# 2021 Data Science Education Special Session

as part of EDUCON 2021 Conference, 21-23 April 2021, Vienna, Austria

# Scope

The Special Session about Data Science Education is intended to allow educators, researchers and practitioners to present their research works for a wide spectrum of research and best practices on education for Data Intensive Science, other Open Science and emerging educational and scientific trends/developments, that the practical Data Science and education community can benefit, including educators, trainers, employers, and research infrastructure managers helping them in identifying, recruiting and inspiring the data science professionals of the future, to improve their knowledge and skills. Data Science is very related with the challenge of "Big Data" continues to grow and is an active area of research. This track focuses on instructional methodologies, teaching techniques, experiences, applications, and lessons learned from the curricula development, implementation, as well as skills management in organizations and large-scale research infrastructure projects.

The special session is to address, explore and exchange information on the stateof-the-art and practice in the broad multidisciplinary field of education in Data Science, Big Data, Research Data Management. Participation is extended to researchers, designers, educators and interested parties in all disciplines and specialties.

The special session can be useful to develop new courses in Data Science, evaluate existing modules and courses, draft job descriptions, and plan and design efficient data-intensive research teams across scientific disciplines.

## **Topics**

Special Session about Data Science Education Contributions include (but are not limited to) the following:

- Data Science Competences
- Data Science Body of Knowledge
- Data Science Model Curriculum
- Data Science Undergraduate Education
- Data Science Graduate Education
- Data Science Professional Profiles
- Education in Data Analytics
- Education in Data Engineering
- Data Management and Data Stewardship, FAIR Data Principles
- Data Stewardship Competences, Education and Training
- Education in Visualization of Big Data and Data Analytics
- Post-graduate and Vocational Education in Data Science and Big Data
- Experiences, Case Studies and Lessons Learned

#### **Important Dates**

The same scheduled for the Conference

#### Submissions

Contributions must be summitted to the Conference Platform indicating that they are submitted to the Data Science Education Special Session.

## Organizers

Y. Demchenko, University of Amsterdam, The Netherlands (y.demchenko@uva.nl)

J.J. Cuadrado-Gallego University of Alcalá, Madrid, Spain (jjcg@uah.es)

T. Wiktorski, Tomasz Wiktorski, University of Stavanger, Norway (tomasz.wiktorski@uis.no)

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## **Program Committee**

Mohammad Samir Abdel-Haq, Dar AL Uloom University, Saudi Arabia Evan Asfoura, Dar AL Uloom University, Saudi Arabia Wo Chang, NIST, USA Francisco C. Cuadrado, European Space Agency, Hidemoto Nakada, National Institute of Advanced Industrial Science and Technology, Japan Olga Ormandjieva, Concordia University, Quebec, Canada Miguel Ángel Patricio, University Carlos III de Madrid, Spain Milan Petkovic, Philips Research Laboratories, The Netherlands Morris Riedel, Forschungszentrum Jülich, Germany Domenico Talia, University of Calabria, Italy **To be completed** 

## **Additional information**

## **Background and history**

This Special Session on Data Science Education is based on the works carried out in the European Commission founded EDISON Project that developed the EDISON Data Science Framework (EDSF) that the Data Science Competence Framework, Body of Knowledge and Model Curriculum for the Data Science Profession, which results has been recently published (October 2020) in the Springer Book: <u>The Data</u> <u>Science Framework: A View from the EDISON Project</u>, Editors: Cuadrado-Gallego, Juan J., Demchenko, Yuri (Eds.)

## **Expected number of submissions**

We plan to accept a small number of high-quality contributions for presentation during the workshop. 5-6 accepted papers with expected submissions 10-15 papers.

At the end of the workshop, a forum discussion is planned to debate on the new trends in data science oriented education and future directions of curricula and teaching methods in Data Science, Big Data, and Cloud Computing

## **Expected length**

Half day special session.