## Call for Papers: Data Science

The conference INFORMATIK is the annual convention and the most important meeting of the Gesellschaft für Informatik e.V. (GI), the largest computer science association in German-speaking countries. INFORMATIK 2019 will take place at the University of Kassel on September 23 - 26, 2019. It will celebrate the GI's 50th birthday, which was founded in 1969, with an attractive program for participants from science and industry. The theme of the conference is "50 Years of Society for Computer Science - Computer Science for Society". Seven conference tracks cover topics that currently receive special attention in science, practice and society. The best contributions will be forwarded for publication in suitable journals. Conference languages are German and English. Further information:

www.informatik2019.de

## Data Science

Innovations in data analytics and machine learning are key drivers for the digitalization of virtually all aspects of our everyday life. They help us to extract knowledge from large amounts of structured and unstructured data, support (automated) decision-making, generate novel business models in industry, foreshadow personalized health technologies, and transform scientific research fields thanks to the availability of new types of data and methods. The widespread adoption of data science creates exciting challenges across all areas of computer science - including artificial intelligence, database technologies, distributed systems, computer architecture, software engineering, algorithm design, and theory – but also raises novel societal challenges like privacy, fairness, transparency and accountability. The Data Science track aims to give an overview of all aspects related to modelling, analysis, knowledge extraction, and learning from Big data, with an emphasis on recent works from the German, Austrian, and Swiss research community.

## Topics of Interest

Soliciting data science applications in academia and industry that cross disciplinary borders, and works that advance the methodological foundation of data science, the topics include, but are not limited to:

- Applications of data analytics and machine learning in the social sciences, humanities,
- natural sciences, life sciences, and medicine
- Case studies of data science in industry
- Data-driven and agent-based modelling of complex systems across the sciences
- Network science, social network analysis,
- and graph mining
- Causal inference and reasoning in Big Data
- Fairness, transparency, and explainability in machine learning
- Quantitative studies of societal aspects
- of Big Data
- Data science and data literacy education in schools, academia, and industry

- Methodological foundations of artificial intelligence and statistical learning
- Anomaly detection, pattern recognition, time series analysis, spatial data analysis
- Natural language processing, text mining and sentiment analysis
- Computer vision, scene analysis, object recognition, medical image analysis
- Web science, linked data, knowledge representation, semantic query languages
- Methods to deal with uncertain, missing, and spurious data
- Scalable storage, retrieval, mining, and analysis of Big Data
- Data Visualisation and Exploration

UNI KASSEL VERSITÄT

50 JAHRE GI

GESELLSCHAFT FÜR INFORMATIK

## Submissions

We welcome submissions of methodological and applied works on data science from academia and industry. We accept English submissions in the following two categories:

◆ **Regular articles** present novel insights and reliable results in one of the areas listed above. Submissions should be max. 14 pages and they must not have been submitted or published elsewhere. All accepted regular articles will be presented in a talk at the conference.

◆ **Extended abstracts** summarize works recently published in a leading international conference or journal in data science (e.g. ACM SIGKDD, NIPS, ICML, AAAI, IEEE TKDE, ICWSM, Machine Learning, ICDM, IEEE TNNLS, EPJ Data Science, WWW, etc.). Submissions should be max. 2 pages and must clearly refer to the original publication. Accepted extended abstracts of such works will be presented during a special session "Best of Data Science made in D/A/CH".

Contributions in German or English should be submitted to the Review System of INFORMATIK 2019 http://easychair.informatik2019.de and must be formatted according to the guidelines for the GI-Edition "Lecture Notes in Informatics" at https://gi.de/service/publikationen/lni/. Each submission is reviewed by at least three members of the track program committee.

## Proceedings and Follow-up Journal Publication

All accepted contributions (regular articles and extended abstracts) will appear in the series Lecture Notes in Informatics (LNI). In addition, authors of selected previously unpublished regular articles will receive an invitation to submit an extended version to the journal EPJ Data Science, where they will be considered for a special issue. The selection will be made by the track co-chairs and the program committee.

## Important Dates

| | |
|---|---|
| 12.04.2019 | registration of submissions |
| 19.04.2019 | submission deadline |
| 31.05.2019 | decision notification |
| 20.06.2019 | camera-ready version due date |
| 23.-26.09.2019 | INFORMATIK 2019 |

## Track Program Committee (Invited, TBC)

Christian Bauckhage, Universität Bonn

Christian Bizer, Universität Mannheim

Andrés Bruhn, Universität Stuttgart

Rebekka Burkholz, ETH Zürich

Stefan Decker, RWTH Aachen

Sarah Etter, Complexity Science Hub Wien

Rainer Gemulla, Universität Mannheim

Michael Granitzer, Universität Passau

Krishna P. Gummadi, MPI-SWS

Stephan Günnemann, TU München

Andreas Hotho, Universität Würzburg

Eyke Hüllermeier, Universität Paderborn

Elisabeth Lex, TU Graz

Katharina Morik, TU Dortmund

Jürgen Pfeffer, TU München

Frank Schweitzer, ETH Zürich

Claudia Wagner, GESIS Köln

Robert West, ETH Lausanne

Katharina Zweig, TU Kaiserslautern

## Track Co-Chairs

Ingo Scholtes, University of Zürich (co-Chair)
Markus Strohmaier, RWTH Aachen (co-Chair)

## Kontakt: dsc_chairs@informatik2019.de

U N I K A S S E L
V E R S I T Ä T

50 JAHRE GI

GESELLSCHAFT
FÜR INFORMATIK