CIVL 500 THESIS TOPICS 2017-2018

	THESIS TOPIC	SUPERVISOR	STUDENT
1.	Field measurement of energy dissipation under breaking waves.	Dr. Boegman/Dr. Mulligan	
2.	Modelling effects of climate change on Lake Trout habitat (deep water temperatures and oxygen) in Canadian Shield lakes	Dr. Boegman	
3.	Smart Timber: cutting edge materials and sensor technologies to enable more sustainable structures	Dr. Hoult	
4.	Our crumbling water mains: preventing cast iron pipe failure	Dr. Hoult/ Dr. Moore	
5.	Corrugated Steel Culverts: humble water way or ground swallowing behemoth	Dr. Hoult/ Dr. Moore	
6.	Development of X-Ray imaging for a non-destructive assessment of hidden damage within geosynthetic clay liners	Dr. Take	
7.	Evaluation of HDPE Geomembrane diffusive properties with respect to thickness	Dr. Rowe	
8.	Fire resistance of fibre reinforced polymer reinforcing bars	Dr. Green	
9.	Sustainable materials for northern building conditions	Dr. Green	
10.	Bio materials for wind turbine towers	Dr. Green	
11.	Testing bridges using the first moving load simulator in Canada	Dr. Fam	
12.	Green FRP composites for construction using bio-based fibers and resins	Dr. Fam	
13.	New FRP composite for concrete structures rehabilitation using corn-cob-based sustainable bio resins	Dr. Fam	
14.	Modelling Red Water Discolouration Potential in Drinking Water Distribution Systems	Dr. Filion	
15.	Physical response of (i) landfill geosynthetic liners or (ii) buried polymer pipes using elevated temperatures to simulate long-term creep response or numerical modelling to calculate local stresses	Dr. Brachman	
16.	Physical and numerical modeling of hyporheic flows through river gravel bars.	Dr. da Silva	
17.	Landslide tracking using point cloud data	Dr. Take	
18.	Developing a novel sensor to measure full-field water surface velocities using a high-resolution digital camera and glitter.	Dr. da Silva/ Dr. Take	
19.	Use of solar engineering principles to predict the surface temperature of exposed geomembrane liners	Dr. Take	
20.	Turbine power from currents in the St. Lawrence River.	Dr. Boegman/ Dr. Mulligan	
21.	Concrete-filled FRP tubes for rapid and durable construction	Dr. Fam	
22.	Laboratory investigation of slow methane leaks to shallow aquifers	Dr. Mumford	
23.	Numerical modelling of gas exchange during bioremediation of contaminated groundwater	Dr. Mumford	
24.	Analysis of a tracer experiment conducted in fractured rock	Dr. Novakowski	
25.	Development of an analytical model for stable isotope fractionation by diffusion	Dr. Novakowski	
26.	Cantilever testing of polygonal hollow steel sections	Dr. MacDougall	
27.	Testing of pre-engineered connections for large Douglas fir glulam	Dr. MacDougall	

29.	Finite element modeling of large self-tapping screws for timber connections	Dr. MacDougall /Dr. Genikomsou	
30.	Smart Timber: cutting edge materials and sensor technologies to enable more sustainable structures	Dr. Hoult	
31.	Optimum performance slabs: how thin can we go?	Dr. Hoult	
32.	Finite element analysis of reinforced concrete slabs modeled with shell elements	Dr. Genikomsou	
33.	Finite element analysis of GFRP reinforced concrete beams	Dr. Genikomsou	