# 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: 4.0/4.0Advisor: Bernard Ghanem Thesis: Combating Domain Shifts in Deep Learning Era MSc, King Abdullah University of Science and Technology January 2019 - May 2020 Overall GPA: 4.0/4.0Department of Electrical Engineering, Thuwal, Saudi Arabia 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

• Senior Engineer

Qualcomm AI Research - Amsterdam, Netherlands

September 2024 - Present

• Summer School

International Computer Vision Summer School - Sicily, Italy

• CVPR Workshop Co-Organizer

1st Workshop on Test-Time Adaptation: Model, Adapt Thyself! (MAT) - Seattle, USA

• Research Internship

Qualcomm AI Research - Amsterdam, Netherlands

May 2023 - September 2023

• Research Internship
Intel AI Labs - Munich, Germany

August 2022 - December 2022

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

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

• Guest Lecturer (1 Lecture)

Title: Adversarial Attacks and Network Robustness - Universidad Panamericana, Mexico

#### SELECTED PUBLICATIONS

(\* indicates equal contribution)

- Motasem Alfarra, Alvaro Corriea, Bernard Ghanem, Christos Louizos. "Test-time Adaptation with Source Based Auxiliary Tasks", TMLR
- Merey Ramazanova, Alejandro Pardo, Bernard Ghanem, Motasem Alfarra,. "Combating Missing Modalities in Egocentric Videos at Test Time", ICLR
- Motasem Alfarra, Juan C Pérez, Zhipeng Cai, Matthias Müller, Bernard Ghanem. "Revisiting Test Time Adaptation under Online Evaluation", ICML

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

## AWARDS AND HONORS

- KAUST Academic Excellency Award

  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

  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  $(6^{th}/\sim 23,000)$  June 2014 Kuwait, Kuwait.

## **SKILLS**

- Programming Skills and Software Packages
  Python, Pytorch, C++, MATLAB, Git, Anaconda, Latex
- Reviewer CVPR, ICML, ICCV, NeurIPS, ICLR, TPAMI.