

## **Motion Analysis of Stereo Sequences**

Continue to process those stereo sequences as recorded with HAKA1 for your Stereo Sequence Analysis assignment.

As before, you may also discuss results for other sequences (e.g., possibly also including those available on <a href="https://www.citr.auckland.ac.nz/6D/">www.citr.auckland.ac.nz/6D/</a>). For this assignment,

- (1) do some preprocessing of the sequences such as Sobel edge detection or smoothing (e.g., using a mean operator or a convolution with a Gauss function),
- (2) have an optical flow algorithm implemented, such as Horn-Schunck, or Lucas-Kanade (note: you may download sources from the net, but be careful that the used sources actually do what is expected), and
- (3) attempt to improve the performance by adding hierarchical (i.e., pyramid) processing.

Use color codes for visualizing computed vector fields.

Discuss how results vary for no, or with some particular preprocessing, with or without hierarchical processing, or for different settings of parameters.

Implementation is in C/C++, and you may use OpenCV and other sources, but, of course, with citation in your report.

Your report should briefly describe the implemented techniques and your experiments.

Deadline is 20 October 2008. Submit via memory stick to



Reinhard's machine (before 11.30am that day).