

ECRM 2020

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Mini Track on The Fourth Research Methodological Tradition: Big Data, Analytics and Data Science

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Contemporary digital environments are increasingly generating various forms of data traces (structured, semi-structured and unstructured). Such data are the outcome of human-to-human, human-to-machine and machine-to-machine interactions in social media environments, online business enterprise systems (social, financial and administrative), smartphones and sensors. The application of artificial intelligence techniques (AI) and machine learning approaches to these new forms of data offer researchers enormous opportunities for understanding complex human and social systems. However, in order to fully leverage the opportunities afforded by Big Data

and analytics, it is necessary for the design of research methods programmes to reflect the changing nature of these data and incorporate techniques of Data Science.

Further, the utilisation of Big Data and analytics enable researchers and decision-makers to harvest and extract useful knowledge to enhance the quality of decision-making, the use of personal data primarily in predictive modelling raises concerns around data ownership, privacy, ethics, and informed consent. In this mini-track we invite work on theoretical and empirical work on research methods and techniques in the analysis of Big Data and analytics. Topics will include but not limited to:

- Curriculum design and delivery of Data Science
- Perspectives, application and challenges of working with Big Data and Analytics
- Learning analytics (LA) and business analytics (BI)
- Techniques for visualisation of data (e.g. dashboards, infographics, etc.)
- Modelling and predictive models
- Human ethics, data literacy, privacy, security, and morality in the use of human data
- Regulatory and data compliance issues with Big Data
- Developing data governance models, challenges and opportunities
- Examples of the application of the following machine learning methods in business, education and health:
 - Social network Analysis
 - Sentiment Analysis
 - Random Forest
 - Clustering
 - Association
 - Classification
 - Naive Bayes
 - Decision Trees
 - Regression
 - Support Vector Machines (SVM)
 - Neural Networks



Dr Ben Kei Daniel, is Associate Professor in Higher Education, and the Head of Department of Higher Education Development Centre at the University of Otago, New Zealand. Prof Daniel is the convenor for Educational Technology strategic initiatives and an academic member of the IT Governance Group for the University of Otago. He obtained his PhD Jointly in Educational Technology and Artificial Intelligence in Education (AIED) from the University of Saskatchewan in Canada. His current research focuses on Big Data and Analytics in higher education. Also, he is actively researching into what constitutes "best practice teaching" in research methods.

Submission details

In the first instance a 300 word abstract is required, to be received by **27 November 2019**. Please read the guidelines at <http://www.academic-conferences.org/policies/abstract-guidelines-for-papers/>

Submissions must be made using the online submission form at:

<http://www.academic-conferences.org/conferences/ecrm/ecrm-abstract-submission/>

If you have any questions about this track please email the mini track chair: ben.daniel@otago.ac.nz

See more about ECRM at <http://www.academic-conferences.org/conferences/ecrm/>