MOTASEM ALFARRA

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EDUCATION

PhD, King Abdullah University of Science and Technology	*May 2020 - Present*
Department of Electrical and Computer Engineering	
Advisor: Bernard Ghanem	
MSc, King Abdullah University of Science and Technology	*January 2019 - May 2020*
Department of Electrical Engineering	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	Overall GPA: 4.0/4.0

TEACHING/RESEARCH EXPERIENCE

- **Research Internship**   August 2022 - December 2022
  Intel 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>, Hani Itani, Alejandro Pardo, Shyma Alhuwaider, Merey Ramazanova, Juan C Pérez, Zhipeng Cai, Matthias Müller, Bernard Ghanem. "Revisiting Test Time Adaptation under Online Evaluation", arxiv   2023

- <u>Motasem Alfarra</u>, Zhipeng Cai, Adel Bibi, Bernard Ghanem, Matthias Müller. "SimCS: Simulation for Online Domain-Incremental Continual Segmentation", CVPRW   2023

- 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 Paradigm", CVPR 2023

- Andrés Villa, Juan C Alcazar, <u>Motasem Alfarra</u>, Kumail Alhamoud, Julio Hurtado, Fabian Caba, Alvaro Soto, Bernard Ghanem. "PIVOT: Prompting for Video Continual Learning", CVPR 2023

- Juan C. Pérez, <u>Motasem Alfarra</u>, Ali Thabet, Pablo Arbeláez, Bernard Ghanem. "Towards Assessing and Characterizing the Semantic Robustness of Face Recognition" CVPRW   2023

- Joachim Houyon, Anthony Cioppa, Yasir Ghunaim, <u>Motasem Alfarra</u>, Anaïs Halin, Maxim Henry, Bernard Ghanem, Marc Van Droogenbroeck. "Online Distillation with Continual Learning for Cyclic Domain Shifts" CVPRW   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>, Juan C. Pérez, Egor Shulgin, Peter Richtárik, Bernard Ghanem. "Certified Robustness in Federated Learning". NeurIPSW   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

- Juan C Pérez, <u>Motasem Alfarra</u>, Guillaume Jeanneret, Laura Rueda, Ali Thabet, Bernard Ghanem, Pablo Arbeláez. "Enhancing Adversarial Robustness via Test-time Transformation Ensembling", AROW-ICCVW   2021

- <u>Motasem Alfarra</u>*, Juan C. Pérez*, Guillaume Jeanneret*, Adel Bibi, Ali Thabet, Bernard Ghanem, Pablo Arbeláez. "Gabor Layers Enhance Network Robustness", ECCV.   2020

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 generous 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, Kuwait.

- **Dean's Award Honor List (6 consecutive semesters)**   November, 2015 - March 2018
  Kuwait, Kuwait.

- **High School Examinations (6th/$\sim$23,000)**   June 2014
  Kuwait, Kuwait.

SKILLS

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

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