

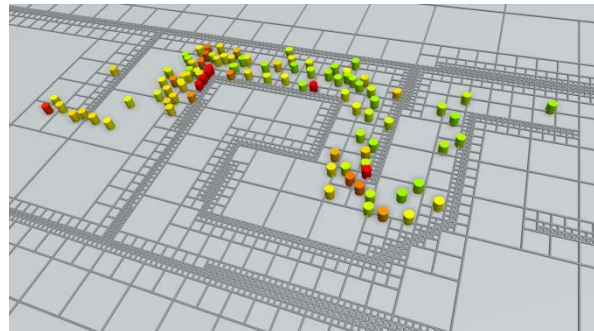
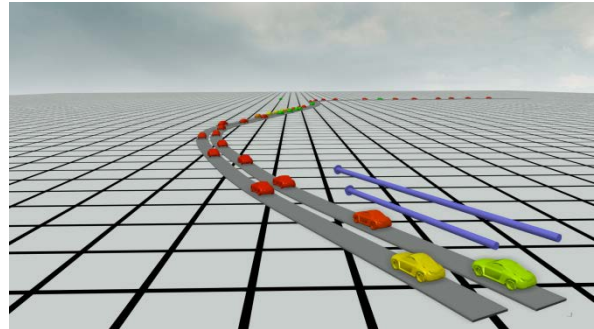
## Diploma Thesis / Internship

### Agent-based Simulations (Crowd, Traffic)



The VRVis Research Center ([www.vrvis.at](http://www.vrvis.at)) offers a diploma thesis in the field of agent-based techniques for simulating pedestrians or traffic in evacuation scenarios and more.

In the project *Scenario Pool: Visual Analytics for Action Planning in the Presence of Uncertainty* (<http://visdom.at/projects/scenariopool/>), funded by the Vienna Science and Technology Fund WWTF, we investigate simulation and visualization techniques to support decision making. Our work is based on the simulation and analysis of alternative scenarios using state-of-the-art techniques for flood simulation, traffic simulation, or pedestrian simulation. We have advanced flood components but only basic implementations of agent-based simulation techniques. We are looking for a motivated student who is going to improve our agent-based simulators for usage in realistic, urban scenarios. While the ultimate goal of our system is the coupling of multiple simulation techniques for application in advanced evacuation scenarios, the focus of the diploma thesis should be either on traffic or on crowd simulation. Good knowledge of C++ is required.



The work will be incorporated into the Visdom (<http://visdom.at>) framework, which is being jointly developed by the VRVis and our partners at the TU Vienna and the ETH Zürich. Scientific supervision will be done by Dr. Jürgen Waser, VRVis, in collaboration with Prof. Eduard Gröller, Institute of Computer Graphics and Algorithms (ICGA), TU Vienna.

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