

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 Fellow* 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.

The listed publications are peer-reviewed conference or journal articles and top tier in the field of computer vision. CVPR, NeurIPs, ICCV, ECCV, 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 Stiefelbogen, "**Temporally-Weighted Hierarchical Clustering for Unsupervised Action Segmentation**", *CVPR*, 2021
18. Ali Diba, Vivek Sharma, Reza Safdari, Dariush Lotfi, Saquib Sarfraz, Rainer Stiefelbogen, Luc Van Gool, "**Vi2CLR: Video and Image for Visual Contrastive Learning of Representation**", *ICCV*, 2021
17. Callemeyn 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 Stiefelbogen, Luc Van Gool, "**Large scale holistic video understanding**", *ECCV*, 2020
14. Ali Diba, Vivek Sharma, Luc Van Gool, Rainer Stiefelbogen, "**DynamoNet: Dynamic Action and Motion Network**", *ICCV*, 2019
13. Ali Diba, Vivek Sharma, Rainer Stiefelbogen, 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 Stiefelbogen, "**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, "**Deep-CAMP: 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

**SPECIAL
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, TIP, IJCV, CVIU 2016-present
- Conference reviewer for CVPR, ICCV, ECCV, WACV, BMVC, NeurIPS 2015-present
- Organizing member of "Large-Scale Holistic Video Understanding (LSHVU) Workshop/Tutorials" at CVPR, ECCV and ICCV venues.

GRANTS

- 110K euro (2022 - 2023), OCRE Cloud computation grant, to pursuit research on self-supervised neural network.
- 80K euro (2019 - 2020), KU Leuven internal research grant, creating a large-scale holistic video understanding dataset.
- 440K euro (2020 - 2022), VLAIO research/development grant, Research and development on on-edge computer vision solutions like video and scene understanding.
- 120K euro (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