

## CWSF 2010 - Peterborough, Ontario



### Bio-Binding: A Microbial Precipit-Action

**Division:** Health Sciences

**Category:** Senior

**Region:**

**City:** ,

**School:**

**Abstract:** An artificially induced particle cementation via microbial induction of soil samples was produced using specific urease positive microbes. In a calcium rich, water prone soil environment these urease positive microbes work effectively under harsh pH conditions and room temperatures to produce a binding particulate matrix in the soil. This system can eliminate liquefaction susceptible soil deposits during cyclic loading produced by earthquakes.

Awards	Value
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$4 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$20,000 Entrance Scholarship (\$5,000 each year for 4 years) Sponsor: University of Ottawa	\$20 000
The University of Western Ontario Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: University of Western Ontario	\$4 000
Gold Medal - Earth & Environmental Sciences - Senior Sponsor: Suncor Energy Inc.	\$1 500
EnCana Platinum Award - Best Senior Project Sponsor: Encana Corporation	\$5 000
EnCana Best in Fair Award Sponsor: Encana Corporation	\$10 000
<b>Total</b>	<b>\$48 500</b>