

GSE - January 15, 2003 Talk

TOPIC: Fiber Optic Sensors: High Technology In Geotechnical Engineering
PRESENTATION BY: Dr. Marco Quirion, Roctest Ltd.

The presentation will provide an introduction to optical fiber related to geotechnical instrumentation including definitions, fiber types, cables, connections and splicing details and fiber properties. Building on the basics, the presenter will provide a description of the current state of the practice in fiber optics, including a technology comparison and a description of the sensors (Fabry-Pérot, Bragg, Microbend, and Brillouin) and instruments (strain gages, piezometers, displacement sensors, and temperature sensors) currently available. In addition, the presentation will provide examples of the practical application of fiber optic sensors and provide a description of project experiences at several locations including the Dickson Dam (Alberta), the LaTuque Dam (Quebec) and others.

Dr. Marco Quirion obtained his B.A.Sc. (1993) in Geological Engineering from Laval University and an M.A.Sc. (1996) and Ph.D. (1999) in Civil Engineering from Sherbrooke University. Following the completion of his Ph.D., Dr. Quirion has been an NSERC Industrial Research Fellow at Roctest Ltd. from 1999 to 2002. Dr. Quirion's experience at Roctest includes responsibility for the completion of technical studies focusing on geomechanics. His interests include engineering geology, rock mechanics, dams and concrete structures. Dr. Quirion is currently a member of the CGS National Executive (Divisions Representative) and Chairman of the Engineering Geology Division of the CGS.

Venue : Delta Edmonton South, 4404 Gateway Boulevard, Edmonton, Alberta

Time :Lunch at 12:00 noon

Date :Wednesday, January 15, 2003

Cost : \$15 GSE Members, \$20 Non-members, \$10 Students