# Omid Taheri

# Curriculum Vitae

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

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Jul 2018 - Pres. Max Planck Institute for Intelligent Systems, Tuebingen, DE.

Degree Ph.D. in Computer Science - Machine Learning and Computer Vision

Supervisors Prof. Michael J. Black, Dr. Dimitrios Tzionas

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

Thesis Gait Tracking and Analysis Using IMU and RGB Camera Data Fusion Using EKF

Supervisors Prof. Aria Alasti, Prof. Hassan Salarieh

2010 - 2014 Isfahan University of Technology,

Isfahan, IR.

Degree B.Sc. in Mechanical Engineering - Mechatronics

GPA 3.97/4 - Ranked 1<sup>st</sup> in the Mech. Eng. Department

Thesis Design of Spool-Sleeve Electrohydraulic Servo Salves Based on Desired Parameters

Supervisor Prof. Saeed Behbahani

#### **Publications**

GRIP: Generating Interaction Poses Conditioned on Object and Body Motion (Under Submission)

2023 O Taheri, Yi Zhou, D Tzionas, Ya Zhou, D Ceylan, S Pirk, MJ Black

Paper — Project Website — Github Code

2 ARCTIC: Articulated Objects in Free-form Hand Interaction (Under Submission)

2023 Z Fan, **O Taheri**, D Tzionas, M Kocabas, M Kaufmann, MJ Black, O Hilliges

Paper — Project Website

GOAL: Generating 4D Whole-Body Motion for Hand-Object Grasping

CVPR - 2022 O Taheri, V Choutas, MJ Black, D Tzionas

Paper — Project Website — Github Code

InterCap: Joint Markerless 3D Tracking of Humans and Objects in Interaction

GCPR - 2022 Y Huang, O Taheri, MJ Black, D Tzionas

Paper — Project Website — Github Code

GRAB: A Dataset of Whole-Body Human Grasping of Objects

ECCV - 2020 O Taheri, N Ghorbani, MJ Black, D Tzionas

Paper — Project Website — Github Code



arXiv - 2017

O Taheri, H Salarieh, A Alasti

Paper

# Research Interests

o Virtual Avatar Animation
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o Grasp Prediction

o Object-Interaction Detection

o Human-Object Interaction

o Motion Synthesis and Tracking

o 3D Geometry Representation

# Experience

#### Research & Work

Jun-Nov 2022 PhD Research Intern, Adobe Inc.,

Remote, San Jose.

July 2022 ICVSS Summer School,

Sicily, IT.

July 2021 PAISS Summer School,

Grenoble, Remote.

2018 - Present Motion Capture, Max Planck Institute for Intelligent Systems, Collecting motion data with various systems including:

Winner of the AWS reading-group challenge.

Tuebingen, DE.

Vicon MoCap System

RGB Cameras

Pressure Sensors

3D Scanners

IMU Sensors

Human Leg Motion Tracking by Fusing IMUs and RGB Camera Data Using EKF

Gaze Tracker

2016 - 2017 Motion Analysis Researcher, Movafaghian Research Center, Tehran, IR. Capturing and analyzing human motion data using IMU sensors and RGB cameras.

Control Engineer, Rahpooyane Aflak Corporation, 2015 - 2016

Tehran, IR.

Head of the control team in a project for tele-driving of manual cars

**Startup**, Self-Employement,

Tehran, IR.

Design and Fabrication of a Controller Board for AC to DC Conversion

Isfahan, IR.

Jun-Sep 2014 Summer Internship, Kian-Control Corporation, Worked on automation of a company production line using Siemens PLCs

## Teaching

2014 - 2015

2014

Jan-Jun 2015 Teaching Assistant, B.Sc., Sharif University of Technology,

Tehran, IR.

Mechanics of Materials and Statics

Dynamic and Control Laboratory

Jan-Jun 2014 Teaching Assistant, B.Sc., Isfahan University of Technology, Mechatronics Laboratory

Isfahan, IR.

## Awards & Honors

2023 **Selected as Finalist**, Meta PhD Fellowship Program,

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, 2018 **Ph.D. Fellowship** (*Declined*), Sharif University of Technology,

Tuebingen, DE. Tehran, IR.

2014 - 2018 Member of Iran's National Elites Foundation,

Tehran, IR.

2010 - 2017 Recognized as Exceptionally-Talented Student,

Tehran, IR.

Honary M.Sc. Admission, Sharif University of Technology, 2014

Tehran, IR. Tehran, IR.

Ranked 4th & 6th in National Olympiad of Mech. Eng., 2013 & 2014

Tehran, IR.

M.Sc. Fellowship (Declined), Amirkabir & Isfahan Uni of Technology,

2010 - 2014 Ranked 1st in Mechanical Engineering Department in B.Sc.,

Isfahan, IR.

2010 Among Top 0.5% in National University Entrance Exam,

Isfahan, IR.

#### Skills

#### -Team Management

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

#### -Mentoring

2022 Farzaneh Seyedshahi, Co-Supervised, MPI for Intelligent Systems,

Tuebingen, DE.

## -Tools & Topics

Python	MATLAB	C & C++	PyTorch
TensorFlow	Motion Capture	Blender	Autodesk Inventor
Deep Learning	Machine Learning	3D Geometry	

## Talks & Presentations

- 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

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