



SUPER – Stuttgart University Program for Experiencing Research Project Information

Institute’s Information

Name of Institute High Performance Computing Center Stuttgart (HLRS)

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Duration of Project/Number of Students

June/July
 June/July/August 3

Number of Students 3

Name of Project Virtual and Augmented Reality

Beneficial Skills & Knowledge Applicants should be familiar with an object oriented Programming language. If possible C++

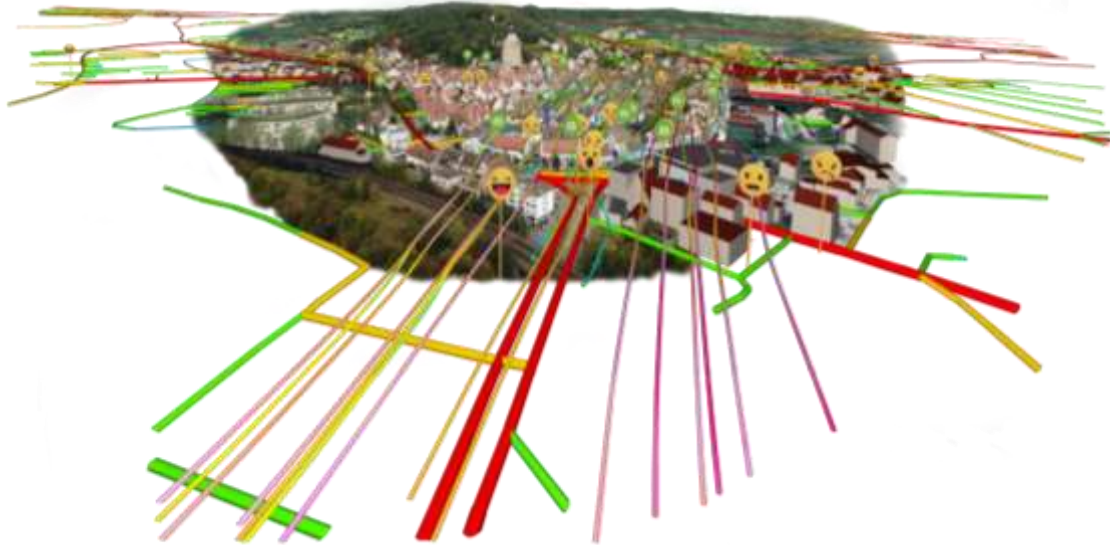
Description of Work

We can host up to three students next summer. Some of the projects you might work on are briefly outlined below:

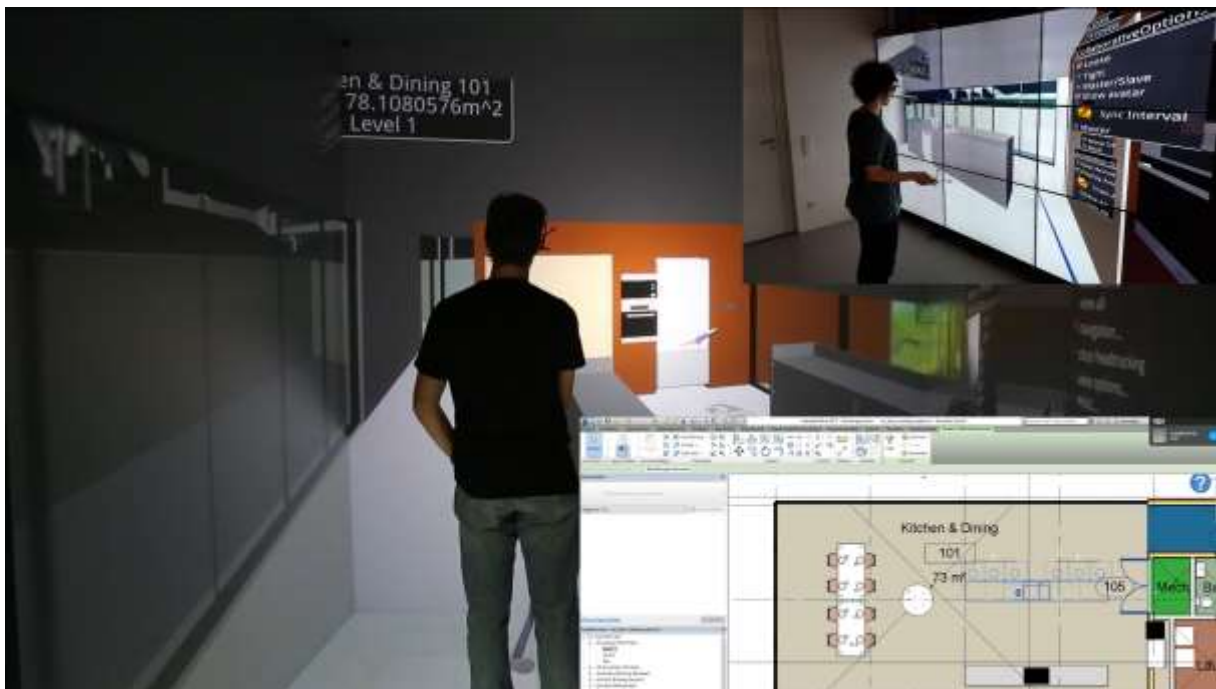
Crime scene reconstruction and Virtual Autopsies: In a collaborative project with the forensics institute in Zürich, you will be working on integrating a 3D modelling application (Autodesk 3D-StudioMax) into our immersive virtual environment. The goal is to improve crime scene reconstruction.



Spatial planning and public participation:
You will be working on visualizing sensor data values within virtual city models.



Collaborative virtual environments: Virtual environments can be linked through the network to form a collaborative workspace. Remote users are typically represented as avatars. Our current avatars are minimalistic and only consist of 3D glasses, a hand and feet. You will be working on configurable 3D avatars probably featuring full body motion tracking.



Driving Simulator: You will be working on integrating OpenPASS, a traffic accident simulation into our immersive driving simulator. This work will be done in close collaboration with Porsche and/or Daimler.

Wheelchair simulator: You will be writing a real time vehicle dynamics with force feedback for our new wheelchair simulator





Paraglider simulator: You will be improving the flight dynamics of our Glider simulator.

