

laden gemeinsam zum

# GASTVORTRAG

## Silvia Castro

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### “Research Topics at the VyGLab (Visualization and Graphics Laboratory)”

#### Abstract:

The Visualization and Graphics Laboratory at the Computer Science and Engineering, Universidad Nacional del Sur, was founded in October 2000. We focus on research issues in areas of visualization and computer graphics. Major research topics of VyGLab include:

- Visualization. This topic relates to the obtention of an operational prototype of a visualization tool to assist the user and the designer in all the stages of the Visualization process. Most of today's visualization systems give the user a considerable control over the visualization process; he or she experiments with changing different parameters until the obtention of a satisfactory collection of visualization results; but the obtention of an effective visualization is not easy. The visualization process is really a very complex search process and the user should be assisted to produce an effective visualization. In order to assist the visualization, we are integrating the visualization process with a reasoning process in order to configure a visualization based on the reasoner results.
- Terrain modeling for mobile devices. This topic relates to the design and implementation of basic algorithms and structures for efficient management of terrain data on mobile devices.
- Volume Modeling with wavelets. This topic relates to the obtention of new multiresolution representations based on wavelets. We are working on volumetric models based on wavelets, constructed using subdivision and the lifting scheme, called the second generation setting, and also on a recent class of MR representation of volumetric models based on sequential simplification procedures. We are engaged in exploring both approaches.

#### Biography:

Teaching Assistant in the Electronic Engineering Dept. (1980-1984) and in the Mathematics Dept. (1984-1988) at the Universidad Nacional del Sur.

Adjunct Professor (1989-1999) and Associate Professor (2000-2007) at the Dept. of Computer Science and Engineering, Universidad Nacional del Sur, teaching Computer Programming, Computer Graphics and Visualization.

Since 2007, Titular Professor, at the Dept. of Computer Science and Engineering, Universidad Nacional del Sur, teaching Computer Graphics, Image Processing and Visualization.

Research and Graduate Studies Secretary (2003-2009).

Since 2000, head of the Graphics and Visualization Group in the Dept. of Computer Science and Engineering and responsible for research and education in computer graphics.

**Datum:** 5. Juni 2009 10:30 Uhr s.t.

**Ort:** TU Wien, Favoritenstr. 9, Stiege 1, 5. Stock, Seminarraum E186

