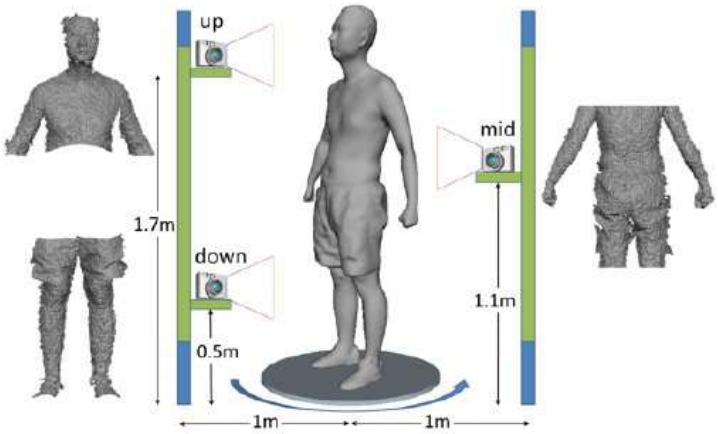
Vehicle Safety Institute

Posture reconstruction of volunteers using Kinect

Background

Every human is different - To capture the diversity in terms of geometry, we would like to capture the 3D shapes of the volunteers in the future with a measurement device developed by you.

Your goal in this thesis is to develop a test device which can be used to determine the 3D posture from volunteers of the voluntary tests. The Kinect or similar technologies are to be used for this purpose.



J. Tong, J. Zhou, L. Liu, Z. Pan and H. Yan, "Scanning 3D Full Human Bodies Using Kinects," in *IEEE Transactions on Visualization and Computer Graphics*, vol. 18, no. 4, pp. 643-650, April 2012, doi: 10.1109/TVCG.2012.56

Tasks

- **Get familiar** with 3D posture reconstruction.
- **Development** of a device for the 3D posture reconstruction.
- **Performing** 3D posture reconstructions.
- **Documentation**

Topic as thesis for

Master Thesis for Mechanical Engineering or Software Engineering

Organizational

- Start: anytime
- Language: German or English
- Scholarship **only for Master Thesis**: min. € 2.500, - for successful completion of the thesis
- Contact: Christoph Leo (christoph.leo@tugraz.at)