

**Alexandra (Lexie) Arnott, PhD.**  
**Instructor, Dalhousie University**

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## **EDUCATION**

**2003**                      **PhD., Earth Sciences**

Department of Earth Sciences, Dalhousie University, Halifax, NS

**1994**                      **BSc. (Honours)**

Department of Geology, Acadia University, Wolfville, NS

## **PUBLICATIONS, REPORTS, AND RESEARCH**

### **Peer Reviewed Publications**

- Ryan, A.M, **Arnott, A.**, Chisholm, R., deGelleke, L., Gibson, L., Grantham, D., Kienast, S., Mullally, M., Ross, T., Schmidt, A., Stevens, L., Welsh, E. 2017. Conversations in a Coffee Shop: Voices from within a community of teaching practice of university science faculty. *Transformative Dialogues: Teaching & Learning Journal* 9 (3).
- Hein, F.J. and **Arnott, A.M.** 1995. Petrography of coarse clastic facies, Fisset Brook Formation and Horton Group (Upper Devonian-Lower Carboniferous), Lake Ainslie and Margaree map areas, Cape Breton Island, Nova Scotia. *Current research 1995-E/Recherches en cours 1995-E*; by Geological Survey of Canada; GSC Current Research no. 1995-E, 1995; pp. 293-300
- Barr, S.M., MacDonald, A.S., **Arnott, A.M.**, and Dunning, G.R. 1995. Field Relations, structure, and geochemistry of the Fisset Brook Formation in the Lake Ainslie-Gillanders Mountain area, central Cape Breton Island, Nova Scotia. *Atlantic Geology*, v. 31, pp. 127-139.

### **Unpublished Theses**

- **Arnott, A.M.** 2003. Evolution of the Hydrothermal Alteration at the Chuquicamata Porphyry Copper System, Northern Chile. Dalhousie University, PhD. thesis. 450p.
- **Arnott, A.M.** 1994. Petrology and Geochemistry of the Fisset Brook Formation in the Gillanders Mountain Area, Cape Breton Island, Nova Scotia. Acadia University, BSc. Undergraduate thesis. 117p.

### **Environmental Impact Assessment Reports**

- LaPierre, T., **Arnott, A.**, Hawkins, C., Simpson, K. and Davis, D. 2011. Environmental Impact Assessment for Marine 2D Seismic Reflection Survey Baffin Bay and Davis Strait offshore Eastern Canada. Report No. HOPH417(B), RPS Energy, Halifax, Nova Scotia.
- LaPierre, T., **Arnott, A.**, Hawkins, C., Simpson, K., Davis, D., and Girling, J. 2010. Environmental impact assessment for marine 2D seismic reflection survey, Baffin Bay and Davis Strait, offshore

eastern Canada by TGS – NOPEC Geophysical Company ASA. RPS Energy Report # HOP0401 to NEB, 325p.

- LaPierre, T., **Arnott, A.**, Hawkins, C., and Simpson, K. 2009. Environmental impact assessment for ocean bottom refraction survey, Scotian Shelf / Slope, offshore Nova Scotia, for Offshore Energy Technical Research Association. RPS Energy Report # 09-376, 137 p. + Appendices.
- LaPierre, T., **Arnott, A.**, Simpson, K., and Hawkins, C. 2009. Preliminary environmental impact assessment for marine 3D seismic reflection survey, Disko West, Licence Block 5 (2007 / 22) and Licence Block 7 (2007 / 24), Offshore Greenland for Husky Oil Operations Limited. RPS Energy Report # 09-382. Prepared for the Bureau of Minerals and Petroleum, Greenland, 144p. + Appendices.

### Teaching and Learning Conference

- **Arnott, L.** 2023. Small changes for big impact. Inclusive STEM Showcase Faculty of Science Summer Institute. Dalhousie University.
- Cray, H., Gass, S. Mui, A., and **Arnott, L.** 2021 Making the invisible intentional: addressing the “hidden curriculum” of soft skill development in Undergraduate university education. Dalhousie Conference on University Teaching and Learning 2021
- **Arnott, A.M.** 2019. Journaling as a learning tool in the sciences. Dalhousie Conference on University Teaching and Learning 2019.

### Student Scientific Work

- Powell, M. 2022. Petrography and trace element chemistry of calcite veins in the deep drill 1972 core, Bermuda Islands. Honours Thesis, Dalhousie University, 83p.
- Albert, J. 2021. Origin and composition of the silica-undersaturated dykes of the Bermuda Rise using clinopyroxene. Final Undergraduate Research Project. Dalhousie University.
- Gillespie, W., Stainsforth, E., Hancock, A., and **Arnott, L.** 2022. Using pXRF to differentiate igneous rocks in the Bermuda volcanic basement. Atlantic Geoscience Society Meeting. Poster. (February 11-12, 2022)
- Albert, J. and **Arnott, A.** 2021. Study of silica-undersaturated dykes of the Bermuda basement. Atlantic Geoscience Society Meeting. Online. Abstract. (February 6-7, 2021)
- Pesternikova, S. and **Arnott, A.** 2018. Electron microprobe study of lapis lazuli to determine provenance. Atlantic Universities Geoscience Conference (November 1-3, 2018)

### UNDERGRADUATE RESEARCH SUPERVISION

- Genesis of septarian nodules from the Horton Formation, Penny Beach, NS (Integrated Science Program Research; 4 students)
- Petrography and trace element chemistry of vein calcite deep drill core, Bermuda Islands (Powell, M. 2022, Supervisor, Dalhousie Honours Thesis).

- Determining original melt composition of silica-undersaturated dykes of the Bermudian basement rocks using clinopyroxene-augite (Albert, J. 2020, Supervisor, Dalhousie Undergraduate Research Project)
- Distinguishing lamprophyric and basaltic igneous rocks from the Bermuda Rise using pXRF data and the Random Forest Algorithm (2022, Supervisor, Integrated Science Program Research; 2 students)
- Quantifying sediment transport at Conrad Beach, NS using high spatial resolution LiDAR data (2022, Co-supervisor, Integrated Science Program Research; 2 students)
- Portable X-ray fluorescence differentiation of mafic and ultramafic rocks of the Bermuda Rise (2021, Supervisor, Integrated Science Program Research; 3 students)
- Portable X-ray fluorescence analysis on Bermuda core (2020, Supervisor, Integrated Science Program Research; 1 student)
- Electron microprobe study of lapis lazuli to determine provenance of potential conflict origins (2018, Supervisor, Integrated Science Program Research; 2 students)
- Weathering of gravestones in Halifax (2016, Co-supervisor, Integrated Science Program Research Project) (2 students)
- Relationship between pH, conductivity, total dissolved solids, and texture of soil samples from Halifax, Nova Scotia (2017, Mentor, Integrated Science Program Research Project)

## **EMPLOYMENT HISTORY**

<b>2016-PRESENT</b>	<b>Instructor, Limited Term Appointment</b> Dept of Earth and Environmental Sciences Dalhousie University, Halifax, NS
<b>2008-2014</b>	<b>Geologist/Editor</b> RPS Energy, Halifax
<b>1999-2001/ 2013-2016</b>	<b>Assistant Professor (Part-Time Academic)</b> Faculty of Science/Faculty of Engineering Dalhousie University, Halifax, NS
<b>2003-2007</b>	<b>Part-time Faculty</b> Department of Geology Saint Mary's University, Halifax, NS
<b>1994-1995</b>	<b>Geologist</b> Cuesta Research (Supervisor: Milton Graves)
<b>1995-1999; 2006</b>	<b>Teaching Assistant</b> Department of Earth Sciences, Dalhousie University
<b>Summer 1994</b>	<b>Field Assistant, Geology</b> Geologic Survey of Canada (Supervisor: Fran Hein)

<b>Fall 1994</b>	<b>Field Assistant, Geology</b> McGregor GeoScience Ltd. (Supervisor: John Stewart)
<b>1993-1994</b>	<b>Teaching Assistant</b> Department of Geology, Acadia University
<b>Summer 1992</b>	<b>Field Assistant, Geology</b> Ontario Geologic Survey (Supervisor: Ben Berger)

### **PROFESSIONAL / DEPARTMENTAL SERVICE**

#### **Ongoing**

<b>2023-</b>	<b>Equity Champion</b> Faculty of Science, Dalhousie University
<b>2022-</b>	<b>Undergraduate Advisor</b> Dept of Earth and Environmental Sciences, Dalhousie University
<b>2022-</b>	<b>Chair, EDIA Committee</b> Dept of Earth and Environmental Sciences, Dalhousie University
<b>2022</b>	<b>Social Responsibility Committee</b> Science Atlantic
<b>2019-</b>	<b>Teaching Assistant Co-ordinator</b> Dept of Earth and Environmental Sciences, Dalhousie University
<b>2019-</b>	<b>Boardmember</b> Young Naturalists Club
<b>2018-</b>	<b>Councillor</b> Atlantic Geoscience Society
<b>2018-</b>	<b>Community of Teaching Practice</b> Faculty of science
<b>2018-</b>	<b>Outreach committee</b> Dept Earth and Environmental Science, Dalhousie University Dalhousie Discovery Days (Gr. 7&8 students); Open Houses (recruitment days)
<b>2018-</b>	<b>First-year Science Committee</b> Faculty of Science, Dalhousie University

#### **Past**

<b>2019-2023</b>	<b>Science Atlantic Representative</b> Earth Science Division (Earth Chair 2019-2022)
<b>2020-2022</b>	<b>Social Event Coordinator</b> GACMAC 2022 Local Organizing Committee
<b>Fall 2019</b>	<b>Field Safety Co-ordinator</b> Department Earth Sciences

## **PROFESSIONAL DEVELOPMENT**

### **Teaching**

#### Ongoing

Teaching certificate (Centre for learning and teaching (CLT))

- Course: Learning Focused Course Design
- Studio course: Topics in Science Teaching: Through the Visualization Lens
- Studio course: Teaching International Students
- Studio course: Treaty-Informed Teaching: A starting Point for Reciprocal Relations

Community of Teaching Practice (Faculty of Science, Dalhousie University)

2023 Workshop: Managing Disruptive Behaviours in the Classroom (HRES)

### **Diversity, Equity, and Inclusion**

2023 Certificate in Equity and Inclusion (2023; Faculty of Open Learning and Career Development)

- Understanding EDI: An organization imperative
- Inclusive Communications in the Workplace

2023 The Role of Curriculum in Combating Racism (Dalhousie Office of Equity and Inclusion)

2023 ReThinking Gender: Trans Inclusive space and practices (Equity Education)

2022 Four Seasons of Reconciliation (First Nations University of Canada)

2020 Round table leader: Being a woman in the field. (Atlantic Geoscience Society meeting)

2017 Workshop: Trans Issues on Campus (CLT, Dalhousie University)

2015 Workshop: Mental Health 101: Identifying and Responding to Students in Distress (CLT)

### **Health, Safety, and Environment**

2022 Applied Suicide Intervention Skills Training (ASIST) (2022)

2021 Standard First Aid / CPR Level A (2021)

2020 Health & Safety for Mineral Exploration (PDAC 2020)

2020 Minimizing Environmental Impact (PDAC 2020)

2017 Your Career and Public Reporting, APGNS Workshop (2018)

2013 Marine Mammal Observation Training (2013)

2013 Introduction to Seabird Observation (ECASE) (2013)

2012 Risk and Loss Control; Dalhousie Continuing Technical Education (2012)

2010 Environmental Impact Assessment; Dalhousie Continuing Technical Education (2010)

**DETAILED TEACHING EXPERIENCE****Dalhousie University, Halifax, NS**

<b>Term</b>	<b>Course</b>	<b># students</b>
Winter 2024	ERTH 1080 Geology 1 (Lectures)	102
	ERTH 1091 Geology 2 (Lectures)	44
	SCIE 1507 Integrated Science (Integrated lectures)	77
Fall 2023	ERTH/ENVS 2410 Environmental Issues in Earth Sciences	63
	SCIE 1506 Integrated Sciences (Integrated lectures & field trips)	80
Winter 2023	ERTH 1091 Geology 2 (Lectures)	36
	ERTH/GEOG 1060 Natural Disasters (Lectures)	343
	SCIE 1507 Integrated Science (Integrated and Earth Science lectures and labs)	65
Summer 2023	ERTH 4510 Directed Reading	1
Fall 2022	ERTH 1080 Geology 1 (Lectures)	93
	SCIE 1506 Integrated Sciences (Integrated lectures & field trips)	68
Winter 2022	ERTH 1091 Geology 2 (Lecture)	38
	SCIE 1507 Integrated Science (Integrated and Earth Science lectures and labs)	69
Fall 2021	ERTH 1080 Geology 1 (in person) (Lab Instructor)	60
	ERTH 1080 Geology 1 (online) (Lab Instructor)	60
	SCIE 1506 Integrated Science (Integrated lectures & field trips)	72
Winter 2021	ERTH 1080 Geology 1 (online) (Lab Instructor)	73
	SCIE 1507 Integrated Science (online) (Integrated and Earth Science lectures and labs)	51
Fall 2020	ERTH 1080 Geology 1 (online) (Lab Instructor)	80
	ERTH 2420 Dinosaurs (online) (Lectures)	37
	SCIE 1506 Integrated Science (online) ("Field trips" and integrated lectures)	53
Winter 2020	ERTH 1090 Geology 2 (F2F transition to online) (Lectures and labs)	39
	SCIE 1507 Integrated Science (F2F transition to online) (Integrated and Earth Science lectures and labs)	67
Fall 2019	ERTH/GEOG 1060 Natural Disasters (Lectures)	343
	ERTH 1080 Geology 1 (Lectures and labs)	30
	SCIE 1506 Integrated Science (Integrated lectures and field trips)	79
Winter 2019	ERTH/GEOG 1030 Intro to Physical Geography (Lectures and tutorials)	87
	SCIE 1507 Integrated Science (Integrated and Earth Science lectures and labs)	66
Fall 2018	ERTH 1080 Geology 1 (2 sections) (Lectures and labs)	93
	SCIE 1506 Integrated Science (Integrated lectures and field trips)	70

<b>Term</b>	<b>Course</b>	<b># students</b>
Winter 2018	ERTH 1091 Geology 2 (Lectures)	41
	SCIE 1505 Integrated Science Program (Integrated and Earth science lectures and labs)	47
Fall 2017	ERTH/GEOG 1030 Introduction to Physical Geography (Lectures and Tutorials)	60
	ERTH 1080 Geology 1 (Lectures and labs)	60
	SCIE 1505 Integrated Science Program (Integrated lectures and field trips)	47
Winter 2017	ERTH/GEOG 1030 Introduction to Physical Geography (Lectures and Tutorials)	120
	SCIE 1505 Integrated Science Program (Integrated and Earth Science lectures and labs)	77
Fall 2016	ERTH 1080 Geology 1 (Lecture and lab)	45
	ERTH/GEOG 1030 Introduction to Physical Geography (Lecture and tutorial)	60
	SCIE 1505 Integrated Science Program (Integrated lectures and field trips)	77
Summer 2016	MINE 2200 Introduction to Geology for Engineers (Lecture and lab)	10
	ERTH 1080 Geology 1 (Lecture and lab)	11
Winter 2016	SCIE 1505 Integrated Science Program (Integrated and Earth Science lectures and labs)	39
Fall 2015	ERTH 1080 Geology 1 (Lecture and lab)	31
	SCIE 1505 Integrated Science Program (Integrated lectures and field trips)	39
Winter 2015	ERTH/GEOG 1030 Introduction to Physical Geography (Lectures and tutorials)	178
Fall 2014	ERTH 1080 Geology 1 (Lecture and lab)	51
Winter 2014	MINE 2200 Introduction to Geology for Engineers (Lecture and lab)	91
Winter 2013	MINE 2200 Introduction to Geology for Engineers (Lecture and lab)	90
Fall 2006	ERTH 3010 Igneous Petrology (Lecture and lab)	32
Winter 2001	ERTH 1050 Earth and Society II (Lectures)	56
Winter 2000	ERTH 1050 Earth and Society II (Lectures)	61
Fall 1999	ERTH 2001 Earth Materials I (Lectures and labs)	24

**2003-2007      Part-time faculty**  
**Department of Geology, St. Mary's University**

First year lab instructor (1<sup>st</sup> year)  
Mineralogy (2<sup>nd</sup> year)  
Applied Geochemistry (4<sup>th</sup> year)  
Environmental Geology (1<sup>st</sup> year)

## **SCHOLARSHIPS AND AWARDS**

<b>2023</b>	<b>Professor of the Year</b> Dalhousie University, Dept of Earth and Environmental Sciences (chosen by students)
<b>2021</b>	<b>Contract and Limited-Term Faculty Award for Excellence in Teaching</b> Dalhousie University; university wide
<b>2019</b>	<b>Teaching and Learning Enhancement Grant</b> Dalhousie Centre for Learning and Teaching; Dalhousie Faculty of Science Book Club
<b>2001</b>	<b>Chrysalis Scholarship for Women</b> Association of Women Geoscientists
<b>1997</b>	<b>President's Graduate Teaching Assistant Award</b> Dalhousie University; university-wide
<b>1995-1999</b>	<b>Dalhousie University Graduate Scholarship</b> Dalhousie University, Dept Earth Sciences
<b>1994</b>	<b>Rupert MacNeill Scholarship</b> Acadia University