Optimisation in Multiple View Geometry:
The L-infinity Way
(Welcoming address)

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CVPR 2018 Tutorial
Welcome!
State of the art in geometric vision

**COLMAP**

**ORB-SLAM**

**LSD-SLAM**
Optimisation libraries

- Ceres
- SBA
- g2o
- Many others (multicore, GPU acceleration, etc.).
So what are we doing here?
Initial structure and camera positions


L-infinity solution


L-infinity solution (with outlier detection and removal)

Bundle adjustment (Huber norm)


Bundle adjustment (Huber norm, poorer initialisation)


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Common perceptions about L-infinity

“L-infinity optimisation is easily biased by outliers.”

“You need bundle adjustment to estimate the rotations anyway.”

“L-infinity optimisation is mainly a theoretical interest.”
Optimization Methods in Geometric Vision

**Organisers**
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**Dates**
28-31 January 2019

**Location**
Shonan Village Center (70km from Tokyo)

**Meeting format**
Dagstuhl style

**Costs**
No registration costs, accom. with catering available

**Leisure**
Guided excursions