

ADSN 2025

Australian Data Science Network Conference

10-12 November 2025

Lecture Theatre 101, Law School Building Annex (F10A), University of Sydney

Hosted by the Sydney Precision Data Science Centre

Abstracts are available on the conference website:

<https://spds.sydney.edu.au/adsn2025/program/>

Sponsors and Partners

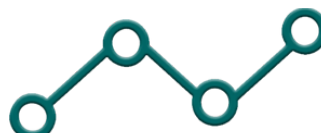


THE UNIVERSITY OF
SYDNEY

School of Mathematics and Statistics
Faculty of Science



Australian Research Data Commons



AUSTRALIAN
DATA SCIENCE
NETWORK

Day One: November 10

9:00-9:40	Registration desk open
9:40-10:00	Welcome & Acknowledgement of country Prof Dingxuan Zhou, Head of School, School of Mathematics and Statistics Prof Kate Jolliffe, Associate Dean Research, Faculty of Science Chair: Garth Tarr, USYD
10:00-11:00	Plenary – Veridical Data Science towards Trustworthy AI Keynote Speaker: Bin Yu, UC Berkeley Chair: Jean Yang, USYD
11:00-11:30	Morning Tea
11:30-12:50	Contributed Talks Chair: Lijia Yu, USYD
11:30-11:50	Explainable AI Systems Must Be Contestable: Here's How to Make It Happen Catarina Moreiera, UTS
11:50-12:10	Elevating Compliance Intelligence: A Human–Machine Model for Incident Analysis Divya Sukumar, University of New England
12:10-12:30	Large language models for interdisciplinary communication in bioinformatics Yue Cao, University of Newcastle
12:30-12:50	Extracting Extreme Precipitation pathways using External Coefficient and K-means++ Clustering Algorithm Reza Nosratpour, RMIT
12:50-1:50	Lunch
1:50-3:00	Fast-forward presentations Chair: Ellis Patrick, USYD
3.00-3:30	Afternoon tea and <u>poster session</u>
3:30-4:50	Contributed Talks Chair: Keith Russell, ARDC
3:30-3:50	Using auxiliary information to separate measurement error from microscale variation in hierarchical spatial statistical models Alan Pearce, The University of Melbourne
3:50-4:10	Computational modelling of black swan bioterror events Richard Bradhurst, The University of Melbourne
4:10-4:30	Inferring Viral Clearance and Extinction Dynamics with Hybrid Simulation-Based Inference Tom Kimpson, The University of Melbourne
4:30-4:50	Optimising data utilisation in federated learning: combined frameworks for horizontally and vertically partitioned data Amir Anees, UNSW
5:00-7:00	Welcome drinks at the Courtyard Café, Holme Building

Day Two: November 11

9:00-9:20	Registration desk open
9:20-9:30	Welcome & Housekeeping
9:30-10:30	Impacts of AI on the Scientific Ecosystem Invited Speaker: Karin Verspoor, RMIT Chair: Rachel Wang, USYD
10:30-11:00	Morning Tea
11:00-12:40	Contributed Talks Chair: Bernadette Hyland-Wood, QUT
11:00-11:20	Towards precision medicine: assessing chromosomal instability in High Grade Serous Ovarian Cancer with shallow whole genome sequencing Merridee Wouters, UNSW
11:20-11:40	Improving Brain Injury Diagnosis from 3D CT Scans Using Residual Triplet Deep Learning Hanem Ellethy, BUild-apps
11:40-12:00	Leveraging LLMs for Qualitative Research: Workflow Architecture and Evaluation Siddharth Arora and Wai Yin Chan, UTS
12:00-12:20	Empowering researchers through national initiatives Darya Vanichkina, Sydney Informatics Hub, USYD
12:20-12:40	Shaping the Future of Australia's Digital Health Research Infrastructure Presenters: Divya Mehta and Bernadette Hyland-Wood, QUT
12:40-1:50	Working Lunch Law Seminar Room 100 Facilitators: Divya Mehta, Bernadette Hyland-Wood, Alberto Nettel-Aguirre, Gnana Bharathy
1:50-3:30	Contributed Talks Chair: Sue Keay, UNSW
1:50-2:10	Pooled and Joint Clustering of Multiple Datasets with Applications to Flow Cytometry Inge Koch, RMIT
2:10-2:30	A multi-objective optimisation strategy for biomarker selection with restriction Wenze Ding, USYD
2:30-2:50	Identifying Interface-Enriched Features Between Spatial Domains with FrontiR Farhan Ameen, USYD
2:50-3:10	A Multimetric Framework for Informative Region Detection in Spatially Resolved Omics Data Daniel Kim, USYD

Day Two: November 11

3:10-3:30	ClustSIGNAL: a method for cell-type spatial clustering of molecule-resolved spatial transcriptomics data Pratibha Panwar, USYD
3:30-4:00	Afternoon tea
4:00-5:00	Panel Session, LLM Debate Chair: Jean Yang , USYD
5:00-6:00	ASDN and AI leaders meeting Law Lecture Theatre 106
6:30-8:30	Conference dinner - Thai Pothong (registration required)

Day Three: November 12

9:00-9:20	Registration desk open
9:20-9:30	Welcome & Housekeeping
9:30-10:30	Tackling the Complexities of Electronic Healthcare Records with LLMs Invited Speaker: Yuan-Fang Li, Oracle Health and AI, Monash University Chair: Alistair Senior, USYD
10:30-11:00	Morning Tea
11:00-12:20	Contributed Talks Chair: Gnana Bharathy, ARDC
11:00-11:20	An automated workflow for improved mine-site safety Paul Hancock, Curtin Institute for Data Science
11:20-11:40	Process Voids: Data Science Without Data Adam Burke, QUT
11:40-12:00	Real-World AI: Transforming Magnetic Plug Inspections Uno Fang, Curtin Institute for Data Science
12:00-1:00	Lunch
1:00-2:00	Panel Session with Jinman Kim, Dimitri Perrin, Helen Gardner, Willem Vervoort, Yuan-Fang Li
2:10-3:10	Contributed Talks Chair: Uno Fang, Curtin University
2:10-2:30	Living on the Edge: AI-enabled prototype camera trap for real-time decision making in the field Glen Charlton, Intersect Australia
2:30-2:50	Smart Diagnosis of Brain Tumors Using Lightweight Convolutional Architectures for Real-Time Medical Imaging Syed Mujtaba Haider, University of Pavia, Italy
2:50-3:10	Silent Forests: Using Acoustic AI to Detect Bushfire Impact on Bird Populations in Australia Harithaa Kannan, RMIT
3:10-3:30	Closing session
3:30-4:00	Afternoon tea