## Announcement of two PhD positions

- (up to) 75% employment 20-30 hours/week
- Starting date: as soon as possible, but no later than Sept 2020

We are recruiting **two highly motivated early-stage researchers** with excellent in experience in applied geoinformatics (GI) and Earth observation (EO) in the domain of humanitarian action and/or disaster management to join the OBIA lab at the Department of Geoinformatics (Z_GIS, www.zgis.at) of the University of Salzburg (www.uni-salzburg.at). Both PhDs will be embedded in close ties to the (geo-)humanitarian team within Z_GIS, which is a joint initiative between the long-lasting partnership between Z_GIS and the renown humanitarian aid organisation *Médecins Sans Frontières* (MSF). Each position will be initially for 24 months, with a possibility for extension to up to three years and a longer-term perspective in case of project success.

## Project RA-1

- The research of this PhD position will focus on **hybrid (i.e. knowledge-based and machine-learning) information extraction** from remotely sensed images and will be part of a larger collaboration with academic and non-academic partners.
- The successful candidate will play a key role as part of an interdisciplinary scientific effort utilizing latest-stage EO*GI technology and tools to support the wide field of humanitarian action to better cope with forced migration, population displacement, human rights violation, protracted crises, etc. The primary goal for this PhD is to develop and test innovative strategies for **automated methods of information extraction from multi-source image data**.

### Responsibilities

- Work package co-lead and task planning
- Data acquisition and analysis
- Documentation and presentation at group internal and external meetings, conferences and workshops
- Joint publications

### Minimum requirements

- MSc degree in Geoinformatics, Geography or similar or MSc degree in Computer Science / Data Science with curricular courses in Geoinformatics and/or a strong focus on remote sensing
- Practical experience in research project settings
- Excellent command of the English language and demonstrated scientific writing skills
- Excellent organisational skills

### Desirable additional qualifications

- Experience in spatial data science, in particular deep learning, especially CNNs

- Strong knowledge in image processing (mainly optical, but not exclusively)
- Demonstrated programming skills for implementing relevant methods and techniques in Python or similar

## Project RA-3

- The research of this PhD position will focus on **online (i.e. cloud) processing and automation of geodata integration and assimilation workflows** and will be part of a larger collaboration with academic and non-academic partners.
- The successful candidate will play a key role as part of an interdisciplinary scientific effort utilizing latest-stage EO*GI technology and tools to support the wide field of humanitarian action to better cope with forced migration, population displacement, human rights violation, protracted crises, etc. . The primary goal for this PhD is to **develop a toolset for online data integration and analysis, adhering to the principles of open standards, reproducibility and validity**.

## Responsibilities

- Work package co-lead and task planning
- Data integration and analysis
- Documentation and presentation at group internal and external meetings, conferences and workshops
- Joint publications

## Minimum requirements

- MSc degree in Geoinformatics, Geography or similar or MSc degree in Computer Science / Data Science with curricular courses in Geoinformatics and/or a strong focus on remote sensing
- Practical experience in research project settings
- Excellent command of the English language and demonstrated scientific writing skills
- Excellent organisational skills

## Desirable additional qualifications

- Demonstrated experience in web processing, OGC specifications
- Programming skills and experience with e.g. Jupyiter notebooks are an asset

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We specifically welcome applicants who are passionate to work in an interdisciplinary team towards a common goal; are reliable, organised and target-oriented; have the desire and curiosity to acquire new knowledge; think creatively and critically; have a high level of intrinsic motivation.

## Salary

(depending on education and previous work experience and on the basis of 40 hrs)
Range: 30,000 – 35,000 € p.a. gross salary

## Applications
Applicants should submit an application including motivation letter, an indication of the aspired position (RA #1 or RA #3), CV incl. list of publications, documentation of your highest obtained degree, and referee contact(s), to the attention of: Assoc-Prof Dr Stefan Lang (stefan.lang@sbc.ac.at).

Applications will be accepted until the position is filled.