Abdullah Hamdi *(Computer Vision)*

Birth:	July 5, 1993, Saudi Arabia
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Career Objective

To develop robust deep learning tools for 3D understanding and creation and to expand the access of AI to disadvantaged groups in the Arabic region . [video link , article link, TedX talk]

* I am currently sponsored by Ibn Rushd Postdoc Fellowship (similar to MSCA, but for Saudi nationals). It covers the entire expenses of pursuing a postdoc at any top academic institution.

Education

Ph.D. candidate, KAUST **2018-now**

- Computer Vision (Robustness and 3D deep learning), Electrical and Computer Engineering major under Prof Bernard Ghanem,

MS, KAUST (GPA: 4.0/4) **2016-2018**

- Computer Vision, Electrical Engineering major under Prof Bernard Ghanem.
- Thesis: “Cascading Generative Adversarial Networks for Targeted Imagination”

Exchange, Texas A&M (GPA: 4.0/4) **2014-2014**

- Earned 14 Credit hours in Texas A&M University, College Station TX.

BS, KFUPM (GPA: 3.97/4) **2011-2016**

- Electrical Engineering in KFUPM, Saudi Arabia

Experience

Internships

- **2022:** Five-month internship at TUM, Munich with Prof. Matthias Niessner.
- **2020:** summer internship at Adobe Research (canceled last minute due to COVID)
- **2015:** Summer internship at GE, Power Generation Services, Saudi Arabia.

Academic

- **2022:** Leading a research project on generating NeRFs from few images at TUM.
- **2021:** Leading a research project on multi-view for 3D understanding (two papers).
- **2020:** Giving a seminar about my recent papers on 3D Adversarial Attacks
- **2019-now:** Reviewer for +50 papers at CVPR’22, ICCV’21, NeurIPS’21, ICLR’21, ECCV’20, CVPR’20 and ICCV’19 on topics like adversarial attacks and 3D.
- **2020:** Giving Introduction to Deep Learning Workshop to +600 attendees.
- **2019:** Teaching Lecture on GANs, EE354 (Intro to Computer Vision), KAUST
- **2019:** TA for AMCS 211 (Numerical Optimization MS course), KAUST
- **2015**: Leading Best Senior Design Project," Low cost automatic controlled drones."

- **2014**: Leading a research team in "solar trackers of PV panels" granted by KFUPM.

Projects

- **2018-now:** Founder and president of Fihm.ai (biggest Arabic online AI platform)
- **2017-now:** Developing deep generative models (GANs), adversarial attacks, 3D deep models and differentiable rendering using TensorFlow and Pytorch.
- **2016:** Developing visual object tracking and orientation detection vision for UAVs, participating with KAUST team that wins MBZIRC international competition.
- **2015:** Founder and president of KFUPM Innovation Club (+200 members).

Accomplishments

List of Featured Publications (Google Scholar)

- Abdullah Hamdi, Silvio Giancola, Bernard Ghanem, "Voint Cloud: Multi-View Point Cloud Representation for 3D Understanding", ECCV 2022 submission.
- Abdullah Hamdi, Silvio Giancola, Bernard Ghanem, "MVTN: Multi-View Transformation Network for 3D Shape Recognition", Published at ICCV 2021.
- Salman Alsubaihi, Adel Bibi, Modar Alfadly, Abdullah Hamdi, Bernard Ghanem, "Expected Tight Bounds for Robust Deep Neural Network Training", ICLRW 2021.
- Abdullah Hamdi, Sara Rojas, Ali Thabet, Bernard Ghanem, "AdvPC: Transferable Adversarial Perturbations on 3D Point Clouds", Published at ECCV 2020.
- Abdullah Hamdi, Matthias Müller, Bernard Ghanem, "SADA: Semantic Adversarial Diagnostic Attacks for Autonomous Applications", Published at AAAI 2020 [spotlight].
- Abdullah Hamdi, Bernard Ghanem, "Towards Analyzing Semantic Robustness of Deep Neural Networks", Published at ECCV 2020 Workshop Proceedings [Best paper award]
- MS Thesis: "Cascading Generative Adversarial Networks for Targeted Imagination".

List of Registered US Patents

- Abdullah Hamdi, "Smart dust-cleaner and cooler for solar PV panels", Granted in 2018.

List of Awards

- **2022:** Winner of "Ibn Rushd Postdoc Fellowship Award", KAUST global initiative.
- **2021 & 2020:** Winner of CEMSE Student Research Excellence Award at KAUST.
- **2020:** Winner of the NEOM AI Challenge, Entertainment track (AI-Sports team).
- **2020:** NVIDA Best Paper Award at ECCV 2020 AROW Workshop.
- **2017:** Won first place in Entrepreneurship Super Steam challenge for Saudi Universities in KAUST, $ 8000 prize, startup idea: VR labs.
- **2014:** The first-place winner in Nassir Bin Hamad international youth creativity award in science for invention in solar dust cleaning. US Patent: US9899957B2 titled "Smart dust-cleaner and cooler for solar PV panels."
- **2008**: Nominated to represent Saudi Arabia in International Junior Science Olympiad for most qualified students in the world in Changwon, Korea.

Skills

Software Skills (GitHub Profile)

- Computer programming in MATLAB, Julia, C++, Python, Pytorch, TensorFlow.
- Using GPU cluster at KAUST (+800 GPUs) for large scale experiments.
- Using UE4 and Blender to simulate computer vision tasks (detection and tracking).

Soft Skills

- Fluent in English and Arabic (107/120 in TOEFEL IBT).
- Public-speaking (gave a TedX talk on AI Inequality in **2021**).