



Andrew L. Fortt, Ph.D

Project Engineer / Laboratory Manager

EDUCATION

M.Eng., Mechanical Design Engineering, University of Glasgow, Glasgow, Scotland – 2001
Ph.D., Materials Science, Dartmouth College, Hanover, NH - 2006

GENERAL EXPERIENCE

Andrew has over 14 years of professional experience, working in the engineering and materials science research fields. Andrew is a skilled field engineer and has recorded several hundred hours of subsurface exploration logging and interpretation. He has experience with many forms of geotechnical subsurface data acquisition techniques including: hollow-stem, air rotary, direct push, Standard and Modified Penetration Test sampling, hard rock coring, and test pit excavation. Andrew has extensive Arctic experience and has logged hundreds of hours of subsurface exploration along with several design projects. He is well versed in the difficulties that are associated with construction in the remote, harsh environment of Alaska's North Slope. Andrew has a diverse background in Quality Assurance (QA) and Quality Control (QC) ranging from overseeing the quality of small geotechnical laboratory programs, to serving as a task specific QC Inspector, to overseeing a team of QC Inspectors as a Quality Control Manager. He understands the important role that QA/QC plays in construction projects. Andrew is a project engineer and laboratory manager at NGE-TFT. He established the advanced testing component of the NGE-TFT laboratory and is currently responsible for the management of geotechnical laboratory projects at NGE-TFT. He has experience with the research and measurement of many types of material properties, specializing in the low temperature properties of materials, and is accustomed to the complications that arise from measuring material properties at low temperatures. Andrew is the primary author of several peer reviewed journal papers on the mechanical behavior of materials, focusing in particular on the friction of ice.

KEY PROJECTS

Livengood Gold Project, Livengood, Alaska, AMEC, 2012 – Andrew oversaw the execution and quality control of a complex laboratory testing program involving several hundred samples. The program involved the development of several new test procedures for the laboratory at NGE-TFT.

Point Thompson Project, Point Thompson, Alaska, AFC/CH2MHILL, 2013-2015 – Andrew served as Quality Control Lead for the installation of foundation piles over three winter construction seasons.

Weatherford COROD Shop, Prudhoe Bay, Alaska, Weatherford International, 2015-2016 – Andrew designed, coordinated, and directed the installation of a passive refrigeration system for the Weatherford COROD shop. Andrew conducted a geotechnical exploration of the site,

performed several thermal models evaluating the cooling system, and finally acted as general contractor during the construction of the refrigeration system, overseeing multiple subcontractors during the process.

PROFESSIONAL REFERENCES

Prof. Erland Schulson, Dartmouth College, (603) 646-2888, Erland.M.Schulson@dartmouth.edu
Phil Lambert, Cons. Proj. Man., Weatherford, (720) 946-2557, Phil.Lambert@Weatherford.com
Frank Caito, Quality Control Manager, AFC, Inc., (907) 562-5303, frankc@nanuq-afc.com

PROFESSIONAL QUALIFICATIONS

Certificate	2013	Troxler Nuclear Gauge Certification
Qualification	2014	WAQTC - Asphalt Testing Technician
Qualification	2014	WAQTC - Embankment & Base Testing Technician
Qualification	2014	WAQTC - In-Place Density Testing Technician
Qualification	2018	ICC - Reinforced Concrete Special Inspector
Qualification	2018	ICC – Soils Special Inspector
Qualification	2014	ACI - Concrete Field Testing Technician - Grade I
Qualification	2014	ACI – Aggregate Testing Technician – Level 1
Qualification	2014	ACI – Concrete Strength Testing Technician
Qualification	2014	ACI – Concrete Laboratory Testing Technician – Level 1
Qualification	2014	MOA – Pile Foundation Special Inspector
Qualification	2013	North Slope Training Course (2014 Refresher)

PROFESSIONAL PUBLICATIONS

Fortt, A.L. and E.M. Schulson. 2011. Frictional sliding across Coulombic faults in first-year sea ice: A comparison with freshwater ice. *J. Geophys. Res.*, 116, C11012, doi:10.1029/2011JC006969.

Fortt, A.L. and E.M. Schulson. 2011. Does the normal stress parallel to the sliding plane affect the friction of ice upon ice? *J. Glac.*, **57**(205), 949-953.

Fortt, A.L. and E.M. Schulson. 2009. Velocity dependent friction on Coulombic shear faults in ice. *Acta Mater.*, **57**(15), 4382-4390.

Fortt, A.L. and E.M. Schulson. 2007. Do loading path and specimen thickness affect the brittle compressive failure of ice? *J. Glac.*, **53**(181), 305-309.

Fortt, A.L. and E.M. Schulson. 2007. The resistance to sliding along Coulombic shear faults in ice. *Acta Mater.*, **55**(7), 2253-2264.

Fortt, A.L., E.M. Schulson, and E Russell. 2003. Sliding along Coulombic shear faults in ice. *Can. J. Phys.*, **81**(1-2), 519-527.