

# Amirhossein Kardoost

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**Websites:** [LinkedIn](#), [Personal Website](#)



## Education

### **University of Mannheim**

**Ph.D., Computer Science**, Mannheim, Germany, 2017 - 2021

### **Saarland University**

**M.Sci., Computer Science**, Saarbrücken, Germany, 2013 - 2017

### **Institute for Advanced Studies in Basic Sciences (IASBS)**

**B.Eng., Information Technology**, Zanjan, Iran, 2008 - 2012

## Research Interests

Machine Learning and Pattern Recognition

Image Analysis and Computer Vision

Video Object and Motion Segmentation

Alignment of Electron Microscopy Images

## Work Experience

### **Software Developer**

**European XFEL**, Schenefeld, Germany

February.2021 - Now

## Research Assistant Experience

### **Estimation of Texture Orientation**

Fraunhofer Institute for Nondestructive Testing (**IZFP**)

Saarbrücken, Germany

January.2015 - December.2015

### **Mobia Project**

German Research Center for Artificial Intelligence (**DFKI**)

Saarbrücken, Germany

January.2014 - December.2014

### **3D Reconstruction of Visual Information**

Max-Planck-Institute for Informatics (**MPI**)

Saarbrücken, Germany

May.2013 - February.2014

## Theses

### Ph.D.'s Thesis

Video Object and Motion Segmentation

Projects Implemented in **C++**, **CUDA**, **MATLAB**, **Python**, and **PyTorch**

### Master's Thesis

Alignment of Tilt-Series by Non-Convex Optimization

Implemented in **C++**

### Bachelor's Thesis

Machine vision - Detection and Recognition of Face with **OpenCV** Library

Implemented in **C++**

## Publications

[1] Solving Minimum Cost Lifted Multicut Problems by Node Agglomeration

**Amirhossein Kardoost** and Margret Keuper

ACCV 2018

Project Website

[2] Object Segmentation Tracking from Generic Video Cues

**Amirhossein Kardoost**, Sabine Müller, Joachim Weickert, Margret Keuper

ICPR 2020

YouTube Link

[3] Self-supervised Sparse to Dense Motion Segmentation

**Amirhossein Kardoost**, Kalun Ho, Peter Ochs, Margret Keuper

ACCV 2020

[4] Uncertainty in Minimum Cost Multicuts for Image and Motion Segmentation

**Amirhossein Kardoost** and Margret Keuper

UAI 2021

[5] A Two-Stage Minimum Cost Multicut Approach to Self-Supervised

Multiple Person Tracking

Kalun Ho, **Amirhossein Kardoost**, Franz-Josef Pfreundt, Janis Keuper,

Margret Keuper

ACCV 2020

[6] Higher-Order Multicuts for Geometric Model Fitting

and Motion Segmentation

Evgeny Levinkov, **Amirhossein Kardoost**, Bjoern Andres, Margret Keuper

Under Review

Summer School	International Computer Vision Summer School ( <b>ICVSS</b> ) July.2019, Sicily, Italy
Visiting Researcher	Max-Planck-Institute for Informatics ( <b>MPI</b> ) Computer Vision Group January.2019 - February.2019, Saarbrücken, Germany
Honors and Awards	<b>Rank 2 in Computer Science Department of (IASBS)</b> (Among top 10% of Class) Zanjan, Iran May.2012  <b>50% Tuition Scholarship from Tagliatela College of Engineering</b> Boston, USA September.2012
Computer Skills	<b>Machine Learning Libraries</b> <ul style="list-style-type: none"> <li>• PyTorch,</li> <li>• Keras,</li> <li>• TensorFlow</li> </ul> <b>Programming Languages</b> <ul style="list-style-type: none"> <li>• C,</li> <li>• C++,</li> <li>• Python</li> <li>• C#,</li> <li>• MATLAB,</li> </ul> <b>Web Programming</b> <ul style="list-style-type: none"> <li>• HTML,</li> <li>• CSS,</li> <li>• JavaScript,</li> <li>• jQuery</li> </ul> <b>Programming Libraries</b> <ul style="list-style-type: none"> <li>• OpenCV,</li> <li>• OpenGL</li> </ul>
Language Skills	English (Fluent) German (Intermediate)