[Register Now](#)

**Important Dates**

**10/29**

**GSA Council Meeting**

The general GSA Council meeting will take place October 29th from 3-4 pm. The meeting is open to all graduate students. An email will be sent out this week with more information on the meeting.

**11/10**

**Last day to change grade option or withdraw from a course**

With exception to thesis, dissertation and independent study research credits all other courses must be taken for a letter grade to be counted towards your degree program.

**11/12**

**Thanksgiving Dinner**

The GSA will be holding the annual Thanksgiving dinner and food drive November 12, from 6:30-9 pm in the Fidel Ballrooms. All graduate students and their families are invited to join us for dinner, bingo, and a raffle with tickets provided from food donation.

**11/29**

**Completion paperwork for Fall graduation**

If you are planning to graduate in December the completed report of the advisory committee, iThenticate report from academic advisor, and ProQuest submission of the final thesis/dissertation must be submitted to and accepted by the Center for Graduate Studies or one final copy of an accepted independent study paper must be submitted to the student's advisor and advisory committee. Please refer to the [Completion Guideline](#) on the CGS website.

Student degrees are not complete until final materials have been approved by the Center for Graduate Studies and the student receives final acceptance via email from the ProQuest system.

**Scholarships**

There are some Endowed scholarship opportunities open to graduate students, which are listed [here on the Endowed Scholarship website](#). Native American graduate students should contact the Financial Aid Office for information for additional scholarship opportunities ([financial\\_aid@nmt.edu](mailto:financial_aid@nmt.edu)).

**Graduate Student Association**

<b>Mariana Huckabee</b> President	<b>Jacob Gochenour</b> Vice President	<b>Jessica Aerts</b> Information Officer
<b>Luis Contreras-Vidal</b> Appropriations Officer	<b>Magdalen Grismer</b> Travel Officer	<b>Qingqing Ling</b> Events Officer

**Center for Graduate Studies**

<b>Barbara Reynolds</b> Recruiting & Contracts	<b>Karen Chavez</b> Admission & Student Success	<b>Nahid Samimotlagh</b> AA Technology Support & Data Analytics	<b>Aly El-Osery</b> Dean of Graduate Studies
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*We love to hear from you*

<https://www.nmt.edu/gradstudies>  
Fidel Center - Room 275  
Tel: (575) 835-5513