Call for Participation

1st International Symposium on the Science of Data Science

Switzerland, June 8, 2021

Data science, one of the most significant developments in computing in the 21st century, is a discipline in the making, drawing principles, methods and tools from established fields like computer science, statistics, science, business, politics, and any domain with adequate data. Yet, data science is just starting. What are its underlying principles and techniques (models, methods) that are applicable across different use cases and fields of application? What «science» underlies this emerging discipline?

We are launching an activity to develop a reference framework for data science and invite your participation, organized in a two-stage process:

- This **first symposium** on **June 8, 2021, organized as a satellite workshop of the 8th Swiss Conference on Data Science, SDS 2021,** to share and discuss preliminary thoughts and hypotheses.
- A future **second symposium** to solicit participation of a larger community (time and location TBD, e.g. co-located with a major data science conference), including **published proceedings**.

We invite contributors to present their ideas at the first symposium and to continue the development of a reference framework for data science as an activity in the intl. data science community, to be finalized during the second symposium.

Subjects of interest include, but are not limited to:

- Data as a 3rd pillar of science: what input can the humanities give to this scientific upheaval?
- Data science foundations drawn from, but not fully included in the constituent disciplines [3, sec. 4.2]
- Data science models and methods with broad impact that emerged within the field
- Open research questions into the "more than the sum of its parts"-aspects of data science
- Engineering principles required to apply existing foundations, e.g., from statistics, in practice [4,5,6]
- Cross-field lessons learned, e.g., can data science help solve problems in which nobody has multi-year experience yet?

Outline of the initial workshop and call for contributions:

- **Date and time:** June 8, 2021, co-located with SDS 2021 in Switzerland (potentially in hybrid format or online-only, depending on the COVID-19 situation)
- **Format:** Half-day workshop with individual opening presentations (10-15') by each participant, followed by ample time for discussion and brainstorming, and an apéro
- **Submissions:** Each participant is asked to submit an extended abstract (1-2 pages), where they formulate and present their (preliminary) ideas, hypotheses or findings on the subject, according to their area of expertise. We suggest refs. [1,3,4,5] to put the contribution in context.
- **Contact & Deadline:** Please send your submission to flum@zhaw.ch by **April 9, 2021**

Organizers

The symposium is organized by members of the **ZHAW Datalab**, an interdisciplinary center for data science at the **Zurich University of Applied Sciences ZHAW** (Winterthur, Switzerland):

- **Dr. Thilo Stadelmann** (Prof. AI/ML, Scientific Director ZHAW digital)
- **Dr. Frank-Peter Schilling** (Senior Researcher Deep Learning)
- **Dr. Rudolf Füchslin** (Prof., Head of Applied Complex Systems Science)
- **Dr. Dandolo Flumini** (Applied Complex System Science)

Contact: Dr. Dandolo Flumini flum@zhaw.ch Webpage: https://stdm.github.io/issds-2021/

References (all available online)

From Braschler et al. (Eds.), «Applied Data Science – Lessons Learned for the Data-Driven Business», Berlin, Heidelberg: Springer, 2019.

[1] Brodie, «What is Data Science?».

[2] Braschler et al., «Data Science».

[3] Brodie, «On Developing Data Science»

[4] Jordan M., Artificial Intelligence — The Revolution Hasn't Happened Yet. UC Berkeley, April 18, 2018.

[5] Jordan M., Dr. AI or: How I Learned to Stop Worrying and Love Economics. Harvard Data Science Review.

[6] Donoho D., 50 years of Data Science. Princeton, September 18, 2015.