Chair for Computational Modeling and Simulation
Prof. Dr.-Ing. André Borrmann

Arcisstraße 21, D-80290 München

## Software Lab:

Modeling: ★☆☆☆☆
Mathematics: ★★★☆☆
Programming: ★★★★☆

# ASE - All Seeing Eye - Track them!

## Setting

Goal of this software lab is to **develop a software** which is able to track pedestrian movements from video recordings. The project team will study common pedestrian **tracking methods** and will create a software which is able to generate trajectories from videos. The team should use the toolkit **OpenCV** and the **State of the Art SIFT (Scale-invariant feature transform)** method. The team will **record a video** in self-experiment. Thus the project team can check the performance of their implementation on the recorded video and video from the internet.

## Task

Your job is to

- use and explore the computer vision toolkit OpenCV [1]
- study the idea of SIFT ([2], [3])
- create fitting video material
- develop a software Java
- measure performance, capability and efficiency

## Supervisors

Peter Kielar, peter.kielar@tum.de
Maximilian Bügler, max.buegler@tum.de

## References

[1]  http://opencv.org/

[2]  Lowe, David G. "Object recognition from local scale-invariant features." *Computer vision, 1999. The proceedings of the seventh IEEE international conference on*. Vol. 2. Ieee, 1999.

[3]  Lowe, David G. "Distinctive image features from scale-invariant keypoints." *International journal of computer vision* 60.2 (2004): 91-110.