

Omid Taheri

Curriculum Vitae

PostDoc Researcher @ Perceiving Systems,
MPI Tübingen, Germany

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"The best way to predict the future is to create it."

Education

- 2024 - Pres. **Max Planck Institute for Intelligent Systems**, Tuebingen, DE.
Degree **PostDoc** in Computer Science - AI & Computer Vision
Supervisor Prof. Michael J. Black
- 2018 - 2024 **Max Planck Institute for Intelligent Systems**, Tuebingen, DE.
Degree **Ph.D.** in Computer Science - AI & Computer Vision (**Summa Cum Laude**)
Supervisors Prof. Michael J. Black, Dr. Dimitrios Tzionas
Thesis Modelling 3D Dynamic Human-Object Interaction Motion: From Capture to Synthesis
- 2014 - 2017 **Sharif University of Technology**, Tehran, IR.
Degree **M.Sc.** in Mechanical Engineering - Applied Mechanics (Control and Robotic)
GPA **3.90/4** - Among top 2% students in the Department
- 2010 - 2014 **Isfahan University of Technology**, Isfahan, IR.
Degree **B.Sc.** in Mechanical Engineering - Mechatronics
GPA **3.97/4** - Ranked 1st in the Mech. Eng. Department

Publications

- 1 HUMOS: Human Motion Model Conditioned on Body Shape**
ECCV - 2024 Tripathi, **Taheri**, Lassner, Black, Holden, Stoll [PDF](#) — [Code](#) — [Website](#)
- 2 WANDR: Intention-guided Human Motion Generation**
CVPR - 2024 Diomataris, Athanasiou, **Taheri**, Wang, Hilliges, Black [PDF](#) — [Code](#) — [Website](#)
- 3 GRIP: Generating Interaction Poses Using Spatial Cues and Latent Consistency**
3DV - 2024 **Taheri**, Zhou, Tzionas, Zhou, Ceylan, Pirk, Black [PDF](#) — [Code](#) — [Website](#)
- 4 InterCap: Joint Markerless 3D Tracking of Humans and Objects in Interaction from Multi-view RGB-D Images**
IJCV - 2024 Huang, **Taheri**, Black, Tzionas [PDF](#) — [Code](#) — [Website](#)
- 5 ARCTIC: A Dataset for Dexterous Bimanual Hand-Object Manipulation**
CVPR - 2023 Fan, **Taheri**, Tzionas, Kocabas, Kaufmann, Black, Hilliges [PDF](#) — [Code](#) — [Website](#)
- 6 IPMAN: 3D Human Pose Estimation via Intuitive Physics**
CVPR - 2023 Tripathi, Müller, Huang, **Taheri**, Black, Tzionas [PDF](#) — [Code](#) — [Website](#)
- 7 GOAL: Generating 4D Whole-Body Motion for Hand-Object Grasping**
CVPR - 2022 **Taheri**, Choutas, Black, Tzionas [PDF](#) — [Code](#) — [Website](#)

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InterCap: Joint Markerless 3D Tracking of Humans and Objects in Interaction
 GCPR - 2022 Huang, **Taheri**, Black, Tzionas [PDF](#) — [Code](#) — [Website](#)
- 9
GRAB: A Dataset of Whole-Body Human Grasping of Objects
 ECCV - 2020 **Taheri**, Ghorbani, Black, Tzionas [PDF](#) — [Code](#) — [Website](#)
- 10
Human Leg Motion Tracking by Fusing IMUs and RGB Camera Data Using EKF
 arXiv - 2017 **Taheri**, Salarieh, Alasti [PDF](#)

Research Interests

- o Virtual Avatar Animation
- o Human-Object Interaction
- o Grasp Prediction
- o Motion Synthesis and Tracking
- o Object-Interaction Detection
- o 3D Geometry Representation
- o Diffusion Models
- o Large Language Models (LLMs)

Experience

Research & Work

- Jun-Nov 2022 **PhD Research Intern**, *Adobe Inc.*, Remote, San Jose.
- July 2022 **ICVSS Summer School**, Sicily, IT.
 Winner of the AWS reading-group challenge.
- July 2021 **PAISS Summer School**, Grenoble, Remote.
- 2018 - Present **Motion Capture**, *Max Planck Institute for Intelligent Systems*, Tuebingen, DE.
 Collecting motion data with various systems including:
 - o Vicon MoCap System
 - o RGB Cameras
 - o Pressure Sensors
 - o 3D Scanners
 - o IMU Sensors
 - o Gaze Tracker
- 2016 - 2017 **Motion Analysis Researcher**, *Movafaghian Research Center*, Tehran, IR.
 Capturing and analyzing human motion data using IMU sensors and RGB cameras.
- 2015 - 2016 **Control Engineer**, *Rahpooyane Aflak Corporation*, Tehran, IR.
 Head of the control team in a project for tele-driving of manual cars

Teaching

- Jan-Jun 2015 **Teaching Assistant, B.Sc.**, *Sharif University of Technology*, Tehran, IR.
 - o Mechanics of Materials and Statics
 - o Dynamic and Control Laboratory
- Jan-Jun 2014 **Teaching Assistant, B.Sc.**, *Isfahan University of Technology*, Isfahan, IR.
 Mechatronics Laboratory

Awards & Honors

- 2023 **Finalist**, for *Meta PhD Fellowship*, Meta Inc.
- 2022 **Winner of the AWS reading group competition**, *ICVSS Summer School*, Sicily, IT.
- 2021 **Admitted to IMPRS-IS Program**, *MPI for Intelligent Systems*, Tuebingen, DE.
- 2018 **Ph.D. Fellowship**, *Max Planck Institute for Intelligent Systems*, Tuebingen, DE.
- 2014 - 2018 **Member of Iran's National Elites Foundation**, Tehran, IR.
- 2010 - 2017 **Recognized as Exceptionally-Talented Student**, Tehran, IR.
- 2014 **Honary M.Sc. Admission**, *Sharif University of Technology*, Tehran, IR.
- 2013 & 2014 **Ranked 4th & 6th in National Olympiad of Mech. Eng.**, Tehran, IR.
- 2010 - 2014 **Ranked 1st in Mechanical Engineering Department in B.Sc.**, Isfahan, IR.

Skills

- PYTHON - C/C++
- PyTorch & TensorFlow
- LLMs
- Generative AI (GenAI)
- Transformers
- Diffusion Models
- Computer Vision
- Human-Object Interaction
- Motion Capture
- IMU Sensors
- 3D Representation
- Avatar Animations
- Team Management
- Mentoring Researchers

Talks & Presentations

- 2024 **Modelling 3D Dynamic Human-Object Interactions: From Capture to Synthesis** (*Talk*),
@MPI-Informatik - Saarbruecken, DE.
- 2023 **Generating Realistic 3D Animations From Text** (*Startup Pitch*),
@CyberValley - Tuebingen, DE.
- 2022 **GOAL: Generating 4D Whole-Body Motion for Hand-Object Grasping** (*Poster*), @CVPR.
- 2021 **Training Avatars How to Grasp 3D Objects** (*Poster*), @PAISS Summer School.
- 2021 **Training Virtual Humans How to Interact With Objects** (*Lightning Talk*),
Honorable mention prize as a top 5% talk, @IMPRS Bootcamp - Tuebingen, DE.
- 2020 **GRAB: A Dataset of Whole-Body Human Grasping of Objects** (*Talk & Poster*),
@ECCV - Online.
- 2020 **GRAB: A Dataset of Whole-Body Human Grasping of Objects** (*Talk*),
@MPI_IS - Tuebingen, DE.
- 2019 **Accurate Hand Tracking using IMU sensors** (*Talk*), @MPI_IS - Tuebingen, DE.
- 2017 **Gait Tracking and Analysis Using IMU and RGB Camera Data Fusion Using EKF** (*Talk*),
@SUT - Tehran, IR.

Community Service

Paper Review

- 2023 ○ **3DV** (4 Papers)
- 2022 ○ **CVPR** (2 Papers) ○ **IJCV** (1 Paper)
- 2021 ○ **3DV** (3 Papers) ○ **TPAMI** (1 Paper) ○ **ICCV** (3 Papers)
- 2020 ○ **CVPR** (1 Paper) ○ **ECCV** (1 Paper)