# Ali Diba

Computer Vision Lab(PSI), KU Leuven (PSI-Lab)
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**PRINCIPAL INTERESTS**

Computer vision, Video understanding, Human activity recognition, Machine learning, Deep neural networks, Large scale visual understanding, and Self-supervised learning methods.

**ACADEMIC BACKGROUND**

*Ph.D. Electrical Engineering, Computer Vision* 2021
KU Leuven, Leuven, Belgium

- Ph.D. research in computer vision under the supervision of prof. Luc Van Gool. Dissertation title: Large-scale video understanding.

*M.Sc. Computer Engineering* 2014
Sharif University of Technology, Tehran, Iran

- Focus areas: computer vision and scene understanding (thesis: Scene classification By Segmented frames from video streams) under the supervision of Prof. Mohammad Ghanbari

**EMPLOYMENT HISTORY**

*Postdoctoral Researcher* 2022 - Present
KU Leuven, PSI, Leuven, Belgium

- Leading research on video understanding and self-supervised learning
- Supervising Ph.D. projects with Prof. Luc Van Gool
- Organizing international workshops and tutorials on computer vision

*PhD Researcher* 2016 - 2022
KU Leuven, PSI, Leuven, Belgium

- Research on novel deep neural networks for object detection
- Research on novel large-scale video recognition models
- Organizing teaching sessions for computer vision course

*Chief Technology Officer/ Co-Founder* 2015 - 2020
Sensifai BV (Computer vision solutions startup), Leuven, Belgium

- Principal technical expert
- Leading design and implementing computer vision SaaS solutions
- Leading technical teams in software and AI divisions
- Managing research grants and proposals

**PUBLICATIONS**

See also my google scholar page. (**citations>2K and H-index 20**)
The listed publications are peer-reviewed conferences or journal articles and top-tier in the field of computer vision. CVPR, NeurIPs, ICCV, ECCV, and MVA are highly competitive, with acceptance rates of less than 25%, and among the most impactful conferences in computer science. CVPR is the most cited IEEE conference with the highest impact in Engineering and Computer Science.

21. Ali Diba, Vivek Sharma, Luc Van Gool, **"Spatio-Temporal Convolution-Attention Video Network"**, under review, 2022
20. Mohsen Fayyaz, Emad Bahrami Rad, Ali Diba, Mehdi Noroozi, Ehsan Adeli, Luc Van Gool, Juergen Gall, **"3D CNNs with Adaptive Temporal Feature Resolutions"**, ***CVPR*, 2021**
19. M Saquib Sarfraz, Naila Murray, Vivek Sharma, Ali Diba, Luc Van Gool, Rainer Stiefelhagen, **"Temporally-Weighted Hierarchical Clustering for Unsupervised Action Segmentation"**, ***CVPR*, 2021**
18. Ali Diba, Vivek Sharma, Reza Safdari, Dariush Lotfi, Saquib Sarfraz, Rainer Stiefelhagen, Luc Van Gool, **"Vi2CLR: Video and Image for Visual Contrastive Learning of Representation"**, ***ICCV*, 2021**
17. Callemein Timothy, Tom Roussel, Ali Diba, Boes Wim, Tuytelaars Tinne, Goedemé Toon, **"Show me where the action is!"**, *Journal of Multimedia Tools and Applications*, 2021
16. Ali Varamesh, Ali Diba, Tinne Tuytelaars, Luc Van Gool, **"Self-Supervised Ranking for Representation Learning"**, ***Neurips*, 2020**
15. Ali Diba, Mohsen Fayyaz, Vivek Sharma, Manohar Paluri, Jürgen Gall, Rainer Stiefelhagen, Luc Van Gool, **"Large scale holistic video understanding"**, ***ECCV*, 2020**
14. Ali Diba, Vivek Sharma, Luc Van Gool, Rainer Stiefelhagen, **"DynamoNet: Dynamic Action and Motion Network"**, ***ICCV*, 2019**
13. Ali Diba, Vivek Sharma, Rainer Stiefelhagen, Luc Van Gool, **"Weakly Supervised Object Discovery by Generative Adversarial & Ranking Networks"**, ***CVPR-CEFRL*, 2019**
12. Ali Diba, Mohsen Fayyaz, Vivek Sharma, M Mahdi Arzani, Rahman Yousefzadeh, Juergen Gall, Luc Van Gool, **"Spatio-Temporal Channel Correlation Networks for Action Classification"**, ***ECCV*, 2018**
11. Ali Diba, Mohsen Fayyaz, Vivek Sharma, A Hossein Karami, M Mahdi Arzani, Rahman Yousefzadeh, Luc Van Gool, **"Temporal 3D ConvNets using Temporal Transition Layer"**, ***CVPR*, 2019**
10. Dries Hulens, Bram Aerts, Punarjay Chakravarty, Ali Diba, Toon Goedemé, Tom Roussel, Jeroen Zegers, Tinne Tuytelaars, Luc Van Eycken, Luc Van Gool, Hugo Van Hamme, Joost Vennekens, **"The cametron lecture recording system: High-quality video recording and editing with minimal human supervision"**, ***ICMM*, 2018**
9. Vivek Sharma, Ali Diba, Davy Neven, Michael S Brown, Luc Van Gool, Rainer Stiefelhagen, **"Classification Driven Dynamic Image Enhancement"**, ***CVPR*, 2018**
8. Ali Diba, Vivek Sharma, Luc Van Gool, **"Deep Temporal Linear Encoding Networks"**, ***CVPR*, 2017**
7. Ali Diba, Vivek Sharma, Ali Pazandeh, Hamed Pirsiavash, Luc Van Gool, **"Weakly Supervised Cascaded Convolutional Networks"**, ***CVPR*, 2017**
6. Ali Diba, Ali Mohammad Pazandeh, Luc Van Gool, **"Deep visual words: Improved fisher vector for image classification"**, ***MVA*, 2017**
5. Ali Diba, Ali Mohammad Pazandeh, Hamed Pirsiavash, Luc Van Gool, **"DeepCAMP: Deep Convolutional Action & Attribute Mid-Level Patterns"**, ***CVPR*, 2016**

4. Ali Diba, Ali Mohammad Pazandeh, Luc Van Gool, **"Efficient Two-Stream Motion and Appearance 3D CNNs for Video Classification"**, ***ECCV*, 2016**
3. Amir Ghodrati, Ali Diba, Marco Pedersoli, Tinne Tuytelaars, Luc Van Gool, **"DeepProposals: Hunting Objects and Actions by Cascading Deep Convolutional Layers"**, ***IJCV*, 2016**
2. Ali Diba, Amir Ghodrati, Marco Pedersoli, Tinne Tuytelaars, Luc Van Gool, **"Deepproposal: Hunting objects by cascading deep convolutional layers"**, ***ICCV*, 2015**
1. Mohammad Rastegari, Ali Diba, Devi Parikh, Ali Farhadi, **"Multi-Attribute Queries: To Merge or Not to Merge?"**, ***CVPR*, 2013**

**Achievements**

*Awards/Recognition*

- Outstanding reviewer for ICCV 2019, CVPR 2020,2021
- KU Leuven PhD scholarship 2015-2021

*Invited Talks*

- ECCV workshop on Brave idea on video understanding, "Efficient Two-Stream Motion and Appearance 3D CNNs for Video Classification", Amsterdam, 2016
- Machine vision applications, "Deep Visual Words", Nagoya, Japan, 2017
- International Conference on Computer Vision, "Dynamic Action and Motion Network", Seoul, South Korea, 2019
- ICCV HVU workshop, "Holistic Video Understanding", Seoul, South Korea, 2019

**Professional Activities**

- Journal reviewer for IEEE TPAMI, IEEE TIP, IEEE TMM, IJCV, CVIU 2016-present
- Conference reviewer for CVPR, ICCV, ECCV, ICLR, BMVC, NeurIPS 2015-present
- Organizing member and chair of "Large-Scale Holistic Video Understanding (LSHVU) Workshop/Tutorials" at CVPR, ECCV, and ICCV venues.

**GRANTS**

- 2.9M€ (2022-2024), VLAIO research grant HBC.2022.0474, Research and development on computer vision solutions for cashier-less payment solutions.
- 110K€ (2021 - 2022), OCRE Cloud computation grant, to pursue research on self-supervised neural network.
- 440K€ (2020 - 2022), VLAIO R&D grant HBC.2020.2585, Research and development on on-edge computer vision solutions like video and scene understanding.
- 80K€ (2019 - 2020), KU Leuven internal research grant, creating a large-scale holistic video understanding dataset.
- 60K€ (2018 - 2019), EIC accelerator grant 835681.
- 120K€ (2017 - 2018), AWS Cloud computation grant, To facilitate research and development on deep learning solutions in visual understanding at scale.

## TEACHING EXPERIENCES

- *Image interpretation and pattern recognition, KU Leuven* *2015-2017*
  Senior teaching assistant in charge of designing exercises and organizing hands-on sessions.
- *Machine learning, Video encoding-decoding* *2013-2014*
  Teaching assistant at Sharif University

## REFERENCES

- Prof. Luc Van Gool, ETHz, KU Leuven
  vangool@vision.ee.ethz.ch
- Prof. Rainer Stiefelhagen, Karlsruhe Institute of Technology
  rainer.stiefelhagen@kit.edu
- Prof. Ehsan Adeli, Stanford
  eadeli@stanford.edu
- Prof. Juergen Gall, Uni-Bonn
  gall@iai.uni-bonn.de