MATTIA SOLDAN

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EDUCATION

- **Ph.D. Electrical and Computer Engineering** - King Abdullah University of Science and Technology, Saudi Arabia   Aug. 2019 - Present
  Advisor: Bernard Ghanem   GPA: 4.0
  Research topics: Computer Vision, Deep Learning, Video and Language Modeling

- **M.Sc. Telecommunication Engineering** - University of Padova, Italy   Feb. 2015 - Nov. 2017
  Advisor: Michele Rossi   GPA: 4.0
  Thesis: Deep Recurrent Neural Network based Multi-Modal Gait Anomaly Detection System

- **B.Sc. Information Engineering** - University of Padova, Italy   Sep. 2011 - Feb. 2015
  Advisor: Leonardo Badia
  Thesis: Winner Radio Channel Model Analysis for LTE Network Simulations Performance Evaluation

INDUSTRY EXPERIENCE

- **Research Internship** - Adobe AI Research - San Francisco, USA   May 2023 - Sep. 2023
  Working on efficient deep learning models for enabling cost-effective AI solutions in video processing.
  Advisor: Bryan Russell

- **Research Internship** - Samsung AI Center - Cambridge, United Kingdom   June 2022 - Dec. 2022
  Working on an AI-powered cooking assistant with vision and language capabilities.
  Advisor: Brais Martinez

TEACHING/RESEARCH EXPERIENCE

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

- **Teaching Assistance**   Jan. 2024 - May 2024
  Deep Learning for Computer Vision (Ph.D. level course) - KAUST, Saudi Arabia

- **Summer School**   July 2019
  DeepLearn - International Summer School on Deep Learning - Warsaw, Poland

- **Research Internship**   Aug. 2018 - Apr. 2019
  King Abdullah University of Science and Technology - Thuwal, Saudi Arabia

AWARDS

- **Distinguished Paper Award @ CVPR's EgoVis workshop**   June 2024

- **EPIC-Kitchens Challenge @ CVPR**   June 2022
  1st place in *Multi-Instance Retrieval*

- **Ego4D Challenge @ CVPR**   June 2022
  1st place in *Object State Change Classification*, **2**[nd] place in *Natural Language Queries for Episodic Memories*, **3**[rd] place in *Point of No Return Temporal Localization*

- **Best paper award @ CVPR's CVEU workshop**   June 2021

- **AI-Sports: Taking E-sports To The Next Level with AI**   June 2020
  1st place in the NEOM AI Challenge awarded at the GlobalAISummit in Riyadh

INVITED TALKS

- "Boundary-denoising for video activity localization" presented at **Rising Stars in AI Symposium** - KAUST - Saudi Arabia — Feb. 2024

- "Connecting Language and Video to Enable Semantic Video Search" presented at **University of Bristol** - United Kingdom — Jul. 2022

- "MAD: A Scalable Dataset for Language Grounding in Videos from Movie Audio Descriptions" presented at **Rising Stars in AI Symposium** - KAUST - Saudi Arabia — Feb. 2022

PUBLICATIONS

(* indicates equal contribution)

1. **M. Soldan**, F. Caba, B. Ghanem, J. Sivic, B. Russell. "ResidualViT for Efficient Zero-Shot Natural Language Temporal Video Grounding" Under review 2024

2. S. Liu, C. Zhao, F. Zohra, **M. Soldan**, A. Pardo, M. Xu, L. Alssum, M. Ramazanova, J. L. Alcazar, A. Cioppa, S. Giancola, C. Hinojosa, B. Ghanem. "OpenTAD: A Unified Framework and Comprehensive Study of Temporal Action Detection" Under review 2024

3. J. C. Pérez, A. Pardo, **M. Soldan**, H. Itani, J. L. Alcazar, B. Ghanem. "Compressed-Language Models for Understanding Compressed File Formats: a JPEG Exploration" ArXiv - Under review 2024

4. D. M. Argaw, **M. Soldan**, A. Pardo, C. Zhao, F. Caba, J. S. Chung, B. Ghanem. "Towards Automated Movie Trailer Generation" CVPR 2024

5. **M. Soldan***, M. Xu*, Jialin Gao, S. Liu, J. M. Pérez-Rúa, B. Ghanem. "Boundary-denoising for video activity localization" ICLR 2023

6. Wayner Barrios, **M. Soldan**, F. Caba, A. M. Ceballos-Arroyo, B. Ghanem. "Localizing moments in long video via multimodal guidance" ICCV 2023

7. K. Q. Lin, A. J. Wang, **M. Soldan**, M. Wray, R. Yan, E. Z. Xu, D. Gao, R. Tu, W. Zhao, W. Kong, C. Cai, H. Wang, D. Damen, B. Ghanem, W. Liu, M. Z. Shou. "Egocentric Video-Language Pretraining" NeurIPS 2022

8. **M. Soldan**, A. Pardo, J. L. Alcázar, F. Caba, C. Zhao, S. Giancola, B. Ghanem. "MAD: A Scalable Dataset for Language Grounding in Videos from Movie Audio Descriptions" CVPR 2022

9. **M. Soldan**, M. Xu, Sisi Qu, Jesper Tegner, B. Ghanem. "VLG-Net: Video-Language Graph Matching Network for Video Grounding" ICCV 2021

10. L. Angelilli, P. P. Ciottoli, R. M. Galassi, F. E. Hernandez Perez, **M. Soldan**, Z. Lu, M. Valorani, H. G. Im. "Large eddy simulation with flamelet progress variable approach combined with artificial neural network acceleration" AIAA Scitech 2021

11. R. Bonetto, **M. Soldan**, A. Lanaro, S. Milani, M. Rossi. "Seq2Seq RNN based gait anomaly detection from smartphone acquired multimodal motion data" ArXiv 2019

12. **M. Soldan***, V. Escorcia*, J. Sivic, B. Ghanem, B. Russell. "Finding Moments in Video Collections Using Natural Language" ArXiv 2019

SKILLS

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

- **Scientific Peer Reviewer**
  Conferences (CVPR, ICCV, ECCV, NeurIPS, ICLR, AAAI) and Journals (IJCV, CVIU).