GEO INFORMATION

Vertiefende Aspekte der Geoinformation || Advanced Topics in Geographic Information Science and Technology

GST.365UF (VU) & 522.345 (VU)

Rizwan Bulbul & Johannes Scholz
TU Graz, Institute of Geodesy
Research Group Geoinformation

Introduction

- Objective of the course:

  The students have insight into current topics in the field of Geographic Information Science and Technology. The students have acquired detailed, well-founded knowledge in at least one research area of GIScience.

Lecturer #1

Dr.techn. **Rizwan Bulbul,** MSc, BSc

- Contact Information
  - Email: bulbul@tugraz.at
  - Phone: 0316 / 873 – 6334
  - Webpage: Business Card

Google Scholar

https://www.linkedin.com/in/rizwanbulbul/

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Lecturer #2

Assoc.-Prof. DI(FH) Dr.techn. **Johannes Scholz**

- Deputy Head Institute of Geodesy
- Head of Research Group Geoinformation

- Contact Information
  - Mail: johannes.scholz@tugraz.at
  - Phone: 0316 / 873 – 6353

  - Webpage: http://www.johannesscholz.net

https://twitter.com/Joe_GISc

ORCID: http://orcid.org/0000-0002-3212-8864
Publons: https://publons.com/a/1231051/
Google Scholar: https://scholar.google.at/citations?user=kthtbDYAAAAJ&hl=de

Lecture details

- Hybrid mode **- Onsite and Online (Webex)**
  - Wednesday 13:00 – 15:00

- TeachCenter Platform
  - https://tc.tugraz.at/main/course/view.php?id=236

  - Collection of:
    - Lecture slides (PDFs)
    - Books (relevant chapters)
    - Papers
    - Online resources
    - Apps/Tools for submitting labs/assignments

VU Overview and Contents

Date	Content	Assignment/Quiz
01.03.2023	Introduction, Administrative Issues	
08.03.2023	Spatial data structures and algorithms	
15.03.2023	Computational Geometry with Python	
22.03.2023	Computational Geometry with Python	Quiz(based on literature)
29.03.2023	3D GIS and beyond	
26.04.2023	GeoAI	
10.05.2023	GeoAI	Quiz(based on literature)
17.05.2023	GeoAI	
24.05.2023	Spatial Agent-based Modeling and Simulation I (lecture)	
31.05.2023	Spatial Agent-based Modeling and Simulation II (interactive session + lab)	Quiz (based on literature)
07.06.2023	Spatial Agent-based Modeling and Simulation III (lab with GAMA)	
14.06.2023	Spatial Optimization I (lecture)	
21.06.2023	Spatial Optimization II (interactive session + lab)	Quiz (based on literature)
28.06.2023	Spatial Optimization III (lab with pyspatialopt and/or Google OR tools)	

Exam

- **Oral Exam**
  - By appointment (send an email to us)

  - Exam contents
    - Lecture slides
    - Interactive content in the classes (discussions, …)
    - Literature (provided on TeachCenter)

Grading

- **Marks Distribution**
  - Assessment criteria
    - Lab : Lecture = 1 : 2 (i.e. Lab 33%, Lecture 67%)
    - ***Both Lab (Assignments) and Oral Exam must be positive!***
- **Grades**

100 – 91	**1**
90 – 81	**2**
80 – 71	**3**
70 – 61	**4**

Literature

Will be provided and announced for each lecture topic separately!

Questions?