



**2020/2021 Executive Committee**

Ali Nasser Moghaddam – Chair  
Hafeez Baba - Secretary  
Billy Singh – Regional Director  
Matt MacIntosh – Treasurer  
Sebnem Boduroglu– Student Member/ Website

Ali Abdelaziz – Event Lead  
Junaid Khan – Event Lead  
Michael Etezzad – Event Lead  
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Dino Vito – Sponsorship  
Amir Poshnejad - Membership and Award  
Pouya Pishgah – Communication  
Rashid Bashir – Student Liaison

**2021 CGS-SOS Graduate Student Competition**

Canadian Geotechnical Society, Southern Ontario Section (CGS-SOS) congratulates the graduate students who presented their research on 2021 Graduate Student Competition. The competition included representatives from six Southern Ontario Universities (McMaster University, University of Waterloo, University of Toronto, York University, Ryerson University, and Western University). A representative from each University gave a virtual presentation of up to 12 minutes which was followed by a 3 minutes question-and-answer period. A panel of judges from industry and academia evaluated the presentations. Evaluation for the CGS-SOS Graduate Student Competition was conducted based on the following criteria: geotechnical content and interest (60%), oral and visual quality of presentation (30%) and performance during the question-and-answer period (10%). Cash prizes was awarded to recognize the best presentations and for participation in the competition. The best presenter, **Ali Fallah Yeznabad** was awarded \$500; the second place presenter, **Markus Jesswein** received \$250; and the third place presenter, **Mina Lee** received \$150; and the rest of the speakers received \$100 for participation.



**Mahyar Malekzade Kebria,  
McMaster University**



**Mina Lee,  
University of Waterloo**



**Aly Abdelaziz,  
University of Toronto**



**Satbir Guram,  
York University**



**Markus Jesswein,  
Ryerson University**



**Ali Fallah Yeznabad,  
Western University**



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**Mahyar Malekzade Kebria, McMaster University**



Mahyar Malekzade Kebria is PhD student in Geotechnical Engineering in McMaster University. He took his bachelor degree in Civil Engineering and master degree in water and hydraulic structures at Sharif University of Technology. His master thesis focused on pipe-soil interactions on the touchdown area of long catenary risers and numerical modeling of geotechnical processes in remolded soil in critical state framework. He also worked as a part time geotechnical designing engineer at Payakhak company from 2012 to 2018. He was involved in designing soldier structures for deep excavation projects. In Fall 2019, he started PhD in geotechnical engineering at McMaster University and currently working on modeling freezing and thawing phenomenon in permafrost soil. His research focuses on using Thermo-Hydro-Mechanical framework and finite element analysis to model frost heave and thawing consolidation of the soil in permafrost areas. He is particularly interested in using advanced constitutive models to relate different field variables related to the frozen soil. Recently he is working on a 4-phased freezing THM model of variably saturated soil to aim for reaching a proper approximation of frost heave in unsaturated frozen soil in contact with gas pipelines.

**Mina Lee, University of Waterloo**

Mina Lee is a Ph.D. candidate in the Civil & Environmental Engineering department at the University of Waterloo. She completed both her bachelor and master studies at the University of Waterloo with Dr. Dipanjan Basu as her advisor. During her undergraduate studies, she grew her interests in geotechnical engineering while working at the Ministry of Transportation Ontario (MTO) and Terraprobe. Her main research interests are sustainability and resilience assessment in geotechnical engineering. She takes a multidisciplinary approach to develop a framework that evaluates sustainability and resilience of a given geotechnical structure or an infrastructure system. She has strong interests in bringing awareness to practitioners that there are huge opportunities in geotechnical engineering towards sustainable development. Her main goal through her research is to guide geotechnical engineers to make informed design decisions not only for reliable and cost-effective but also for sustainable and resilient designs considering climate change and extreme events.





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**Aly Abdelaziz, University of Toronto**



Aly Abdelaziz is a PhD Candidate in Civil Engineering at the University of Toronto. He received his Bachelor's degree in 2007 in Civil Engineering (Structures) at Benha University in Egypt. Between 2007 and 2015, Aly worked as a geotechnical engineer with extensive experience in geotechnical investigation, construction monitoring, non-destructive and laboratory materials testing in Dubai, United Arab Emirates. He returned to academia to expand his knowledge and make connections between academia and industry. His current research interests include generating synthetic samples using Voronoi tessellations and considering several aspects to the data collected from testing rock samples to understand the influence of the testing system and sample shape on the mechanical behaviour of rock.

**Satbir Guram, York University**

Satbir is a MASc student in the Department of Civil Engineering at York University. Satbir received her Bachelor of Engineering with Honours in 2018 at Lassonde School of Engineering. She was part of the first group of students to graduate the newly implemented Civil Engineering program at York University. She was also nominated for the Canadian Geotechnical Society – Southern Ontario Section (CGS-SOS) undergraduate scholarship in 2018 by demonstrating an interest in Geotechnical Engineering and receiving the top grade for the course. Under the supervision of Dr. Rashid Bashir, she is researching Low Impact Developments, particularly green roof and bioretention media, under variably saturated conditions and under changing climate. She has recently released a paper called “The Determination of Unsaturated Hydraulic Properties for Low Impact Developments” for the GeoVirtual 2020 Conference. Satbir is appreciative of her experience gained as a teaching assistant and as a master's candidate conducting both laboratory testing and numerical modelling. She aims to maintain a positive outlook and continue to expand her skills.





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**Markus Jesswein, Ryerson University**



Markus Jesswein hopes to aid in the planning and designing of infrastructures that will serve and enrich society. Previously, as a Geotechnical Engineering Intern at Arup, Toronto, Markus helped to assess the settlement for a cut-and-cover light-rail-transit system. Currently, as a PhD candidate at Ryerson University, he aims to improve the accuracy of pile design methods for the ultimate limit state and serviceability limit state by extracting valuable insights from databases of pile load tests. His research included developing new design methods by programming a genetic algorithm, an artificial intelligence method, to correlate pile test results and soil measurements. The findings from his analyses have been presented in 7 conference papers, and his research has been kindly supported by Peter Kiewit Sons ULC and generously funded by the Ministry of Transportation of Ontario. In addition, funding has been provided by the National Sciences and Engineering Research Council of Canada through both a Canadian Graduate Scholarship (CGS D) and Engage program. Overall, Markus hopes his research contributions will assist designers to provide cost-effective

infrastructure developments in the future.

**Ali Fallah Yeznabad, Western University**

Ali Fallah Yeznabad was born in Iran and completed his B.Sc. and M.Sc. in Tabriz University and Iran University of Science and Technology. He joined Dr. H. El Naggar's research team at Western University in 2016. His project's title is "Seismic Landslide Mapping for Greater Vancouver" and is funded by Emergency Management of BC and Institute for Catastrophic Loss Reduction. His works have been published in peer-reviewed journals and provide insight for city planners about the potential seismic hazard in the Vancouver region.

