PhD course title: **Designing Distributed Geospatial Data-Intensive Applications**

Course description

With most data arriving from real-world data-intensive problems being geo-referenced, it is becoming indispensable to design distributed geospatial software solutions for the large-scale management of such data. This course brings the foundational knowledge, explaining pivotal aspects pertinent to designing highly efficient distributed geospatial solutions for data-intensive applications. It covers the enabling technologies and architectures in Cloud storage and computing, including programing models (such as MapReduce and SQL-like declarative models) and algorithms from a middleware perspective.

Topics

Part 1: Introduction to distributed data-intensive applications
Part 2: Designing highly efficient geospatial data-intensive solutions
Part 3: Designing QoS-aware approximate solutions for distributed geo-spatial data-intensive applications
Part 4: state-of-art relevant papers discussion

Instructors: Prof. Luca Foschini & Dr. Isam Al Jawarneh

Mode: Fully online (via Microsoft Teams)

Assessment methods: a short review paper

Tentative schedule (two weeks in July 2022):

Part	Week	Total hours
Part 1: Introduction to distributed data-intensive applications	Monday 18 July (2.5 hours) **Timing: 9:30 – 12:00** + Tuesday 19 July (2.5 hours) **Timing: 9:30 – 12:00**	5
Part 2: Designing highly efficient geospatial data-intensive solutions	Friday 22 July (2 hours) **Timing: 10:00 – 12:00** + Monday 25 July (3 hours) **Timing: 10:00 – 13:00**	5
Part 3: Designing QoS-aware approximate solutions for distributed geo-spatial data-intensive applications	Wednesday 27 July (3 hours) **Timing: 16:00 – 19:00**	3
Part 4: state-of-art relevant papers discussion	Friday 29 July (2 hours) **Timing: 10:00 – 12:00**	2
		15 hours in total (3 ECTS)