

# Alireza Zargar Shabestari

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## EDUCATION

November 2025 – Present

**PhD.** Department of Civil and Architectural Engineering, *Aarhus University (AU), Aarhus, Denmark*

- **Thesis:** Upcycling of alkaline wastewaters based on CO<sub>2</sub> mineralization

September 2022 – February 2025

**MSc.** Department of Polymer and Color Engineering, *Amirkabir University of Technology (AUT), Tehran, Iran*

- **Thesis:** The prediction and confirmation of mechanical behavior of hybrid cementitious mortar/waste crumb rubber

September 2018 – August 2022

**BSc.** Department of Polymer and Color Engineering, *Amirkabir University of Technology (AUT), Tehran, Iran*

- **Thesis:** The application of waste crumb rubber in the mechanical properties' augmentation of cementitious mortars
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## RESEARCH AND PROJECTS

November 2025 – Present

**Upcycling of alkaline wastewaters based on CO<sub>2</sub> mineralization, Aarhus University (AU), Aarhus, Denmark**

- Controlling metastable phases during carbonation reaction of cementitious fines via chemical additives based on CCUS goals

March 2024 – February 2025

**Synthesis of Sulphonated Melamine Formaldehyde (SMF), Loghman Polymer Fanavari Gostar Co., Tehran, Iran**

- Synthesis of Sulphonated Melamine Formaldehyde (SMF) superplasticizer at laboratory and industrial scale

April 2022 – October 2024

**Investigation and characterization of Geopolymers, Loghman Polymer Fanavari Gostar Co., Tehran, Iran**

- Geopolymer analyzing, formulation development and characterization based on Fly Ashes and GGBS

April 2021 – March 2025

**Utilization of crumb rubber for property development of pavements, Amirkabir University of Technology (AUT), Tehran, Iran**

- Augmentation of mechanical properties of pavements with heat-treated crumb rubber at industrial scale
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## WORK EXPERIENCE

September 2022 – October 2024, Part-time

**Laboratory instructor, Amirkabir University of Technology (AUT), Tehran, Iran**

- Teaching "Co-axial Rheometer" and "Chains Fractionation", and "Physical Chemistry of Polymers" lab. supervisor

September 2022 – January 2024, Part-time

**Teaching Assistant, Amirkabir University of Technology (AUT), Tehran, Iran**

- Conducting tutorials and exams for "Physical Chemistry of Polymers", BSc. and MSc. courses

May 2021 – October 2025, Full-time

**R&D Specialist and Research Assistant, Loghman Polymer Fanavari Gostar Co., Tehran, Iran**

- Research assistant, R&D specialist, projects management and data analysis of industrial projects
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## CONFERENCE PAPERS, CERTIFICATES AND WORKSHOPS

September 2024

**Presentation: 16<sup>th</sup> International Seminar on Polymer Science and Technology, Sahand University of Technology, Tabriz, Iran**

- The application of treated crumb rubber to augmentation of the compression-impact strengths of cementitious materials

November 2022

**Presentation: 15<sup>th</sup> International Seminar on Polymer Science & Technology, Isfahan University of Technology, Isfahan, Iran**

- Effect of water infiltration rate on mechanical properties of treated crumb rubber containing cementitious mortar
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## LANGUAGES

**English:** IELTS Academic Band Score (Overall) = 7.0 (CEFR Level = C1)

**Persian:** Native