

Umar Iqbal

Sr. Research Manager
Data-Driven AI for Robotics

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RESEARCH INTERESTS

Computer Vision, Computer Graphics, Deep Learning, digital humans, human motion capture, human-object interaction, and robot learning from human data.

EDUCATION

Ph.D. in Computer Science (*summa cum laude - with highest honors*) Mar. 2014 – Nov. 2018
[University of Bonn](#), Germany

Supervisor: Prof. Juergen Gall

Dissertation: Articulated Human Pose Estimation in Unconstrained Images and Videos

Winner of the 2019 [DAGM MVTec Dissertation Award](#) given by the German Pattern Recognition Association.

M.Sc. in Information Technology (*distinction*) Aug. 2011 – Sep. 2013
[Tampere University of Technology](#), Finland

Supervisor(s): Prof. Moncef Gabbouj and Dr. Igor Curcio

Thesis title: Important Person Detection from Multiple Videos

B.Sc. in Computer Engineering Sep. 2006 – Aug. 2010
[COMSATS Institute of Information Technology \(CIIT\)](#), Lahore, Pakistan

Supervisor: Dr. Saquib Sarfraz

Thesis title: Vision Based Car Make and Model Recognition

WORK EXPERIENCE

Sr. Research Manager - NVIDIA Research Jan. 2019 – Present

Leading the [Data-Driven AI for Robotics \(DAIR\)](#) Team

- Human-centric computer vision, computer graphics, and machine learning.
- Robot learning from human videos.
- Digital human appearance and motion modeling.

Research Assistant - University of Bonn, Germany Mar. 2014 – Dec. 2018
[Computer Vision Group](#)

Research Intern - NVIDIA Research Oct. 2017 – Mar. 2018
[Learning and Perception Research Group](#)

Mentors: Jan Kautz and Pavlo Molchanov

Project Researcher - Tampere University of Technology, Finland Nov. 2013 – Dec. 2013
[Multimedia Research Group](#)





Computer Vision Research Assistant - Nokia Research Center (External) Sep. 2011 – Oct. 2013
Contextual Media Systems Team, Tampere, Finland

Research Associate - COMSATS Institute of Information Technology, Pakistan Aug. 2010 – Aug. 2011
[Computer Vision Research Group](#)

SELECTED PUBLICATIONS



- [1] J. Li, J. Cao, H. Zhang, D. Rempe, J. Kautz, **U. Iqbal**, Y. Yuan. GENMO: A GENeralist Model for Human MOtion. **ICCV**, 2025.
- [2] G. Kim, X. Li, Y. Yuan, K. Nagano, T. Li, J. Kautz, S. Y. Chun, **U. Iqbal**. GeoMan: Temporally Consistent

Human Geometry Estimation using Image-to-Video Diffusion. **ICCV**, 2025. 

- [3] Y. Huang, Y. Yuan, X. Li, J. Kautz, **U. Iqbal**. AdaHuman: Animatable Detailed 3D Human Generation with Compositional Multiview Diffusion. **ICCV**, 2025. 
- [4] T. Teufel, X. Zhou, **U. Iqbal**, P. Rao, P. Gera, J. Kautz, V. Golyanik, C. Theobalt. HumanOLAT: A Large-Scale Dataset for Full-Body Human Relighting and Novel-View Synthesis. **ICCV**, 2025. 
- [5] X. Li, Y. Yuan, S. De Mello, G. Daviet, J. Leaf, M. Macklin, J. Kautz, **U. Iqbal**. SimAvatar: Simulation-Ready Avatars with Layered Hair and Clothing. **CVPR**, 2025.
- [6] J. Li, Y. Yuan, D. Rempe, H. Zhang, P. Molchanov, C. Lu, J. Kautz, **U. Iqbal**. COIN: Control-Inpainting Diffusion Prior for Human and Camera Motion Estimation. **ECCV**, 2024.
- [7] Y. Yuan, X. Li, Y. Huang, S. De Mello, K. Nagano, J. Kautz, **U. Iqbal**. GAvatar: Animatable 3D Gaussian Avatars with Implicit Mesh Learning. **CVPR**, 2024.
- [8] M. Kocabas, Y. Yuan, P. Molchanov, M. J. Black, O. Hilliges, J. Kautz, **U. Iqbal**. PACE: Human and Camera Motion Estimation from In-the-Wild Videos. **3DV**, 2024.
- [9] **U. Iqbal**, A. Caliskan, K. Nagano, S. Khamis, P. Molchanov, J. Kautz. RANA: Relightable Articulated Neural Avatars. **ICCV**, 2023. 
- [10] Y. Yuan, J. Song, **U. Iqbal**, A. Vahdat, J. Kautz. PhysDiff: Physics-Guided Human Motion Diffusion Model. **ICCV**, 2023. 

[Full publication list.](#)

SCIENTIFIC SERVICES

- **Area Chair**
ICCV'25, CVPR'25, WACV'25, BMVC'21, BMVC'22, BMVC'23
- **Reviewer**
CVPR, ICCV, ECCV, NeurIPS, SIGGRAPH, ICML, ACCV, 3DV, TPAMI, TIP, TMM.
- **Workshop(s)**
Organized the 2nd PoseTrack Challenge on Human Pose Estimation and Tracking in the Wild, ECCV (2018). 
Organized the 1st PoseTrack Challenge on Human Pose Estimation and Tracking in the Wild, ICCV (2017). 

VISA STATUS

US Permanent Resident (EB1-B green card, Outstanding Professor or Researcher)