

Ehsan PAJOUHESHGAR

PERSONAL DATA

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PUBLICATIONS: [Google Scholar](#)
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EDUCATION

PRESENT	Postdoc Researcher (Computer Science, and Appleid Mathematics) Ecole Polytechnique Fédérale de Lausanne , Lausanne, Switzerland Image and Visual Representation Lab (IVRL) - Prof. Sabine Süsstrunk
AUG. 2025	Chair of Statistical Field Theory (CSFT) - Prof. Clément Hongler
JULY 2025	Ph.D in Computer Science Ecole Polytechnique Fédérale de Lausanne , Lausanne, Switzerland Image and Visual Representation Lab (IVRL) SUPERVISOR: Sabine Süsstrunk
SEPT. 2020	GPA: 5.78/6 (via 36 credits)
JULY 2020	B.Sc in Computer Engineering Sharif University of Technology , Tehran, Iran MAJOR: Computer Engineering MINOR: Pure Mathematics
SEPT. 2015	GPA: 19.40/20 (via 166 credits)

HONORS AND AWARDS

JULY. 2024	Best Student Paper Award from ALife 2024 Conference
DEC. 2023	Teaching Assistance Excellence Award From EPFL
AUG. 2022	Best Paper Award from SIGGRAPH 2022 Conference
OCT. 2020	Doctoral Fellowship for one year from EDIC EPFL
JULY 2020	Ranked in top 5 in terms of GPA among 126 B.Sc. Computer Engineering students of the Computer Engineering Department , 2015 beginners.
SEPT. 2019	Gold Medal in Iranian National Statistics Olympiad (Ranked 1st)
OCT. 2016	30th team among 2000+ teams in IEEEEXTREME Programming Competition
AUG. 2014	Gold Medal in Iranian National Physics Olympiad

LANGUAGES

PERSIAN AND TURKISH: Bilingual

ENGLISH: Fluent

WORK EXPERIENCE

JULY 2020	Data Scientist , Cafe Bazaar , Tehran, Iran. Cafe Bazaar is by far the most popular app store among Iranians. I was working in the Computer Vision team in Balad (A map and navigation service like google maps). My projects were focused on extracting information from our own
MAY 2019	KITTI-like Dataset, and extracting roads from satellite and aerial images.

TEACHING EXPERIENCES

SPRING 2024 2023 - 2022	Teaching Assistant at EPFL , Lausanne, Switzerland Course: Computational Photography Prof. Sabine Süsstrunk Responsibility: Designing course projects and supervising students
FALL 2022	Course: Linear Algebra Prof. Nicolas Boumal Responsibility: Holding exercise sessions
FALL 2021	Course: Machine Learning Prof. Martin Jaggi Responsibility: Holding exercise sessions, designing the exam
SPRING 2019	Teaching Assistant at Sharif University of Technology , Tehran, Iran Course: Deep Learning Prof. Soleymani Responsibility: Teaching TensorFlow, designing homeworks
SPRING 2019	Course: Stochastic Processes Prof. M. H. Rohban Responsibility: Holding exercise classes and designing homeworks
FALL 2018	Course: Machine Learning Prof. Soleymani Responsibility: Designing homeworks and exams
SPRING 2017	Course: Advanced Programming in Java Prof. Mazloumi Responsibility: Designing course project
FALL 2016	Course: Engineering Probability and Statistics Prof. A. Hosseini Responsibility: Holding exercise class and designing homeworks
DEC. 2016	Teaching Physics , Farzanegan 1 High School and Allame Helli High School , Tehran, Iran
OCT. 2014	Teaching Thermodynamic, Kinetic Theory, Electrodynamics and Experimental Physics to Olympiad students

PUBLICATIONS

- Authors:** Ehsan Pajouheshgar, Yitao Xu, Ali Abbasi, Alexander Mordvintsev, Wenzel Jakob, Sabine Süsstrunk
Title: [Neural Cellular Automata: From Cells to Pixels](#)
Conference: Arxiv preprint, working towards SIGGRAPH 2026
- Authors:** Yitao Xu, Tong Zhang, Ehsan Pajouheshgar, Sabine Süsstrunk
Title: [Canonical Latent Representations in Conditional Diffusion Models](#)
Conference: Arxiv preprint, submitted to NeurIPS 2025
- Authors:** Maria Larsson, Hodaka Yamaguchi, Ehsan Pajouheshgar, I-Chao Shen, Kenji Tojo, Chia-Ming Chang, Lars Hansson, Olof Broman, Takashi Ijiri, Ariel Shamir, Wenzel Jakob, Takeo Igarashi
Title: [The Mokume Dataset and Inverse Modeling of Solid Wood Textures](#)
Journal: ACM Transactions on Graphics (TOG, SIGGRAPH) 2025
- Authors:** Dongqing Wang, Ehsan Pajouheshgar, Yitao Xu, Tong Zhang, Sabine Süsstrunk
Title: [Volumetric Temporal Texture Synthesis for Smoke Stylization using Neural Cellular Automata](#)
Journal: Arxiv preprint, submitted to BMVC
- Authors:** Ehsan Pajouheshgar, Yitao Xu, Sabine Süsstrunk
Title: [NoiseNCA: Noisy Seed Improves Spatio-Temporal Continuity of Neural Cellular Automata](#)
Conference: Artificial Life (ALife) 2024
- Authors:** Yitao Xu, Ehsan Pajouheshgar, Sabine Süsstrunk
Title: [Emergent Dynamics in Neural Cellular Automata](#)
Conference: Artificial Life (ALife) 2024
- Authors:** Ehsan Pajouheshgar*, Yitao Xu*, Alexander Mordvintsev, Eyvind Niklasson, Tong Zhang, Sabine Süsstrunk
Title: [Mesh Neural Cellular Automata](#) (arXiv pre-print)
Journal: ACM Transactions on Graphics (TOG, SIGGRAPH) 2024
- Authors:** Ehsan Pajouheshgar*, Yitao Xu*, Tong Zhang, Sabine Süsstrunk
Title: [DyNCA: Real-time Dynamic Texture Synthesis Using Neural Cellular Automata](#)
Conference: Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2023
- Authors:** Yael Vinker, Ehsan Pajouheshgar, Jessica Y Bo, Roman Christian Bachmann, Amit Haim Bermano, Daniel Cohen-Or, Amir Zamir, Ariel Shamir
Title: [Clipasso: Semantically-aware object sketching](#)
Journal: ACM Transactions on Graphics (TOG, SIGGRAPH) 2022
- Authors:** Ehsan Pajouheshgar, Tong Zhang, Sabine Süsstrunk
Title: [Optimizing Latent Space Directions for GAN-Based Local Image Editing](#)
Conference: IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2022

Authors: A. Khodadadi, A. Hosseini, **Ehsan Pajouheshgar**, F. Mansouri, & Hamid R. Rabiee
Title: [ChOracle: A Unified Statistical Framework for Churn Prediction](#)
Journal: IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE) 2020

Authors: **Ehsan Pajouheshgar**, Christoph H. Lampert
Title: [Back to square one: probabilistic trajectory forecasting without bells and whistles](#)
Conference: Workshop on Modeling and Decision-Making in the Spatiotemporal Domain,
32nd Conference on **Neural Information Processing Systems**, (**NeurIPS**) 2018