

CURRICULUM VITAE

Sarah Rosolen

South Slave Research Centre
Aurora Research Institute
PO Box 45
Fort Smith, NT, Canada X0E 0P0

Tel: 1-867-872-7081
Email: srosolen@auroracollege.nt.ca

EDUCATION AND EMPLOYMENT HISTORY

Education

MEd (21st Century Teaching and Learning). University of PEI, Charlottetown, PEI. 2015.

BEd, University of Ottawa, Ottawa, ON. 2008.

MSc in Civil Engineering (Environmental), Queen's University, Kingston, ON. 2000. Thesis Title: An evaluation of adsorptive media for improving phosphorous removal in constructed wetlands. Supervisor: Bruce Anderson

BSc (Highest Honours) in Environmental Science, Carleton University, Ottawa ON. 1995. Thesis Title: Monitoring the competition between two 3-chlorobenzoate degraders in biofilms in a laboratory. Supervisor: Campbell Wyndham.

Professional Experience

2010-present Manager/Instructor, Aurora Research Institute, Aurora College
2008-2010 Teacher, Ottawa Carleton District and Western Quebec School Boards
2006-2008 Principal, Ros Environmental Consulting
2002-2006 Executive Director, Centre for Sustainable Watersheds (now Watersheds Canada)
2001-2002 Programs Director, Big Rideau Lake Association
1995-1997 Consultant, Innovative Management Solutions (formerly Fisher, Leff & Associates)
1994-1997 Research Assistant, Carleton University (Dr. Campbell Wyndham)

Other Experience

2000-2001 Capacity Coordinator for Sustainable Agriculture in Panama (Volunteer)

CURRENT ACTIVITIES

Research Interests

Decolonizing education, 21st century education, climate change, ecosystem science, water management, watershed stewardship, community-based environmental monitoring, participatory research, local knowledge, science outreach, information management, communicating northern research to community members and stakeholders.

Current Projects

Decolonizing learning in communities across Canada: Stories of hope. A partnership development project engaging researchers from University of New Brunswick - Mi'kmaq-Wolastoqey Centre, University of Toronto (Ontario Institute for Studies in Education), University of Saskatchewan (Indian Teacher Education Program), and University of Calgary (Department of Education) to explore different approaches to decolonizing education that are emerging across the country.

NWT perspectives on decolonizing education. A case study to gather perspective from local teachers, administrators, Bachelor's of Education graduates and Elders, and build a conversation on how decolonization is happening in the NWT.

Program development: Environmental stewardship training certificate. A review of job opportunities and skills development in support of creating a training program for both industry environmental monitors as well as community-based monitoring and Guardian-type projects.

Let's Talk Science and STEM Outreach. In partnership with Let's Talk Science and the South Slave Division Education Council, deliver hands-on STEM learning in classroom and provide professional development opportunities for teachers.

PUBLICATIONS

Journal Articles

Milne, R., **S. Rosolen**, G. Whitelaw, and L. Bennett. (2006). Multi-Party Monitoring in Ontario: Challenges and Emerging Solutions. *Environments*, 34(1): 11 – 24.

Providenti, M. A., R.E. Shaye, K. D. Lynes, N. T. McKenna, J. M. O'Brien, **S. Rosolen**, R.C. Wyndham, and I.B. Lambert. (2006). The Locus Coding for the 3-Nitrobenzoate Dioxygenase of *Comamonas* sp. Strain JS46 Is Flanked by IS1071 Elements and Is Subject to Deletion and Inversion Events. *Applied and Environmental Microbiology*, 72(4): 2651–2660.

Gagliardi, J. V., J. Angle, J. Germida, R. C. Wyndham, C. P. Chanway, R. J. Watson, C. W. Greer, T. McIntyre, H. H. Yu, M. A. Levin, E. Russek-Cohen, **S. Rosolen**, J. Nairn, A. Seib, T. Martin-Heller, and G. Wisse. (2001). Intact soil-core microcosms compared with multi-site field releases for pre-release testing of microbes in diverse soils and climates. *Canadian Journal of Microbiology*, 47(3), 237 – 252.

Papers in Conference Proceedings

Rosolen, S. and B. C. Anderson. 2000. Designing subsurface flow constructed wetlands for phosphorous removal. Proceedings – Canadian Society for Civil Engineering, 2: 516-522, Environmental Engineering Specialty Conference, London ON (June 2000).

Unpublished Reports and Other Contributions

Aurora Research Institute. (2014). AgNorth modular farm concept Phase 2: Pilot project implementation planning. **Co-author.**
http://nwtresearch.com/sites/default/files/agnorth_marketstudy_technicaldesign_final.pdf

Aurora Research Institute. (2013). AgNorth modular farm concept market study and technical design. **Lead author.**
http://nwtresearch.com/sites/default/files/agnorth_marketstudy_technicaldesign_final.pdf

Aurora Research Institute. (2013). Working together: Towards relevant environmental monitoring and research in the NWT. **Co-author.**
http://nwtresearch.com/sites/default/files/cimp_doc_final_low_res.pdf

Centre for Sustainable Watersheds. (2006). Water connections: A feasibility study towards understanding and improving access to water information in Canada. **Lead author.**

PRESENTATIONS

Invited, Plenary, and Keynote Presentations

S. Rosolen. (2017). Capacity, Leadership, and Training to Support Watershed Stewardship in the NWT. Presentation/Panelist, Water Stewardship Strategy Implementation Workshop, Dettah, NWT (November 2017). **Invited.**
<https://prezi.com/view/2CVYZ0Ss2nDc24wjw5Fo/>

Rosolen, S. (2006). Water Connections – Connecting Canada’s Water Community. Presentation to Canadian Water Resources Association Conference. Toronto, ON (June 2006). **Invited.**

Kent, R.A. and **S. Rosolen**. (2006). RésEau: Supporting Canada's Water Community to Build a National Water Information System and Network. Canadian Water Network - Linking Watersheds Workshop, Fredericton, NB (February 2006). **Invited**.

Rosolen, S. (2005). Involving Community in Water Resource Protection. Environment Canada - Ontario Region Lake Ontario Management Plan meeting at Biannual Meeting of International Joint Commission. Kingston, ON (June 2005). **Invited**.

Contributed Oral Presentations

Rosolen, S., D. Conrad, S. Stewart, A. Belczewski, C. George, J. Baker, T. Senk, B. Sleeper, and J. Rodriquez. 2018. Stories of Hope: Celebrating decolonized Indigenous education. Conference presentation, Think Indigenous Educators Conference, Saskatoon, SK (March 2018).

Rosolen, S., D. Conrad, D. Porter, and J. Fournier. 2018. Decolonizing learning: Exploring strategies and overcoming obstacles. Conference presentation, Northwest Territories Teachers' Association Educators Conference, Yellowknife, NT (February 2018).

Porter, D. and **S. Rosolen**. 2016. B. Ed., Our Journey. Conference presentation, Think Indigenous Educators Conference, Saskatoon, SK (March 2016).
http://prezi.com/gdrkfapc7nsp/?utm_campaign=share&utm_medium=copy

Rosolen, S. 2015. A Step Towards Transformative Education in the NWT. M.Ed. Capstone presentation, University of Prince Edward Island, Charlottetown, PE (July 2015).
http://prezi.com/gznxpphk64p/?utm_campaign=share&utm_medium=copy

Scott, A., M. Dixon, and **S. Rosolen**. 2013. Socio-Economic Benefits of Space Exploration for Canada. Conference presentation, Canadian Space Society Space Summit, Ottawa, ON.
https://www.researchgate.net/publication/264193146_Socio-Economic_Benefits_of_Space_Exploration_for_Canada

Rosolen, S. and B.C. Anderson. 1998. The Quintessential Wetland at Sunny Creek Estates: Using a constructed wetland to polish sewage lagoon effluent. Presentation at the Bay of Quinte Remedial Action Plan Sewage Treatment Plant Optimization Workshop, Trenton ON (December 1998).

Rosolen, S. and R.C. Wyndham. 1996. Validation of a Microcosm as a Standard Risk Assessment Tool for Predicting Survival of Genetically Engineered Microorganisms in the Environment. Presentation at the Ottawa Life Sciences National Conference and Exhibition, Ottawa ON (October 1996).

Contributed Poster Presentations

S.J. Connor, D.J. Baird, C. Curry, J. Gibson, M. Hajibabaei, K. Heard, B. Hussey, I. King, W. Monk, **S. Rosolen**, and S. Shokralla. 2014. Applying the Biomonitoring 2.0 approach in two contrasting sub-arctic tributaries of the Slave River, NWT, Canada. Poster presentation, Joint Aquatic Sciences Meeting, Portland, OR.
https://www.researchgate.net/publication/283643875_Applying_the_Biomonitoring_20_approach_in_two_contrasting_sub-arctic_tributaries_of_the_Slave_River_NWT_Canada/overview

RESEARCH FUNDING

Awarded – Current

Porter, D., S. Rosolen, S. Stewart, J. Baker, D. Conrad, and A. Sherman. 2016-2019. Social Sciences and Humanities Research Council. Decolonizing learning in communities across Canada: Stories of hope. \$239,946.

Awarded - Completed

Smith's Landing First Nation and S. Rosolen. 2015. Climate Change and Health Adaptation Fund for First Nations, Metis and Inuit Communities (Health Canada). Cassette Islands climate change vulnerability assessment. \$114,290.

Rosolen. 2015. Environment Canada. Cassette Islands climate change vulnerability assessment. \$12,000.

Rosolen, S. 2014. Department of Environment and Natural Resources. Legendary sky project, South Slave initiative. \$12,050.

Rosolen, S., M. Dixon, and A. Scott. 2012-2014. Canadian Northern Economic Development Agency. AgNorth study for northern food production. \$652,375.

AWARDS AND HONOURS

Awards

2013	Innovation Award, Aurora College
1998-2000	NSERC Postgraduate Award
1998-2000	Queen's Postgraduate Award
1999	Department of Civil Engineering Teaching Assistant of the Year
1995	Carleton University Senate Medal
1994	NSERC Undergraduate Student Research Award
1993	Governor General's Scholarship for Environmental Science

1990-94 Canada Scholarship
1990-94 Carleton University Entrance Scholarship

TEACHING ACTIVITIES

Courses Taught

At Aurora College

- 120-240 Geology. First or second year course for Environment and Natural Resource Program that provides an overview of geological processes and landforms. 2011 – present.
- 440-204 Science Education. Methods course in Bachelor of Education program, providing hands-on learning related to teaching science in K-9. 2012-present.
- 120-102 Ecology. First-year course for Environment and Natural Resources Technology Program that gives a general introduction to ecological processes and relationships. 2018.
- 102-105 Introduction to Environmental Sciences. First year course for Environment and Natural Resources Technology Program that provides an introduction to earth processes and interrelationships between the atmosphere, hydrosphere, geosphere and biosphere. 2012-2015.
- 120-111 Communications and Project Management. Second year course for Environment and Natural Resources Technology Program that sets the course for their technical project. 2015.
- 125.3 Environmental Science and Society. Introductory course in Bachelor of Education program introducing students to general scientific processes in the context of environmental science and conservation. 2012-2016.
- 440-107 Technological Applications in Education. Methods course in the Bachelor of Education program to introduce teacher candidates to technological applications for the classroom. 2017.
- EDUC411 Inquiry Project. Seminar format capstone class in Bachelor of Education program, introducing students to process of inquiry in relation to their professional development.

At Carleton University

GEOG 2900 Watershed Assessment and Management. 2nd year field course covering basic principles of watershed management, including designing appropriate watershed monitoring activities and analyzing results. 2003-2007.

Student Supervision

2013 Co-supervised one M.Sc. student

PROFESSIONAL SERVICE ACTIVITIES

Advisory Groups

Member, Aurora College Circle of Knowledge Holders

Member, Aurora College Strategic Advisory Committee (2017)

Member, Aurora Research Institute Strategic Plan Advisory Group (2016)

Grant Reviews

Aurora Research Institute Fellowship and Assistantship Programs; GNWT Cumulative Impacts Monitoring Program (past)