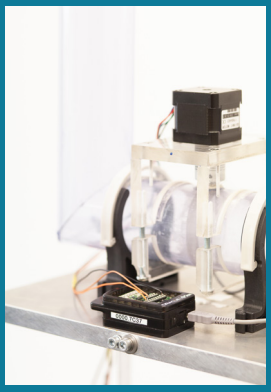
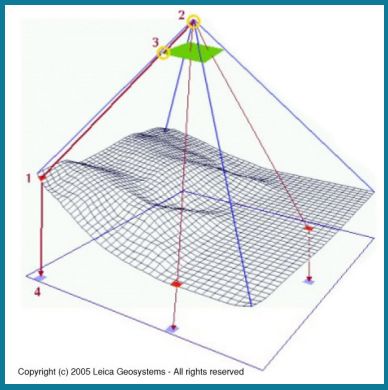
PhD Course

Structural Health Monitoring and Computer Vision

June 3rd to 7th, 2019
at Bauhaus-Universität Weimar, Germany





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Description

Content

- SHM system design, data management and data analysis
- Implementation of wireless sensor networks and embedded systems
- Laboratory experiments on test structures using wireless SHM and control systems developed in this course
- Modern change detection algorithms, including background modeling, illumination
- Invariance, significance and hypothesis testing and predictive models

Pre-requisites

Prerequisite for participation in addition to adequate English skills, is the submission of a meaningful motivation letter and an abstract with respect to current personal scientific activity which mediates the interest or the ability to edit the project themes.

Target group:

PhD students in the fields of civil engineering.

Aims & Outcome

Aims

The course provides to PhD students a deeper insight in the field of structural health monitoring (SHM) and computer vision (CV). In the course several advanced topics will be presented, which are partly supported by computer simulations and project work. After the course the students shall be able to apply SHM systems and CV techniques. Additionally, the participating students will be encouraged to increase their personal competencies and transversal skills.

Learning Outcome

- Application of SHM and control systems in engineering applications incl. the data management
- Implementation of embedded systems (specifically wireless sensor nodes)
- Creation of object-oriented models in Java programming environment
- Identification of most appropriate computer vision techniques for own initiatives
- Working in an international group, practice their management, presentation and language skills and more . . .

Coordination

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