



Date:
27 October 2021 to 28
October 2021
Location:
Online

Ethics and Explainability for Responsible Data Science (EE-RDS) Conference

**Critical Reflections on
Reliable and Trustworthy Data
Engineering and Data Science
approaches: The importance
of Explainability, Ethics,
Fairness, and Discrimination
as aspects which inform
Responsible Data Science.**

27-28 October 2021

Zoom registration link: <https://zoom.us/meeting/register/UjAvd-qtrD0oGtBr4W-weADIXwk6OTmmOMJo>
Conference website link: <https://www.ul.ac.za/newandevents/Pages/EE-BDS.aspx>

MESSAGE FROM THE ORGANISERS

It is with great pleasure that we introduce the following Keynote Speakers:

1. **Yoshua Bengio**, Department of Computer Science and Operational Research, Université de Montréal, Canada;
2. **Geralyn Miller**, Senior Director of the AI for Good Research Lab at Microsoft, United States; and
3. **Mark Parson**, Editor in Chief of the Data Science Journal, University of Alabama, United States.

1. **Responsible Data Science:** Reliable and Trustworthy approaches for data engineering, data science and modern machine learning.

2. Algorithmic Fairness, Transparency, and Explainability.
3. Social and Ethical aspects of Responsible Data Science.
4. Use cases illustrating the cross-disciplinary nature of the field of Data Science.

This conference is being hosted by the Data Science Across Disciplines (DSAD) Research Group based at the University of Johannesburg's Institute for the Future of Knowledge (South Africa), the Perception Robotics and Intelligent Machines Research Group (PRIME) at the University of Aberdeen, Scotland, and the Centre of Excellence in Artificial Intelligence in Science at the University of the Witwatersrand, Johannesburg.

The Future Reimagined

Conference hosted by:

- Data Science Across Disciplines (DSAD) Research Group, Institute for the Future of Knowledge, University of Johannesburg;
- Perception Robotics and Intelligent Machines Research Group (PRIME), University of Moncton;
- Sponsorship is being provided by the National Integrated Cyberinfrastructure System (NICIS).

Is Data Science a new approach to solving problems, one that applies across disciplines as various as physics, sociology and linguistics? Or are machine learning, deep convoluted neural nets, and other exciting phrases just statistics on steroids?

Recent developments in Data Science broadly construed, and the products these have yielded (or promise to yield) are undeniably exciting: identifying and predicting disease, personalised healthcare recommendations, automating digital ad placement, predicting incarceration rates, and countless other tools have attracted a lot of attention. But what about the process behind these products? Are these amazing feats based on traditional scientific discoveries? Or does the problem-solving approach which is being implemented have an even wider range of applicability than we could imagine? While the Sciences and Engineering are driving the field, traditional Humanities and the Social Sciences are also experimenting and contributing to a growing body of knowledge around the use of data. This conference seeks to understand the nature and significance of data science for traditional modes of inquiry across the full spectrum. We also seek to interrogate underlying ethical issues that arise not only in research but also when data science is relied on in decision-making – this is where notions of explainability, fairness and discrimination form part of the practical application of responsible data science.

As a launching event of the Data Science Across Disciplines Research Group at the University of Johannesburg, this conference brings together reflections on both the actual and potential impact of data science across disciplines and sectors.

Panel Discussion

As a part of this conference, we will host a Problem-Solving Panel Discussion where a group of specialists will consider a problem of real-world importance; they will clarify the issue at hand, discuss possible issues involved, consider the tools at their disposal and ultimately design and argue for a feasible solution.



On each of the days of the conference, 60 minutes will be set aside for a panel discussion on a particular problem or issue related to the theme(s) of the Conference. Panel members will be assigned by the Scientific Committee of the Conference, and attendees will be allowed to sign up to attend as a part of the audience.

FAIRsFAIR Ethics and Explainability for Responsible Data Science (EE-RDS)

On **28 October 2021**, both FAIRsFAIR members Hugh Shanahan (Royal Holloway University of London) and Joy Davidson (Digital Curation Centre) were panelists in the panel discussion " **Data Stewardship and Responsible Data Science: Lessons from the CODATA-RDA Schools for Research Data Science**".

Data-driven research relies on a range of expertise within research communities. This has led to the emergence of the data stewards, individuals who provide oversight or data governance support within organizations and ensure the quality and fitness for purpose of data assets including the metadata. The CODATA-RDA Schools for Research Data Science, together with FAIRsFAIR, have developed data stewards training workshops that focus on training on responsible/open research and research data management. This panel will discuss this training in detail, and include a broader discussion about the benefits and challenges of educating data stewards and their impact on responsible research.

