Arman Ghaffarizadeh

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LinkedIn
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EDUCATION

Ph.D. in Mechanical Engineering, Carnegie Mellon University — Jan. 2019 – Present
Thesis: Rapid Estimation of Transport Properties in Soft and Active Matter Systems

MASc. in Mechanical Engineering, University of Toronto — Sept. 2016 – Sept. 2018
Thesis: Equilibrium and Kinetics of Water Vapor Adsorption on Silica Nanopowders

BASc. in Mechanical Engineering, University of Toronto — Sept. 2012 – Jun. 2016
Graduated with High Honors, Specialization in Sustainable Energy

WORK EXPERIENCE

Deloitte, Summer Associate Consultant — May 2023 – Present

– Collaborating with the Strategy & Analytics team as an Applied AI Engineer. Implementing algorithms to streamline claim processes for a leading insurance company.

– Co-authoring a whitepaper in collaboration with a major international organization, aimed at enhancing healthcare infrastructures in underdeveloped regions. The paper introduced a holistic evaluation framework incorporating aspects of financial modeling, technology transfer, market analysis, and governance.

– Leveraging generative AI solutions in firm's DEI initiatives, contributing to a more comprehensive and equitable approach to project staffing.

SELECTED PUBLICATIONS

- **Ghaffarizadeh, S. A.** and Wang, G. J., "Getting over the hump with KAMEL-LOBE: Kernel-averaging method to eliminate length-of-bin effects in radial distribution functions," *The Journal of Chemical Physics* (2023)
- *__Ghaffarizadeh, S. A.__, *et al.*, "Ultrahigh evaporative heat transfer measured locally in submicron water films," *Scientific Reports* (2022)
- Chamanara, S., **Ghaffarizadeh, S. A.**, and Madani, K., "The Environmental Costs of Mining Bitcoin," *Authorea Preprints* (2022)
- *__Ghaffarizadeh, S. A.__, *et al.*, "Life and work of researchers trapped in the COVID-19 pandemic vicious cycle," *bioRxiv* (2021)

*Contributed equally

SELECTED PRESENTATIONS

- **Ghaffarizadeh, S. A.** and Wang, G. J., "Fishers Handle Bugs Better than Fish-Receivers: Nourishing Computational Self-Efficacy in Engineering Coursework," *ASEE* (2022)
- **Ghaffarizadeh, S. A.** and Wang, G. J., "Active Control of Active Fluids," *APS* (2022)
- **Ghaffarizadeh, S. A.** and Wang, G. J., "Excess Entropy Scaling in Active Matter Systems," *SoR* (2021)

Presented/contributed to 14 conferences

TEACHING

- **Sessional Lecturer**:
  Introduction to Mechanical and Industrial Engineering (MIE191) — University of Toronto
- **Teaching Assistant**:
  - Molecular Simulation of Materials (12-623) — Carnegie Mellon University
  - Engineering Analysis (MIE230) — University of Toronto
  - Differential Equations (MAT234) — University of Toronto

SELECTED AWARDS & SCHOLARSHIPS

- Doctoral Program PGS-D — NSERC, $21,000/year, 2018-2021
- Best Poster Award (Micro and Nano Eng.) — CMU, $1,500, 2020 & 2021
- Russell A. Reynolds Fellowships in Thermodynamics — U of T, $5,400, 2017
- Society of Petroleum Engineers Canadian Education Trust — SPE, $1,000, 2015
- DSOFT Future Investigator Travel Award — APS, $500, 2022
- Jeremiah Mpagazehe Student Service Award — CMU, $200, 2020

SELECTED LEADERSHIP EXPERIENCES

Diversity, Equity, and Inclusion (DEI):

- Led efforts to incorporate DEI training into graduate engineering curriculum and for committee members of PhD oral qualification exams (approximately 40 students/year). Mentored 10 students and volunteered for the Departmental DEI mentorship program (*CMU 2020-2022*)
- Selected as the student representative on the DEI committee for the Society of Rheology (SoR) with more than 2000 active members and served on the organizing committee of the annual meeting with approximately 500 participants. Mentored 30 graduate students for the Society of Rheology Symposium attending nationally and internationally. (*SoR 2022-Present*)

Committee Representation:

- Served on 4+ Carnegie Mellon university-level committees including the academic affairs and academic calendar committees, collaborated directly with the Vice Provost for Education, Vice President for Research, and Deans, and led large-scale, university-wide efforts such as the graduate student landmark survey of all 2,000 doctoral students.
- Represented more than 7,000 graduate students on CMU's COVID-19 task force, assisting with formalization of communication channels during in-person research tasks; mitigating potential health risks while optimizing research efficiency
- Represented all CMU MechE's 180 doctoral students in meetings with the Department Head and graduation education committee leading to subsidizing 50% health insurance (this program became exemplary and was implemented at the university level). Led the implementation of an annual graduate student feedback form, enabling a continuous feedback loop to ensure continuous improvement. Assisted the Department with reforming qualification exams and the degree requirements.
- Elected as VP-Academic and annual symposium Co-chair (over 300 attendees) of the Association of Mechanical and Industrial Engineering Graduate Students at University of Toronto
- Elected as Student Representative on the University of Toronto Engineering Faculty Council, involved in designing and planning 1. Engineering Co-op Programs 2. Institute for Engineering Education and Practice (ISTE2P)