

## CURRICULUM VITAE

Mirvahid

MOHAMMADPOUR CHEHRGHANI

PhD Candidate at University of Twente and Wetsus.  
The Netherlands



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## EDUCATION

- 2021- Present • **University of Twente , Enschede, The Netherlands**  
PhD. Candidate, Faculty of Engineering Technology (ET)  
Project: Super fluent pipes – Water distribution with ultralow fluid resistance  
Supervisors: *Prof.dr.ir. M.B. de Rooij* and *Dr. Doekle Yntema*
- 2019-2021 • **Sabanci University, Istanbul, Turkey**  
M.S. Mechatronics Engineering, (GPA: 3.87/4.0)  
Thesis Title: *Phase Change Heat Transfer Enhancement Using Engineered Surfaces*  
Supervisor: *Prof. Dr. Ali Kosar*
- 2015-2019 • **Izmir Institute of Technology, Izmir, Turkey**  
B.S. Mechanical Engineering, (GPA: 3.79/4.0)  
High honors graduate: *Graduated as First Rank student in Mechanical Engineering department and Third Rank in the University*  
Graduation Project: *Designing and Manufacturing a Compact Mini-Channel Condenser*  
Supervisor: *Assoc. Prof. Dr. Erdal Cetkin*



## EXPERIENCE

- 2021- Present • **Wetsus, European Centre of Excellence for Sustainable Water Technology, Leeuwarden, The Netherlands**  
Researcher PhD. Candidate  
Project: Super fluent pipes – Water distribution with ultralow fluid resistance (in partnership with university of Twente)  
Supervisors: *Prof.dr.ir. M.B. de Rooij; dr. J. S. M. Zanjani; dr. D.T.A. Matthews; dr. D. Yntema*
- 2019-2021 • **Sabanci University Nanotechnology Research and Application Center (SUNUM)**  
Project: Dropwise Flow Condensation Heat Transfer in Minichannels on Engineered Surfaces  
Supervisor: *Prof. Dr. Ali Kosar*
- 2018-2019 • **Izmir Institute of Technology, Izmir, Turkey**  
Designing and manufacturing a compact mini-channel condenser  
Supervisor: *Assoc. Prof. Dr. Erdal Cetkin*



## RESEARCH INTEREST

- Fluid Mechanics
- Surface Engineering
- Drag Reduction
- Phase Change Heat Transfer



## PUBLICATIONS

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5. Mirvahid Mohammadpour Chehrghani, Taher Abbasiasl, Abdolali Khalili Sadaghiani, and Ali Kosar. "Biphilic Surfaces with Optimum Hydrophobic Islands on Superhydrophobic Background for Dropwise Flow Condensation." *Langmuir* **2021** 37 (46), 13567-13575, <https://doi.org/10.1021/acs.langmuir.1c01844>
4. Mirvahid Mohammadpour Chehrghani, Taher Abbasiasl, Abdolali Khalili Sadaghiani, and Ali Kosar. "Copper-Based Superhydrophobic Nanostructures for Heat Transfer in Flow Condensation." *ACS Appl. Nano Mater.* **2021**, 2021, 1719–1732. <https://doi.org/10.1021/acsnm.0c03181>
3. Taher Abbasiasl, Mirvahid Mohammadpour Chehrghani, Abdolali Khalili Sadaghiani, and Ali Kosar. "Gradient Mixed Wettability Surfaces for Enhancing Heat Transfer in Dropwise Condensation" *International Journal of Heat and Mass Transfer*, Volume 179, **2021**, 121664, ISSN 0017-9310, <https://doi.org/10.1016/j.ijheatmasstransfer.2021.121664>
2. Mirvahid Mohammadpour Chehrghani, Taher Abbasiasl, Ghazaleh Gharib, Abdolali Khalili Sadaghiani, and Ali Kosar "Steam Flow Condensation on Superhydrophobic Surfaces in a High Aspect Ratio Microchannel." *Proceedings of the ASME 18th ICNMM*, **2020**. <https://doi.org/10.1115/ICNMM2020-1070>
1. Mirvahid Mohammadpour Chehrghani, Erdal Cetkin. "A review on heat transfer enhancement with constructal theory." *4th International Conference on Advances in Mechanical Engineering*, Istanbul, ICAME **2018**.



## HONORS AND AWARDS

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|--------------|--|
| 2021-Present | • Marie Sklodowska - Curie fellow<br>Marie Curie Grant   |
| 2019-2021    | • Sabanci University, Istanbul, Turkey<br>Sabanci University Full Scholarship Award for Master's Study   |
| 2019         | • Izmir Institute of Technology, Izmir, Turkey <ul style="list-style-type: none"><li>• <b>Ranking First</b> in receiving BS degree in department of Mechanical Engineering faculty of Engineering</li><li>• <b>Ranking Third</b> in graduation among all students who graduated from Izmir Institute of Technology in 2018-2019 Academic Year.</li></ul> |
| 2019         | • TUBITAK (The Scientific and Technological Research Council of Turkey)<br>University Students Research Project Competitions Aegean Region, <b>First Rank Award</b>  |
| 2015-2019    | • Izmir Institute of Technology, Izmir, Turkey<br>High honor student, Izmir Institute of Technology, Izmir, Turkey   |



## ACADEMIC AND ADMINISTRATIVE EXPERIENCE

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|-----------|---|
| 2019-2021 | • Sabanci University, Istanbul, Turkey<br>Teaching Assistant: ME-309 Heat and Mass Transfer |
| 2019      | • Sabanci University, Istanbul, Turkey<br>Teaching Assistant: MATH-201 Linear Algebra       |



## SKILLS

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- Analytical and Lab Skills
  - a) Micro/nano fabrication: Thin film deposition using PVD; Wet etching technique; Lithography technique
  - b) Highly experienced in design and setup of experimental test-rigs.
  - c) Plan and perform experiments.
  - d) High speed flow visualization.

### • Computer skills

- a) MATLAB (Image processing; programming and numerical analysis)
- b) ANSYS Fluent
- c) SOLIDWORKS

### • Language skills

- English: (Advanced) **TOEFL: 98** (Expired in April 2021)
- Azerbaijani: (Native)
- Persian: (Advanced)
- Turkish: (Advanced)
- French: (Elementary)