3rd of February 2018

Re Masters Project on **Semantic Mixed Voxel Realities – Visual Fidelity –**
at HCI Lab, Information Science, University of Otago, Dunedin, New Zealand

The Human-Computer Interaction Group at the University of Otago is looking for a graduate student in the area of Mixed Reality research. This Masters project would be supervised by Prof Regenbrecht (Otago) and Prof Klinker (TUM) and would allow for / require actual research and development work on-site at the HCI Lab in Dunedin, New Zealand for about six months.
For background information on the overarching project please refer to:
Regenbrecht, H., Reepen, A., Meng, K., Beck, S., & Langlotz, T. (2017). Mixed Voxel Reality: Presence and Embodiment in Low Fidelity, Visually Coherent, Mixed Reality Environments. Proceedings of The 16th IEEE International Symposium on Mixed and Augmented Reality (ISMAR 2017), 90-99.
For information on the HCI Group please refer to: www.hci.otago.ac.nz

Task: ***Developing, demonstrating, and evaluating visual fidelity***
The main objective is to build a Mixed Voxel Reality prototype system which has a controllable degree of visual fidelity, delivers a basic semantic model (here body parts of interacting user), and to which evaluation methods for presence and embodiment can be applied.

- Refactoring of existing Mixed Reality Embodiment Platform (MREP) system to make it purpose-fit for the targeted SMVR prototype development and studies
- Development of a preliminary semantic model for body parts and respective voxel assignments
- Development of visual fidelity control
- Experiment design (IV: visual fidelity, body part assignments; DV: presence, embodiment)
- Modelling of demonstration and study scenarios and
- Experiment execution, data collection, and analysis (analysis can be done off-campus)

Requirements:

- Solid background in computer programming and (applied) computer graphics
- Basic understanding and interest in HCI and scientific studies
- Scholarship and/or own sufficient financial resources (although, Otago would be able to contribute towards flight/accommodation expenses) Check possibility to apply for DAAD FITweltweit scholarship: https://www.daad.de/fitweltweit/, Promos or other grants: https://www.international.tum.de/en/scholarships/
- Starting the project in April 2018 (negotiable)
- The project will take 5 months to 1 year (flexible arrangements possible)

Application documents: CV, Bachelor's transcript, TUM Master's transcript & motivation letter as **one PDF** until **Sunday, 4th March 2018**, to student-exchange@in.tum.de

For more specific information, contact Martina von Imhoff <imhoff@in.tum.de>, Gudrun Klinker klinker@in.tum.de or Holger Regenbrecht <holger.regenbrecht@otago.ac.nz>.