Autonomous Vehicles - The next Revolution in Mobility

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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 Kolzki, Roland Siegwart
Swiss Federal Institute of Technology Zürich

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*

2011, Singapore-MIT Alliance

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