

Autonomous Vehicles - The next Revolution in Mobility

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IVT, ETHZ
IVT-Seminar
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Autonomous Vehicles



Vehicles, which

- drive autonomously
- in uncertain, open **environments created for humans.**

Mechanical Engineering

2006, ETH Zurich

The SmartTer - a Vehicle for Fully Autonomous Navigation and Mapping in Outdoor Environments

Pierre Lamon, Sascha Kolski, Roland Siegwart
Swiss Federal Institute of Technology Zürich



2011, Singapore-MIT Alliance

Autonomous Personal Vehicle for the First- and Last-Mile Transportation Services

Z. J. Chong*, B. Qin*, T. Bandyopadhyay[‡], T. Wongpiromsarn[‡], E. S. Rankin[¶],
M. H. Ang Jr.*, E. Frazzoli^{§‡}, D. Rus^{§‡}, D. Hsu*, K. H. Low*

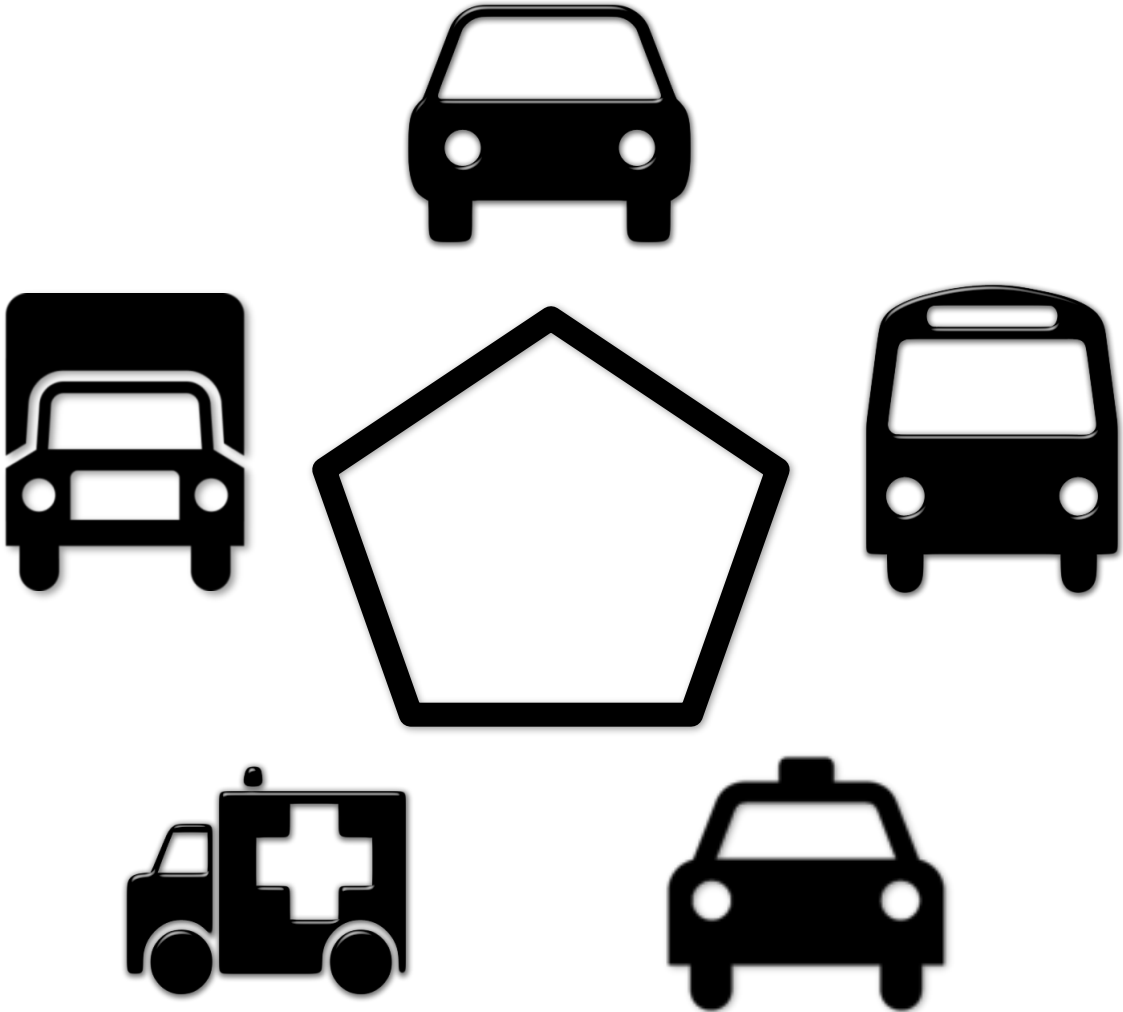


2013, University of Parma

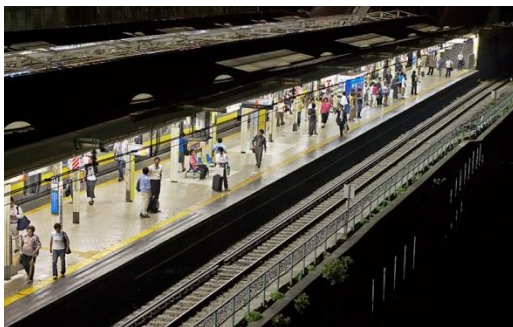
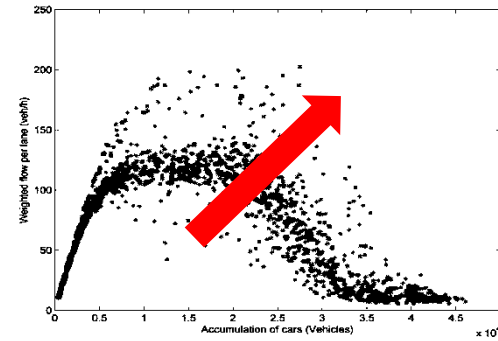
Extensive Tests of Autonomous Driving Technologies

Alberto Broggi, *Senior Member, IEEE*, Michele Buzzoni, Stefano Debattisti, Paolo Grisleri,
Maria Chiara Laghi, Paolo Medici, and Pietro Versari

What if they come?



Possible Research Questions



Possible Scenarios

Two extreme scenarios:

Car Sharing



- Lower Cost
- Special Vehicles
- Improved Productivity
- Smaller Fleet

Private Ownership



- Personal Transport Robot
- No Parking Search
- More Miles per Person
- Bigger Fleet

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