

SUMMER SCHOOL AND STUDENT EXCHANGE

In September 2023 a joint summer school with 18 students is planned at HKA for an active testing of the teaching building blocks developed by then. Relying on virtual participation only is questionable for a sustainable university cooperation aimed at integrating students: it is essential that personal and intercultural student exchange takes place beyond the actual project work, e.g. through socializing. Exchange is further supported by 10 individual scholarships for an entire semester or a final thesis research period at HKA, UP or UoN over a period of three years up to 2025.



A trilateral North-South project cooperation

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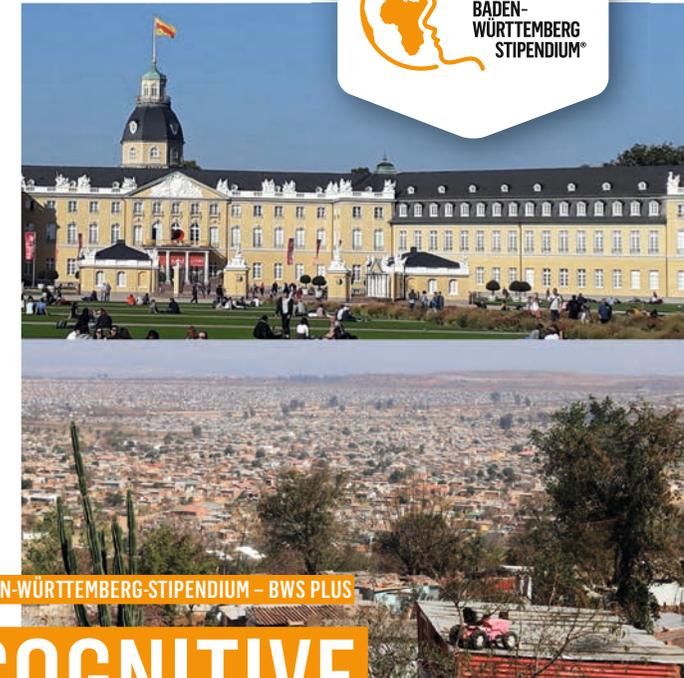
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BADEN-WÜRTTEMBERG-STIPENDIUM – BWS PLUS

COGNITIVE
GEOMATICS
– TEACHING
SENSE OF PLACE



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



UNIVERSITY OF NAIROBI

Hochschule Karlsruhe
University of
Applied Sciences

HKA

DIGITAL TEACHING TO CREATE AWARENESS OF INTERCULTURAL DIFFERENCES IN SENSE OF PLACE

ABSTRACT

The awareness of space («sense of place») is considered to be a requirement for one's orientation in action space, but differs from one culture to another. This raises questions about the nature of the interplay between the way we think about and perceive physical space (our mental maps) and the use of geomatics methods for measuring, analyzing and visualizing our environment (in the virtual world). For this purpose, we are **developing digital teaching and learning resources** using Germany, South Africa and Kenya as case studies, and we are exploring how to involve students of all three countries in this through virtual means.

PROJECT GOALS AND APPROACH

We aim at supporting geo(infor)matics towards the desired digitization of teaching by developing building blocks **for blended learning**. We do so by testing and proving a design for a cooperation focussed on an exchange that is feasible under the new conditions of restricted/limited travelling, delivers results to be of benefit for all project partners in the long term and is usable in different cultures. The approach is based on working together with students on the conceptualization, development and completion of

the materials with the involvement of both target groups – lecturers and students. We chose to follow a phased approach, where the three universities take turns with leading, each responsible for a different subtopic.

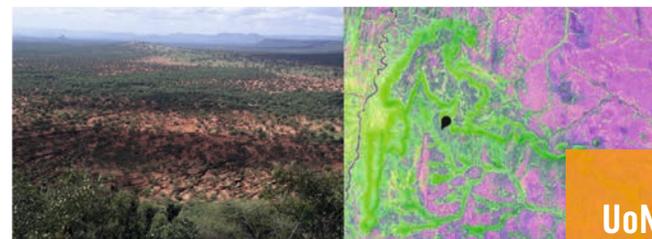
WEB MAPPING



CROWD MAPPING



SATELLITE IMAGE GROUND TRUTHING



Topics covered by the respective universities in blended learning tools related to sense of place

SENSE OF PLACE – WEB MAPPING

In the first phase the focus is on mental maps at different spatial scales versus the visualization of spatial statistical data for different cartographic scales via web mapping technologies. The work started as a semester project at **HKA**. During an in-person workshop with the active participation of the two partner universities, the learning materials at the time are presented and critically reflected on. For reaching an advanced stage and to ensure that the materials can be used in all three cultural contexts, regular virtual support by the partner universities is provided for feedback.

SENSE OF PLACE – CROWD MAPPING

After that, **UP** takes the lead following a similar approach (workshop, semester project and active support through participation of all three universities) but with a different thematic focus: The activity space of people will be illuminated, on the one hand through their own imagination but also visualized by using available geodata and thus in a wider spatial context. By developing easy-to-use crowd mapping tools, the participation and involvement of larger groups of people, this at specific locations and online, will become possible.

SENSE OF PLACE – SATELLITE IMAGE GROUND TRUTHING

Multispectral satellite sensors scan the environment in different spatial and spectral resolutions. Understanding the interaction (reflection – object dimension – pixel resolution) is required for a meaningful interpretation of satellite images and/or digital image classification. Juxtaposition of ground truth, such as photos, and image composites of different sensors can contribute towards training mental images and thus sense of place. Teaching material for this topic is developed under the guidance of **UoN**.