

# Omid Taheri

## Curriculum Vitae

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

## Education

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

## Publications

 1	<b>InteractVLM: 3D Interaction Reasoning from 2D Foundational Models</b>	
CVPR - 2025	Dwivedi, Antić, Tripathi, <b>Taheri</b> , Schmid, Black, Tzionas	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
 2	<b>Humanity's Last Exam</b>	
arXiv - 2025	Taheri et al. (many co-authors)	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Dataset</a>
 3	<b>Predicting 4D Hand Trajectory from Monocular Videos</b>	
arXiv - 2025	Ye, Feng, <b>Taheri</b> , Feng, Tulsiani, Black	<a href="#">arXiv</a> — <a href="#">Code</a>
 4	<b>NIL: No-data Imitation Learning by Leveraging Pre-trained Video Diffusion Models</b>	
arXiv - 2025	Albaba, Li, Diomataris, <b>Taheri</b> , Krause, Black	<a href="#">arXiv</a>
 5	<b>A Versatile and Differentiable Hand-Object Interaction Representation</b>	
WACV - 2025	Morales, <b>Taheri</b> , Lacey	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
 6	<b>3D Whole-body Grasp Synthesis with Directional Controllability</b>	
3DV - 2025	Paschalidis, Wilschut, Antić, <b>Taheri</b> , Tzionas	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
 7	<b>HUMOS: Human Motion Model Conditioned on Body Shape</b>	
ECCV - 2024	Tripathi, <b>Taheri</b> , Lassner, Black, Holden, Stoll	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>

8	<b>WANDR: Intention-guided Human Motion Generation</b>	
CVPR - 2024	Diomataris, Athanasiou, <b>Taheri</b> , Wang, Hilliges, Black	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
9	<b>GRIP: Generating Interaction Poses Using Spatial Cues and Latent Consistency</b>	
3DV - 2024	<b>Taheri</b> , Zhou, Tzionas, Zhou, Ceylan, Pirk, Black	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
10	<b>InterCap: Joint Markerless 3D Tracking of Humans and Objects in Interaction from Multi-view RGB-D Images</b>	
IJCV - 2024	Huang, <b>Taheri</b> , Black, Tzionas	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
11	<b>ARCTIC: A Dataset for Dexterous Bimanual Hand-Object Manipulation</b>	
CVPR - 2023	Fan, <b>Taheri</b> , Tzionas, Kocabas, Kaufmann, Black, Hilliges	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
12	<b>IPMAN: 3D Human Pose Estimation via Intuitive Physics</b>	
CVPR - 2023	Tripathi, Müller, Huang, <b>Taheri</b> , Black, Tzionas	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
13	<b>GOAL: Generating 4D Whole-Body Motion for Hand-Object Grasping</b>	
CVPR - 2022	<b>Taheri</b> , Choutas, Black, Tzionas	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
14	<b>InterCap: Joint Markerless 3D Tracking of Humans and Objects in Interaction</b>	
GCPR - 2022	Huang, <b>Taheri</b> , Black, Tzionas	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
15	<b>GRAB: A Dataset of Whole-Body Human Grasping of Objects</b>	
ECCV - 2020	<b>Taheri</b> , Ghorbani, Black, Tzionas	<a href="#">PDF</a> — <a href="#">Code</a> — <a href="#">Website</a>
16	<b>Human Leg Motion Tracking by Fusing IMUs and RGB Camera Data Using EKF</b>	
arXiv - 2017	<b>Taheri</b> , Salarieh, Alasti	<a href="#">PDF</a>

## Research Interests

- o Virtual Avatar Modeling
- o 3D Reconstruction
- o Generative Models
- o Diffusion Models
- o Human-Object Interaction
- o Motion Synthesis and Tracking
- o 3D Geometry Representation
- o Large Models (LLMs/VLMs)

## Experience

### Research & Work

Jun-Nov 2022	<b>PhD Research Intern, Adobe Inc.</b>	Remote, San Jose.
July 2022	<b>ICVSS Summer School,</b> Winner of the AWS challenge.	Sicily, IT.
July 2021	<b>PAIIS Summer School,</b>	Grenoble, Remote.
2018 - 2024	<b>Motion Capture, Max Planck Institute for Intelligent Systems,</b> Collecting motion data with various systems including:	Tuebingen, DE.
	<ul style="list-style-type: none"> <li>o Vicon MoCap System</li> <li>o 3D Scanners</li> <li>o RGB Cameras</li> <li>o IMU Sensors</li> <li>o Pressure Sensors</li> <li>o Gaze Tracker</li> </ul>	
2016 - 2017	<b>Motion Analysis Researcher, Movafaghian Research Center,</b> Capturing and analyzing human motion data using IMU sensors and RGB cameras.	Tehran, IR.
2015 - 2016	<b>Control Engineer, Rahpooyane Aflak Corporation,</b> Head of the control team in a project for tele-driving of manual cars	Tehran, IR.

### Teaching

Jan-Jun 2015	<b>Teaching Assistant, B.Sc., Sharif University of Technology,</b> o Mechanics of Materials and Statics	Tehran, IR.
Jan-Jun 2014	<b>Teaching Assistant, B.Sc., Isfahan University of Technology,</b> Mechatronics Laboratory	Isfahan, IR.

## Awards & Honors

2023	<b>Finalist, for Meta PhD Fellowship,</b>	Meta Inc.
2022	<b>Winner of the AWS reading group competition, ICVSS Summer School,</b>	Sicily, IT.
2021	<b>Admitted to IMPRS-IS Program, MPI for Intelligent Systems,</b>	Tuebingen, DE.
2018	<b>Ph.D. Fellowship, Max Planck Institute for Intelligent Systems,</b>	Tuebingen, DE.
2014 - 2018	<b>Member of Iran's National Elites Foundation,</b>	Tehran, IR.
2010 - 2017	<b>Recognized as Exceptionally-Talented Student,</b>	Tehran, IR.
2014	<b>Honary M.Sc. Admission, Sharif University of Technology,</b>	Tehran, IR.
2013 & 2014	<b>Ranked 4<sup>th</sup> &amp; 6<sup>th</sup> in National Olympiad of Mech. Eng.,</b>	Tehran, IR.
2010 - 2014	<b>Ranked 1<sup>st</sup> in Mechanical Engineering Department in B.Sc.,</b>	Isfahan, IR.
2010	<b>Among Top 0.5% in National University Entrance Exam,</b>	Isfahan, IR.

## Skills

### Team Management

2019 - 2021	<b>Data Capturing and Data Cleaning Team, MPI for Intelligent Systems,</b> Managing a team of three persons working on capturing and cleaning motion data.	Tuebingen, DE.
2015 - 2016	<b>Control Engineering Team, Rahpooyane Aflak Corporation,</b> Managing a team of three students working on control and tele-drive of manual cars.	Tehran, IR.

### Mentoring

2025	<b>Anna Badalyan, Research Intern, MPI for Intelligent Systems,</b> May 2025–Present	Tuebingen, DE.
2025	<b>Rick Auckerman, Research Intern, MPI for Intelligent Systems,</b> Februray 2025–Present	Tuebingen, DE.
2024 - 2025	<b>Enes Duran, Master Student, MPI for Intelligent Systems,</b> September 2024–May 2025	Tuebingen, DE.
2024 - 2025	<b>Siyao Li, PhD Intern, MPI for Intelligent Systems,</b> September 2024–March 2025	Tuebingen, DE.
2024	<b>Yufei Ye, PhD Intern, MPI for Intelligent Systems,</b> April–November 2024	Tuebingen, DE.

### Tools & Topics

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

## Talks & Presentations

2024	<b>Modelling 3D Dynamic Human-Object Interactions: From Capture to Synthesis (Talk),</b> @MPI-Informatik - Saarbruecken, DE.
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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

2025	○ <b>3DV</b> (4 Papers)	○ <b>CVPR</b> (3 Papers)	○ <b>ICCV</b> (4 Papers)
2024	○ <b>TVCJ</b> (1 Paper)		
2023	○ <b>3DV</b> (4 Papers)	○ <b>Siggraph</b> (1 Paper)	
2022	○ <b>CVPR</b> (2 Papers)	○ <b>IJCV</b> (1 Paper)	
2021	○ <b>3DV</b> (3 Papers)	○ <b>TPAMI</b> (1 Paper)	○ <b>ICCV</b> (3 Papers)
2020	○ <b>CVPR</b> (1 Paper)	○ <b>ECCV</b> (1 Paper)	