



# Séminaire ISIR

Mercredi 11 juillet à 11H00

Thomas Bräunl

Campus Jussieu, 4 place Jussieu, Paris  
Salle 304

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## From Mobile Robots to Autonomous Driving

**Abstract :** This talk starts with an overview of mobile robot systems developed by the author and their progression into automotive autonomous driving systems. Also highlighted is the electric vehicle research conducted in UWA's REV Project, including electric vehicle conversions, charging infrastructure and monitoring systems.

We then present our driverless vehicle research, based on our semi-autonomous BMW X5 and our fully autonomous Formula-SAE-Electric car.

Finally, we discuss Autonomous Vehicle consequences, such as road safety, emission reductions, and future vehicle ownership.

**Short bio :** Thomas Bräunl is Professor at The University of Western Australia, Perth, where he directs the Renewable Energy Vehicle Project (REV) as well as the Robotics & Automation Lab. At UWA, he performed several EV conversions, including a Lotus Elise, Hyundai Getz, and a Sea-Doo Jet-Ski. He was Technical Director of the West Australian Electric Vehicle Trial and continues to operate one of Australia's largest EV charging networks with 24 AC and DC stations.

On the autonomous driving side, Professor Bräunl has developed a semi-autonomous BMW X5 and a fully autonomous Formula-SAE car. His research concentrates on deep learning methods for autonomous driving and also includes realistic hardware-in-the-loop simulations of autonomous vehicles. He holds joint patents with Mercedes-Benz on vision-based automated parking and BMW on home integration of EV charging.

Professor Bräunl has studied in Kaiserslautern, Stuttgart and Los Angeles (University of Southern California), and has held teaching and visiting positions at Uni Stuttgart, TU München and Santa Clara University. He worked at Mercedes-Benz Research Stuttgart on vision-based autonomous driving and at BMW München on intelligent EV charging systems. At BMW Technology Office in Mountain View, California, he concentrated on visualisation tools for the ChargeForward project and on home energy management integration of EVs.