



arc training
centre for
**information
resilience**

INFORMATION RESILIENCE SYMPOSIUM 2022

PROGRAM

12pm-12:30pm	Arrival and light refreshments	The Long Room, Customs House
12:30pm-12:40pm	Welcome	Professor Shazia Sadiq and Dr Ida Asadi Someh
12:40pm-1:20pm	Keynote: Digital Transformation of Healthcare	Professor Andrew Burton-Jones
1:20pm-2:30pm	Research Perspectives	Facilitated by Professor Marta Indulska
	Reimagining Education in the Age of AI	Associate Professor Hassan Khosravi
	You Are Where You Go?	Dr Wen Hua
	How could AI change a patient journey in ICUs?	Dr Sen Wang
2:30pm-3:00pm	Networking break & CIRES PhD Poster presentations	
3:00pm-4:10pm	Practice Perspectives	Facilitated by Geoff Clarke
	Lessons from the strategic use of data	Alison Holt
	Solving real business challenges through data	Katherine Love
	Security in an Information Resilient Environment	Stan Gallo
4:10pm-5:10pm	Roundtable Discussions	Facilitated by Dr Ivano Bongiovanni
5:10pm	Close	Dr Ida Asadi Someh
5:15pm-7:30pm	Drinks and Dinner	The River Room

WELCOME & INTRODUCTION



PROFESSOR SHAZIA SADIQ

Shazia Sadiq is the CIRES Centre Director and a research and education leader in data science at UQ. Her research track record has focused on overcoming challenges that stem from disparate IT systems and result in information silos, and she has developed new methods that to tackle these challenges through integrated solutions for information quality and effective use. Shazia is passionate about the positive impact emerging technologies from data science, machine learning and artificial intelligence can have on our future.



DR IDA ASADI SOMEH

Ida Asadi Someh is a CIRES Chief Investigator and leads the Centre's Agility in value creation from data research theme. She is senior lecturer in the Business Information Systems discipline at the UQ Business School, and a research affiliate at the Centre for Information Systems Research (CISR), MIT Sloan School of Management, US. Her research focuses on the organizational and societal impact of data, analytics, and artificial intelligence.

KEYNOTE TALK



PROFESSOR ANDREW BURTON-JONES *Digital Transformation of Healthcare*

In this keynote, Professor Andrew Burton-Jones will describe the status of the digital transformation of healthcare in Queensland from his perspective as a researcher involved in the effort. He will use his experiences as a case study of the challenges and opportunities involved in both studying and achieving the digital transformation of healthcare and how Information Resilience can help overcome some of these challenges. The talk aims to highlight opportunities for collaborative research in digital health settings and spark discussions about how

best to plan and progress future collaborations.

Andrew Burton-Jones is Professor of Business Information Systems at the UQ Business School, where he co-leads the Future of Health Interdisciplinary Research Hub. Andrew conducts research and teaching on the management of information systems with a particular focus on the digital transformation of healthcare. With support from Metro South Health, Queensland Health, Health and Wellbeing Qld, and competitive grants, he has been studying ways to facilitate the digital transformation of healthcare in Queensland.

RESEARCH PERSPECTIVES



PROFESSOR MARTA INDULSKA *Facilitator*

Marta Indulska is the CIRES Research Director and Leader of the Business Information Systems discipline at UQ's Business School. Marta's research interests include IT business value, data quality, business process management and open innovation, primarily focusing on using technology as an enabler of increased organisational effectiveness. She has worked with organisations in the retail, consulting, and non-profit sectors to provide guidance on a variety of topics, including digital strategy, business process improvement, and emerging technologies and platforms for innovation.



ASSOCIATE PROFESSOR HASSAN KHOSRAVI *Reimagining Education in the Age of AI*

There are growing indications that the needs and expectations of learner populations have been shifting, and educational systems are struggling to adapt. This talk presents a case study that demonstrates how AI-powered educational technologies can be a promising avenue for helping students and instructors meet the evolving needs of the higher education landscape. The case study demonstrates successful examples of human-AI partnership for creating educational content that are utilised by an adaptive system to recommend personalised content to students based on their mastery level. The talk concludes by sharing a list of potential considerations for advancing and future development of analytical and AI-powered educational technologies.

Hassan Khosravi is an Associate Professor at UQ. As a computer scientist by training, Hassan is passionate about the role of artificial intelligence in the future of education. In his research, he draws on theoretical insights from the learning sciences and exemplary techniques from the fields of human-computer interaction to design, implement, validate, and deliver technological solutions that contribute to the delivery of learner-centred, data-informed learning at scale. His past research and publications have addressed a number of diverse topics such as learning graphical models, statistical-relational learning, social network analysis, cybersecurity, and game theory.



DR WEN HUA

You Are Where You Go?

With the popularity of GPS-enabled devices, a huge amount of trajectory data has been continuously collected and a variety of location-based services have been developed that greatly benefit our daily life. However, as a side effect, trajectories become vulnerable and could potentially expose individuals' sensitive information such as identity, gender, religion, home address, social relationships, etc. In particular, a widely encountered risk for releasing trajectory data is the re-identification attack, i.e., it is possible to identify a user profile from "where they go". In this talk, I will present several case studies showing the privacy leaks caused by sharing trajectory data and report our recent attempts to control such vulnerability in a quantitative way.

Wen Hua is a Senior Lecturer and ARC DECRA Fellow at the School of Information Technology and Electrical Engineering (ITEE) at UQ. She was awarded the ARC Discovery Early Career Researcher Award (DECRA) in 2021 and the Advance Queensland Early



DR SEN WANG

How could AI change patient journey in ICUs?

Health informatics is one of the most exciting frontiers in artificial intelligence and data science. Medical information systems and electronic health records (EHRs) have been successfully utilised for digital clinical data analysis in hospitals and medical institutes. However, deep learning (DL) algorithms have not been widely and safely adopted in daily operations that are generating voluminous heterogeneous data. Learning multi-source medical time-series data by using state-of-the-art deep models can provide timely assistance to medical experts in ICU when making decisions. This short talk will briefly review the existing DL solutions to the medical tasks in ICU, followed by an introduction to the challenges and opportunities in AI-driven critical care.

Sen Wang is a Senior Lecturer in computer science and ARC DECRA Fellow at the School of Information Technology and Electrical Engineering (ITEE) at UQ. He has published 80+ academic papers in top conferences and journals including internationally renowned journals and conferences in the fields of data science, data mining, and machine learning. Sen's research interests include Feature Selection, Semi-supervised Learning, Deep Learning, Pattern Recognition, and Data Mining, and significant applications using AI and Data Mining techniques, such as health informatics.

PRACTICE PERSPECTIVES



GEOFF CLARKE

Facilitator

Geoff Clarke is a member of the CIRES Strategy Board and is the Regional Standards Manager of Microsoft's Asia-Pacific region, working with national standards bodies and leading industry associations across the region. He is committed to developing and maintaining positive, constructive relationships with government, academic

and industry leaders, to collaboratively contribute to the development of standards globally. He is the chair and expert member of several IT and governance standards committees covering topics including Organisational Governance, Governance of IT, Cloud Computing, and Artificial Intelligence. Through these roles he provides guidance to organisations on developing information and technology strategies within a robust governance framework.



ALISON HOLT

Lessons from the strategic use of data

The Papua New Guinea Judiciary is on a journey to build a world class e-Judiciary powered and enabled by digital services and systems to enable better access to justice for all citizens. The journey started with the establishment of the foundational elements to prepare for digital delivery and a sustainable digital future and has moved on to the design and deployment of digital systems and services to deliver the vision. In this session, Alison Holt, e-Judiciary Adviser to the Chief Justice of Papua New Guinea, will describe the role that data governance is playing in realising this vision and will discuss the challenges that have been faced along the journey so far.

Alison Holt is an internationally acclaimed expert in the governance of data. She has had experience as a director, a general manager, a research fellow, a principal consultant, a virtual CIO for multiple organisations, and most recently as an adviser to the Chief Justice of Papua New Guinea, working in advisory and governance roles that utilise her performance enhancement skills, along with her wide-ranging business expertise.



STAN GALLO

Security in an Information Resilient Environment

As attention turns to more complex data and information environments, security needs to evolve. From outside to in, and from entity to application, our approach to security must adapt to this rapidly changing environment. This session will look at some of the current thinking around the continuing evolution of the risk environment.

Stan Gallo is a Partner, Forensic Services and leads BDO Australia's Forensic Technology practice. Stan Gallo is an experienced

investigator, former Detective and recognised court expert in the application of forensic technology and data analysis techniques. Stan regularly taps into a global talent pool to stay at the forefront of the technology evolution and its application in the corporate, litigation and regulatory environments. A highly regarded risk management specialist, Stan combines his unique insights, traditional investigative skills and forensic technology expertise to bring a different perspective, providing advice and insights to clients looking to minimise risk and align Governance, Risk and Compliance programs with their strategic objectives.



KATHERINE LOVE

Solving real business challenges through data

The demands on the public sector are evolving rapidly, as the way that people interact with the public sector changes, together with their expectations. Meeting these expectations creates many different challenges for public sector agencies across Australia. In this session, Katherine Love, head of Industry Business Advisory for Public Sector from SAP, will discuss three customer case studies, detailing the specific business challenges each customer faced and how they have leveraged data in innovative ways to drive continuous business value.

Katherine Love is the Head of Industry Business Advisory, Public Sector, for SAP. She leads a team of public sector industry experts whose purpose is to help customers assess their strategic objectives, determine key improvement opportunities, and uncover sources for incremental value. Katherine has a passion for enabling change and innovation through data, and a proven track record in delivering digital transformation programs across the public sector that have realised tangible results for staff, citizens, and government.

ROUNDTABLE DISCUSSIONS



DR IVANO BONGIOVANNI

Facilitator

Ivano Bongiovanni is a Lecturer in Information Security, Governance and Leadership with the UQ Business School. His research and practice focus is on the managerial implications of Information Security and its repercussions in terms of Governance and Leadership. Ivano is also a keen researcher and practitioner in the field of Design Thinking and Design-Led methods.



CONTACT INFORMATION

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