# Vision Meets Mapping

CVPR 2019 Tutorial, June 18 2019

Organizer: Xiang (Sean) Ma, Amazon

# Organizer

**Dr. Xiang (Sean) Ma**

**CV & AI leader, Amazon**

**Previously: Research Manager II, HERE Technologies**

# Topics

- Vision-based Map Making
- Vision-based High Definition (HD) Map Making
- Crowd Sourced (Vision Based) Map Making
- Semantic Map
- Structural Map
- Vision-based Localization
- LIDAR-based Localization
- Multi-sensor-based Localization
- 2D/3D Scene Understanding and Location-based Reasoning
- 2D/3D Visual Landmark Detection

# Tutorial website

- https://visionmeetsmapping.github.io

- Presentation slides and videos (if any and if sharable) would be shared through the website
- Please share your pictures/recordings to xiang.sean.ma@gmail.com

# Invited Speakers

**Dr. Raquel Urtasun**

**Professor at Univ. of Toronto;**
**Head of Uber ATG Toronto**

# Invited Speakers

**Dr. Xiaofeng Ren**

**Chief Scientist, Amap (AutoNavi), Alibaba**

# Invited Speakers

**Dr. Xin Chen**

**Director of Engineering, Highly Automated Driving, HERE Technologies**

# Invited Speakers

**Dr. Ben Kadlec**

**Manager of Engineering, Maps and Computer Vision, Uber ATG Boulder**

# Invited Speakers

**Dr. Peter Kontschieder**

**Director of Research, Mapillary**

# Agenda

| Time | Event |
| --- | --- |
| 1:00pm – 1:05pm | Welcome and Introduction: **Dr. Xiang (Sean) Ma**, Amazon |
| 1:05pm – 1:50pm | Invited Talk: **Dr. Raquel Urtasun**, Univ. of Toronto, Uber ATG Toronto<br>Topic: **Mapping for autonomous driving** |
| 1:50pm – 2:35pm | Invited Talk: **Dr. Xiaofeng Ren**, Amap (Autonavi) and Alibaba<br>Topic: **Mapping and Navigating in a Hectic World** |
| 2:35pm – 3:15pm | Invited Talk: **Dr. Xin Chen**, HERE Technologies<br>Topic: **HD Live Map for Automated Driving: Camera Meets LIDAR** |
| 3:15pm – 3:35pm | Break |
| 3:35pm – 4:15pm | Invited Talk: **Dr. Ben Kadlec**, Uber ATG Boulder<br>Topic: **Computer Vision for HD Map Safety** |
| 4:15pm – 5:00pm | Invited Talk: **Dr. Peter Kontschieder**, Mapillary<br>Topic: **Recognition for Mapping on a Global Scale using Deep Learning and Computer Vision** |
| 5:00pm – 5:30pm | Panel Discussion and Conclusion |