Sima Zeinali Danalou

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Education

University of Toronto — Toronto, Canada
Ph.D. Candidate, Chemical Engineering — Sep. 2022 - Present

University of Saskatchewan — Saskatoon, Canada
M.Sc., Chemical Engineering, GPA: A+ — Sep 2020 - Aug. 2022

University of Tehran — Tehran, Iran
B.Sc., Chemical Engineering, GPA: A — Sep. 2016 - Aug. 2020

Teaching Experience

- Teaching Assistant, *Unit Operations in Chemical Process Engineering* — Mar. 2022 - Apr. 2022
- Teaching Assistant, *Plant Design Project* — Jan. 2022 - Apr. 2022
- Teaching Assistant, *Engineering Mechanics II* — Jan. 2022 - Apr. 2022
- Teaching Assistant, *Engineering Discipline Experience* — Nov. 2022 - Dec. 2022
- Teaching Assistant, *Process Engineering and Design I* — Sep. 2021 - Dec. 2021
- Teaching Assistant, *Engineering Mechanics I* — Sep. 2021 - Dec. 2021

Research Experience

- Research Assistant, Particle Characterization and Fluidization Lab, University of Saskatchewan, in cooperation with Canadian Light Source (CLS), Saskatoon, Canada — Sep. 2020 - Aug. 2022
  Under the supervision of Dr. Lifeng Zhang
- Research Assistant, Catalysis and Nano-Structured Materials Research Laboratory, University of Tehran, Tehran, Iran — Feb. 2020 - Aug. 2020
  Under the supervision of Dr. Abbas Ali Khodadadi
- Internship, Kharazmi Technology Development Company, Karaj, Iran — Jun. 2019 - Sep. 2019
- Intern-Assistant Researcher, Iranian Institute of Research and Development in Chemical Industries (IRDCI), Karaj, Iran — Jun. 2018 - Jun. 2019
  Under the supervision of Dr. Shahin Khosharay

Publications

- **Sima Zeinali Danalou**, Xiao Fan Ding, Heather N. Emady, Ning Zhu, Lifeng Zhang, *"4D Study of Liquid Binder Penetration Dynamics in Pharmaceutical Powders using Synchrotron X-ray Micro Computed Tomography"*, International Journal of Pharmaceutics, 627 (2022) 122192.
- Xiao Fan Ding, **Sima Zeinali Danalou**, Lifeng Zhang, Ning Zhu, *"Synchrotron Radiation Based Dynamic Micro-CT Techniques for Studying In-Situ Wet Pharmaceutical Granulation"*, Journal of Synchrotron Radiation, 2022 (under revision).
- **Sima Zeinali Danalou**, Carter Blocka, Jingsi Yang, Ning Zhu, Heather N. Emady, Ellen Wasan, Lifeng Zhang. *"Advanced 3D and 4D Microstructure Study of Single Granule Formation Using Synchrotron in-situ X-ray Imaging",*The American Institute of Chemical Engineers,2022 (under review)
- **S. Zeinali Danalou**, X. Fan Ding, N. Zhu, H. N. Emady, D. Kuma, L. Zhang. *"Using Synchrotron X-ray CT to Study Pharmaceutical Powders Mixing Quality and Granulation"*. In: Annual Alberta Biomedical Engineering Conference. 2021 Oct. 22 - 23.
- **S. Zeinali Danalou**, X. Fan Ding, N. Zhu, L. Zhang. *"Using Synchrotron X-ray CT to Study Pharmaceutical Powders Mixing Quality and Granulation"*. In: 2nd Engineering Graduate Research Conference. 2021 Sep. 13.
- M Rahmanzadeh, Naser Rezakhani, **S Zeinali Danalou**, F Rostami, S Khosharay, 2022. *"Interfacial Behavior of Aqueous Solutions of Cetyltrimethylammonium Bromide (CTAB), Additives and Their Mixtures: The Experimental and Modeling Study",* Iranian Journal of Chemistry and Chemical Engineering (IJCCE), 42 (2022) 568-578.

Honors

- Women in Engineering Excellence Spotlight for outstanding academic performance recognized by WIE-CBE USASK in 2022.