

# DATA SIM Summer School (15-18 July 2013)

[www.datasim-fp7.eu](http://www.datasim-fp7.eu)

## DATA SIM Summer School 2013






The **Transportation Research Institute (IMOB)** of Hasselt University organizes the first DATA SIM Summer School on 'Mobility modeling and big data sources'. This Summer School will take place at **Hasselt University, Campus Diepenbeek** (Agoralaan Building D, 3590 Diepenbeek, Belgium) from **Monday July 15th to Thursday July 18th**.

## Topics

This Summer School will feature a series of lectures by renowned researchers in the following topics:

	<p><b>Mobility modeling: basic principles and tools.</b></p> <ol style="list-style-type: none"> <li>1. Behavior modeling, activity based models (activity selection, planning, daily schedule generation)</li> <li>2. Multi-modal trips</li> <li>3. Modeling cooperation, cooperative scheduling (e.g. carpooling)</li> <li>4. Ontologies</li> <li>5. Traffic and transportation related models, travel demand prediction models</li> <li>6. Simulations in practice: what conclusions can be drawn?</li> </ol>
	<p><b>Special focus: Agent based modeling and simulation for mobility, travel behavior, mobility market, electro-mobility (including smart grid, etc.).</b></p> <ol style="list-style-type: none"> <li>1. Delimiting the domain of applicability: where can agent based modeling be useful?</li> <li>2. Models for cooperation, mutual influence, negotiation</li> <li>3. Computability issues, scalability</li> <li>4. Ontologies</li> <li>5. How to interpret results? What can be expected?</li> </ol>
	<p><b>Big data as source for modeling.</b></p> <ol style="list-style-type: none"> <li>1. Big data repositories</li> <li>2. Annotation, semantic enrichment of big data</li> <li>3. Data mining and process mining to extract information from big data</li> <li>4. Crowd sourcing and publicly available data: pitfalls and challenges</li> <li>5. Using data from different sources: how to align?</li> </ol>

	<p><b>Integrating big data and modeling.</b></p> <ol style="list-style-type: none"> <li>1. Using big data to feed models or to validate model execution results</li> <li>2. How to integrate semantically poor big data with small sets of semantically rich data as input for microsimulation or agent based modeling</li> </ol>
	<p><b>Applications</b></p> <ol style="list-style-type: none"> <li>1. Electric vehicles (including smart grid concepts)</li> <li>2. Carpooling (cooperation on trip traveling)</li> <li>3. Multi-modality and car-sharing (cooperation on resource usage)</li> <li>4. Markets based on big data related to traffic       <ul style="list-style-type: none"> <li>• Business models for EV, multi-modal trips, car-sharing, carpooling</li> <li>• Online support systems (ride sharing advisors)</li> <li>• Traffic load prediction systems</li> </ul> </li> <li>5. Effect of EV characteristics (range anxiety, charging time, limited range) on household travel behavior</li> </ol>
	<p><b>Hot research topics in transportation behavior, traffic safety and logistics.</b></p>

## Target audience

The Summer School is suited for senior-researchers, early-stage researchers, practitioners and (PhD) students from the domain of transportation sciences, data mining, agent/activity based modeling and related topics.

Participants will have the opportunity to get feedback on their work during the graduate symposium sessions. Participants interested in presenting their work should submit a 1 page (A4) abstract motivating the main research challenge they are addressing and stating the approach being taken. A selection of proposals will be chosen for presentation.

## Participation Certificates

Participation Certificates will be issued to all participants of the Summer School.

## Contact

For more information please contact Luk Knapen ([luk.knapen@uhasselt.be](mailto:luk.knapen@uhasselt.be)) or consult the DATA SIM Summer School webpages ([www.datasim-fp7.eu](http://www.datasim-fp7.eu)).