

# MOTASEM ALFARRA

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## EDUCATION

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| <b>PhD, King Abdullah University of Science and Technology</b><br>Department of Electrical and Computer Engineering<br>Advisor: Bernard Ghanem   | <i>May 2020 - Present</i>                                |
| <b>MSc, King Abdullah University of Science and Technology</b><br>Department of Electrical Engineering<br>Advisor: Bernard Ghanem<br>Thesis: Applications of Tropical Geometry in Deep Neural Networks | <i>January 2019 - May 2020</i><br>Overall GPA: 4.0/4.0   |
| <b>BSc, Kuwait University</b><br>Department of Electrical Engineering  | <i>September 2014 - May 2018</i><br>Overall GPA: 4.0/4.0 |

## TEACHING/RESEARCH EXPERIENCE

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- **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

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(\* indicates equal contribution)

- Motasem Alfarra, 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
- Motasem Alfarra, Zhipeng Cai, Adel Bibi, Bernard Ghanem, Matthias Müller. “SimCS: Simulation for Online Domain-Incremental Continual Segmentation”, [CVPRW](#) 2023
- Yasir Ghunaim, Adel Bibi, Kumail Alhamoud, Motasem Alfarra, Philip H. S. Torr, Bernard Ghanem. “Real-Time Evaluation in Online Continual Learning: A New Paradigm”, [CVPR](#) 2023
- Andrés Villa, Juan C Alcazar, Motasem Alfarra, Kumail Alhamoud, Julio Hurtado, Fabian Caba, Alvaro Soto, Bernard Ghanem. “PIVOT: Prompting for Video Continual Learning”, [CVPR](#) 2023
- Juan C. Pérez, Motasem Alfarra, Ali Thabet, Pablo Arbeláez, Bernard Ghanem. “Towards Assessing and Characterizing the Semantic Robustness of Face Recognition” [CVPRW](#) 2023
- Kumail Alhamoud, Hasan Abed Al Kader Hammoud Motasem Alfarra, 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**. 2022
- Motasem Alfarra\*, Adel Bibi\*, Hasan Hammoud, Mohamed Gaafar and Bernard Ghanem. “On the Decision Boundaries of Neural Networks: A Tropical Geometry Perspective”, **TPAMI** 2022
- Motasem Alfarra, Juan C. Pérez, Anna Frühstück, Philip H. S. Torr, Peter Wonka, Bernard Ghanem. “On the Robustness of Quality Measures for GANs”, **ECCV** 2022
- Motasem Alfarra, Juan C. Pérez, Egor Shulgin, Peter Richtárik, Bernard Ghanem. “Certified Robustness in Federated Learning”. **NeurIPSW** 2022
- Motasem Alfarra\*, Gabriel Pérez S.\*, Juan C. Pérez\*, Silvio Giancola, Bernard Ghanem. “3DeformRS: Certifying Spatial Deformations on Point Clouds”. **CVPR** 2022
- Motasem Alfarra\*, Adel Bibi\*, Naeemullah Khan, Philip H. S. Torr, Bernard Ghanem. “DeformRS: Certifying Input Deformations with Randomized Smoothing”, **AAAI [oral]**. 2022
- Motasem Alfarra, Juan C. Pérez, Ali Thabet, Adel Bibi, Philip H. S. Torr, Bernard Ghanem. “Combating Adversaries with Anti-Adversaries”, **AAAI**. 2022
- Juan C Pérez, Motasem Alfarra, Guillaume Jeanneret, Laura Rueda, Ali Thabet, Bernard Ghanem, Pablo Arbeláez. “Enhancing Adversarial Robustness via Test-time Transformation Ensembling”, **AROW-ICCVW** 2021
- Motasem Alfarra\*, Juan C. Pérez\*, Guillaume Jeanneret\*, Adel Bibi, Ali Thabet, Bernard Ghanem, Pablo Arbeláez. “Gabor Layers Enhance Network Robustness”, **ECCV**. 2020

## AWARDS AND HONORS

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- **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 (6<sup>th</sup>/~23,000)** June 2014  
Kuwait, Kuwait.

## SKILLS

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