MOTASEM ALFARRA

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EDUCATION

PhD, King Abdullah University of Science and Technology *May 2020 - September 2024*
Department of Electrical and Computer Engineering, Thuwal, Saudi Arabia Overall GPA: 4.0/4.0
Advisor: Bernard Ghanem
Thesis: Combating Domain Shifts in Deep Learning Era

MSc, King Abdullah University of Science and Technology *January 2019 - May 2020*
Department of Electrical Engineering, Thuwal, Saudi Arabia Overall GPA: 4.0/4.0
Advisor: Bernard Ghanem
Thesis: Applications of Tropical Geometry in Deep Neural Networks

BSc, Kuwait University *September 2014 - May 2018*
Department of Electrical Engineering, Alkhaldiya, Kuwait Overall GPA: 4.0/4.0

TEACHING/RESEARCH EXPERIENCE

- **Research Scientist** September 2024 - Present
  Qualcomm AI Research - Amsterdam, Netherlands

- **Summer School** July 2024
  International Computer Vision Summer School - Sicily, Italy

- **CVPR Workshop Co-Organizer** June 2024
  1st Workshop on Test-Time Adaptation: Model, Adapt Thyself! (MAT) - Seattle, USA

- **Research Internship** May 2023 - September 2023
  Qualcomm AI Research - Amsterdam, Netherlands

- **Research Internship** August 2022 - December 2022
  Intel AI Labs - Munich, Germany

- **Research Internship** October 2021 - February 2022
  University of Oxford - Oxford, United Kingdom

- **Teacher Assistance** January 2020 - May 2020
  Introduction to Computer Vision (Ph.D. course) - KAUST, Saudi Arabia

- **Guest Lecturer** (1 Lecture) July 2020
  Title: Adversarial Attacks and Network Robustness - Universidad Panamericana, Mexico

SELECTED PUBLICATIONS

(* indicates equal contribution)

- <u>Motasem Alfarra</u>, Alvaro Corriea, Bernard Ghanem, Christos Louizos. "Test-time Adaptation with Source Based Auxiliary Tasks", TMLR 2025

- Merey Ramazanova, Alejandro Pardo, Bernard Ghanem, <u>Motasem Alfarra</u>. "Combating Missing Modalities in Egocentric Videos at Test Time", ICLR 2025

- <u>Motasem Alfarra</u>, Juan C Pérez, Zhipeng Cai, Matthias Müller, Bernard Ghanem. "Revisiting Test Time Adaptation under Online Evaluation", ICML 2024

- <u>Motasem Alfarra</u>, Zhipeng Cai, Adel Bibi, Bernard Ghanem, Matthias Müller. "SimCS: Simulation for Online Domain-Incremental Continual Segmentation", AAAI   2024

- Kumail Alhamoud, Yasir Ghunaim, <u>Motasem Alfarra</u>, Thomas Hartvigsen, Philip Torr, Bernard Ghanem, Adel Bibi, Marzyeh Ghassemi, "FedMedICL: Towards Holistic Evaluation of Distribution Shifts in Federated Medical Imaging", MICCAI   2024

- Yasir Ghunaim, Adel Bibi, Kumail Alhamoud, <u>Motasem Alfarra</u>, Philip H. S. Torr, Bernard Ghanem. "Real-Time Evaluation in Online Continual Learning: A New Hope", CVPR   2023

- Kumail Alhamoud, Hasan Abed Al Kader Hammoud <u>Motasem Alfarra</u>, Bernard Ghanem. "Generalizability of Adversarial Robustness Under Distribution Shifts". TMLR [Featured]   2023

- <u>Motasem Alfarra</u>*, Francisco Eiras*, M. Pawan Kumar, Philip H. S. Torr, Puneet K. Dokania, Bernard Ghanem, Adel Bibi*. "ANCER: Anisotropic Certification via Sample-wise Volume Maximization", TMLR.   2022

- <u>Motasem Alfarra</u>*, Adel Bibi*, Hasan Hammoud, Mohamed Gaafar and Bernard Ghanem. "On the Decision Boundaries of Neural Networks: A Tropical Geometry Perspective", TPAMI   2022

- <u>Motasem Alfarra</u>, Juan C. Pérez, Anna Frühstück, Philip H. S. Torr, Peter Wonka, Bernard Ghanem. "On the Robustness of Quality Measures for GANs", ECCV   2022

- <u>Motasem Alfarra</u>*, Gabriel Pérez S.*, Juan C. Pérez*, Silvio Giancola, Bernard Ghanem. "3DeformRS: Certifying Spatial Deformations on Point Clouds". CVPR   2022

- <u>Motasem Alfarra</u>*, Adel Bibi*, Naeemullah Khan, Philip H. S. Torr, Bernard Ghanem. "DeformRS: Certifying Input Deformations with Randomized Smoothing", AAAI [oral].   2022

- <u>Motasem Alfarra</u>, Juan C. Pérez, Ali Thabet, Adel Bibi, Philip H. S. Torr, Bernard Ghanem. "Combating Adversaries with Anti-Adversaries", AAAI.   2022

AWARDS AND HONORS

- **KAUST Academic Excellency Award**   July 2022
  Received the Academic Excellency Award of the academic year 2021/2022. Thuwal, Saudi Arabia.

- **Best Extended Abstract Award in LatinX Workshop at CVPR'22**   June 2022
  For the work "Combating Adversaries with Anti-Adversaries". New Orleans, USA

- **KAUST Fellowship**   January 2019
  A fellowship provided to continue my MSc/PhD studies at KAUST. Thuwal, Saudi Arabia.

- **National Debating Competition**   November 2017
  Won the national debating competition and was awarded as one of the top 10 debaters. Kuwait.

- **High School Examinations ($6^{th}/\sim23,000$)**   June 2014
  Kuwait, Kuwait.

SKILLS

- **Programming Skills and Software Packages**
  Python, Pytorch, C++, MATLAB, Git, Anaconda, Latex

- **Reviewer**
  CVPR, ICML, ICCV, NeurIPS, ICLR, TPAMI.