

Melbourne, Australia, 7 – 9 December 2016

EMERGING BIG DATA TECHNOLOGIES SUMMIT

Hosted by the International Innovative Research Network



SUMMIT PROGRAM BOOK

SUMMIT CHAIR



Prof. Dacheng Tao
University of Technology Sydney

COMMITTEE MEMBERS



A/Prof. Tomasz Bednarz
CSIRO and Queensland
University of Technology



A/Prof. Quoc Bao Vo
Swinburne University of
Technology



A/Prof. Tao Gu
RMIT University



Dr. Saurabh Kumar Garg
University of Tasmania



Dr. Tu Le
iiRNet



Dr. Alexe Bojovschi
RMIT University

SUMMIT INFORMATION

• Registration desk

The registration desk will be open in the foyer of the Rydges on Swanston Hotel

at the following times:

Wednesday 7 December

8:00am to 6:30pm

Thursday 8 December

8:30am to 6:30pm

Friday 9 December

8:30am to 5:30pm

• Name badges and dinner tickets

All delegates are required to wear name badges throughout the summit. Name badges are your ticket of admittance to all summit sessions. Dinner tickets are located behind your name card in your name badge. Please remember to bring your ticket with you to the function. If you believe you have booked for the dinner and do not have a ticket, please see the team at the Registration Desk.

• Transport

Taxi can be arranged by the hotel reception on the ground level. A tram stop is located 1 min walk from the venue.

• Where do I get help?

Please contact the team at the Registration Desk or any of the EBDTS'16 committee members. If you need urgent medical assistance, the hotel staff can also assist.

• Abstracts

Abstracts can be downloaded from the summit website (www.ebdts16.org).

• Internet Access

Free wireless internet access is available throughout the venue during the summit.

Expert Panellists

Each panellist is expected to speak for about 2-5 minutes about his/her personal view on the needs, gaps and future direction pertaining to the topic of the panel. The moderator will then ask questions and the panellists will address them. During the last 20 minutes of the panel discussion, the panellists will receive and answer to questions from the audience.

• Instructions for presenters

Oral presentations

There are three types of oral presentation. It is important to remember that the times listed below are the **total** times for presentations. Speakers should aim to talk for several minutes less than these times, to allow for questions and changeover. Suggested times are included below. The session chairs will follow the schedule rigorously.

Plenary lectures:

40 minutes (e.g. 35 + 5 mins)

Keynote and invited lectures:

25 minutes (e.g. 20 + 5 mins)

Oral communications:

15 minutes (e.g. 13 + 2 mins)

Speakers are strongly encouraged to bring their talks to the summit on USB drivers. They should load them onto the computer before their session and allow time for checking. Technical staff will be available to assist if needed. If you are planning to use your laptop, please check the connect between your laptop and the projector prior to your session.

SUMMIT INFORMATION

• Catering

The following catering is included in the summit registration: all morning teas, lunches, afternoon teas and cocktail. The summit dinner is NOT included in the registration fee. If you have not booked

and would like to attend the dinner function, please purchase the ticket online or contact the team at the Registration Desk before 8 December 2016.

• Dress code

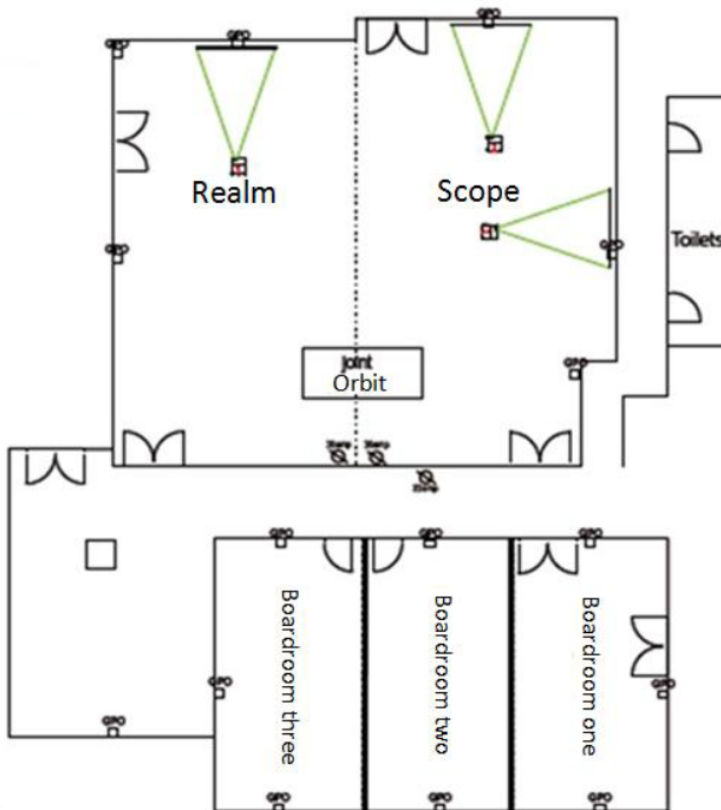
We recommend that delegates dress in smart casual attire for

the summit and business attire/lounge suits for the dinner function.

• Luggage storage

For delegates departing directly to the airport, limited luggage storage is available daily at the Registration Desk.

VENUE FLOOR PLAN



• Talks, posters and functions rooms

Plenary sessions will be held at the Realm and Scope rooms.

Concurrent session will be held in Realm and Scope rooms.

Catering will be served at the restaurant of the hotel during breaks (morning teas, lunches and afternoon teas).

Pre-dinner function will be held at the restaurant and dinner will be held at the Realm and Scope rooms.

SUMMIT PROGRAM - 7 December			
8:00-9:00	Registration		
9:00-9:10	Opening ceremony		
9:10-10:20	Plenary session 1 Chair: Prof. Dacheng Tao, <i>University of Technology Sydney (Australia)</i>		
9:10-9:50	Prof. Benjamin W. Wah, <i>Chinese University of Hong Kong (China)</i> Challenges of Big Data in Scientific Discovery		
9:50-10:30	Prof. Ian Oppermann, <i>New South Wales Data Analytics Centre (Australia)</i> The Data Game: Potential, players and privacy		
10:30-11:00	Morning tea		
11:00-12:40	Plenary session 2 and Expert panel discussion Chair:		
11:00-11:40	Prof. Saman K. Halgamuge, <i>The Australian National University (Australia)</i> Data Engineering Redefined in the Era of Big Data		
11:40-12:40	Expert panel discussion: Digital Cities Prof. Ian Oppermann, Prof. Benjamin W. Wah, Prof. Saman K. Halgamuge, A/Prof. Shanika Karunasekera, Dr. Simon Dunstall, Mr. Trevor Townsend , Prof. Matt Duckham Moderator: Dimitrios Georgakopoulos		
12:40-1:40	Lunch		
1:40-3:45	Concurrent session 1: Real time analytics Chair:	1:40-3:45	Concurrent session 2: Digital cities Chair:
1:40-2:05	A/Prof. Shanika Karunasekera <i>The University of Melbourne (Australia)</i> RAPID: Real-time Analytics Platform for Interactive Data-mining	1:40-2:05	Dimitrios Georgakopoulos, <i>Swinburne University (Australia)</i> Internet of Things: From Internet Scale Sensing to Smart Services
2:05-2:30	Prof. Jing He <i>Victoria University (Australia)</i> Abnormality Detection in Co-evolving Data Streams	2:05-2:30	Prof. Matt Duckham <i>RMIT University (Australia)</i> Evaluating big geodata analytics: From emergency response to environmental monitoring
2:30-2:55	A/Prof. Xiuzhen Zhang <i>RMIT University (Australia)</i> Detection of money laundering groups using supervised learning in networks	2:30-2:55	Mr. Trevor Townsend <i>Startupbootcamp (Australia)</i> Digital Cities - do Startups make a difference?
2:55-3:20	A/Prof Seng W. Loke, La Trobe University (Australia) Computing with the Cloud, the Crowd, Personal Data, IoT, and Drones	2:55-3:20	Dr. Saurabh Garg, University of Tasmania, Australia Bird Acoustic Data analysis
3:20-3:45	Maryam Fanaeepour The University of Melbourne (Australia) Beyond Points and Paths: Counting Private Bodies	3:20-3:45	Jignesh Bhatt, <i>Indian Institute of Information Technology Vadodara (India)</i> Registration of KALPANA-1 VHRR and INSAT-3A CCD imagery for Meteorological Studies

SUMMIT PROGRAM - 7 December			
3:45-4:15	Afternoon tea		
4:15-5:55	Concurrent session 3: Scalable Models and Algorithms for Data Analytics Chair:	4:15-5:55	Concurrent session 4: Cloud and Internet Computing Chair:
4:15-4:40	Prof. Hans De Sterck <i>Monash University (Australia)</i> Fast Optimisation Algorithms for Distributed Data Analytics in Apache Spark	4:15-4:40	Prof. Yun Yang Swinburne University of Technology (Australia) Ensuring big data reliability with minimum replication for cost effectiveness in the cloud
4:40-5:05	Prof. Aurore Delaigle <i>The University of Melbourne (Australia)</i> Methods for analysing partially observed functional data		Dr. Jack Barton AURIN, (Australia) <i>Making Big Data work across disciplines – The AURIN Solution</i>
5:05-5:30	Dr. Meng Wang, <i>Empirics Data Solutions (Australia)</i> Data Science and Superannuation in Australia	5:05-5:30	Zhinoos Razavi, <i>RMIT University (Australia)</i> Mining complex data from highly streaming environment

SUMMIT PROGRAM – 8 December

9:00-10:20	Plenary session 3 Chair:		
9:00-9:40	Prof. Andrzej Cichocki, <i>RIKEN (Japan)</i> Tensor Decompositions and Tensor Networks for Big Data Processing A Review, Challenges and New Perspectives		
9:40-10:20	Prof. Dave Winkler, <i>CSIRO (Australia)</i> Sparse machine learning methods to extract meaning from large chemical, materials, and genomic data sets		
10:20-10:50	Morning tea		
10:50-11:30	Plenary session 4 and Expert panel discussion Chair:		
10:50-11:30	Dr. Manuel Cebrian, Data61 (Australia) Time-Critical Social Mobilization		
11:30-12:30	Expert panel discussion: Digital Health Prof. Andrzej Cichocki, Prof. Dave Winkler, Prof. Yi-Ping Phoebe Chen, Dr. David Hansen Mr. David G. Yip, A/Prof. Christopher Bain Moderator:		
12:30-1:30	Lunch		
1:30-3:10	Concurrent session 5: Digital health care Chair:	1:30-3:10	Concurrent session 6: Predictive business analytics Chair:
1:30-1:55	A/Prof. Christopher Bain <i>Mercy Hospitals Victoria (Australia)</i> Big Data in Healthcare Operations – a Tale of 2 Sites, 1 City	1:30-1:55	A/Prof. Michael Brand, <i>Monash University (Australia)</i> Lost in Translation: On the Disconnect between Business-speak and Data Science
1:55-2:20	Prof. Hua Wang <i>Victoria University, (Australia)</i> Data usability with personalised autonomous mining in health care systems	1:55-2:20	Dr. Alex (YiFei) Dong, <i>CTO CUCPAY, (Australia)</i> Big Data: an almighty concept in Chinese research and capital market
2:20:2:45	Dr Sanjeev Naguleswaran, <i>QSpectral Systems (Australia)</i> Data Driven Decision Making: From Remote Health Monitoring to Venture Prediction	2:20:2:45	Dr. Tim Cahill, <i>The Conversation Media Group, (Australia)</i> From Digital to Data-Centric
2:45-3:10	<i>Dr Mani Abedini</i> <i>IBM Research (Australia)</i> Cognitive Computing for skin analytic and early detection of Melanoma	2:45-3:10	A/Prof Kok-Leong Ong, <i>La Trobe University, (Australia)</i> A business analytics approach to injury risk management for Australian football
3:10-3:35	Karamjit Kaur, <i>Thapar University (India)</i> Handling Healthcare Data using Polyglotpersistence	3:10-3:35	Dr. Alexe Bojovschi AIB, Australia Data driven innovation and innovation driven data
3:35-4:05	Afternoon tea		

SUMMIT PROGRAM – 8 December

4:05-5:45	Concurrent session 7: Digital Business Chair:	4:05-5:45	Concurrent session 8: Digital Health Chair:
4:05-4:30	Mr. Gavin Whyte, <i>KPMG (Australia)</i> Churn Analytics and the impact to business	4:05-4:30	David Yip, <i>IBM Research (Australia)</i> Cognitive Computing Transforming Healthcare
4:30-4:55	Mr. Stuart Growse, <i>GCS AGILE (Australia)</i> Big Data - A Key Driver in the Digital Revolution	4:30-4:55	A/Prof. Uwe Roehm, <i>University of Sydney (Australia)</i> Scalable Data Management and Analysis for Bioinformatics
4:55-5:20	Lee Anderson <i>Delloite (Australia)</i> Unlocking the commercial value of Big Data in a digital age.	4:55-5:20	Dr. Kelly Wyres, <i>University of Melbourne (Australia)</i> Genomics in the battle against antibiotic resistance.
5:20-5:45	Dr. Andy Song RMIT University (Australia) Data aggregation and security	5:20-5:45	Dr. Javed H. Tomal, <i>University of Toronto (Canada)</i> Building Ensemble of Models by Exploiting the Richness of Feature Variables in High-Dimensional Data and Application in Protein Homology
6:00-7 :00	Pre-dinner cocktail		
7:00-9:30	Dinner		

SUMMIT PROGRAM – 9 December			
9:00-10:30	Plenary session 5 Chair		
9:00-9:40	Prof. Timos Sellis, <i>Swinburne University of Technology (Australia)</i> The Science of Big Data and the Data of Big Science		
9:40-10:20	Dr. Amy Shi-Nash, <i>Commonwealth Bank (Australia)</i> Data science at scale		
10:20-10:50	Morning tea		
10:50-11:30	Plenary session 6 and Expert panel discussion Chair:		
10:50-11:30	Prof. Yi-Ping Phoebe Chen, <i>La Trobe University (Australia)</i> Pattern and Knowledge Discovery for Biomedical Applications and Genomics Context		
11:30-12:30	Expert panel discussion: Digital Business Dr. Amy Shi-Nash, Dr John Brudenell, Prof. Yun Yang, Prof. Timos Sellis Mr. Gavin Whyte, Mr. Stuart Growse, Moderator:		
12:30-1:30	Lunch		
1:30-3:30	Concurrent session 9: Systems, Digital Business Chair:	1:30-3:30	Concurrent session 10: Internet of Things (IoT) Chair:
1:30-1:55	Dr John Brudenell, <i>ZETARIS (Australia)</i> The Next-Gen Information Management System – The Zetaris Way	1:30-1:55	A/Prof. Quoc Bao Vo, <i>Swinburne University (Australia)</i> Enabling Intelligent Transport Systems (ITS) with cognitive analytics
1:55-2:20	Prof. David Abramson <i>The University of Queensland (Australia)</i> Caches all the way down: Infrastructure for Data Science	1:55-2:20	A/Prof. James Thom <i>RMIT University (Australia)</i> Privacy and security in the age of big data
2:20-2:45	Dacheng Tao, <i>University of Technology Sydney (Australia)</i>	2:20-2:45	Dr Stephanie Kovalchik, <i>Game Insight Group at Tennis Australia & Institute of Sport, Exercise & Active Living (Australia)</i> Performance Analytics Using Tracking Data and Computer Vision: A New Statistical Era for Elite Tennis
2:45-3:10	Dr. Truyen Tran Deakin University AI for Healthcare	2:45-3:10	A/Prof. Tao Gu <i>RMIT University (Australia)</i> Big Data Analytics for Data Streams from Sensors
3:10-3:40	Afternoon tea		
3:40-4:00	Plenary session 7 and Closing ceremony Chair:		
4:20-5:00	Dist. Prof. Xinghuo Yu RMIT University (Australia) Big Data Analytics for Smart Grids: Challenges and Opportunities		
5:00-5:10	Closing ceremony		

THREE-DAY EXECUTIVE SHORT COURSE

Monash Information Technology and Monash Business School present a three-day short course for managers and executives seeking to **harness the potential of data**.

26-28 April 2017

Monash Conference Centre
30 Collins Street, Melbourne

DAY 1: Monday 26 April

- MODULE 1 | Introduction to Data Science
- MODULE 2 | Data as an Asset
- MODULE 3 | Data Life Cycles
- MODULE 4 | Privacy and Ethics in Big Data

DAY 2: Tuesday 27 April

- MODULE 5 | Data engineering for Analysis
- MODULE 6 | Visualisation
- MODULE 7 | Data Wrangling and Exploratory Analysis
- MODULE 8 | Fundamentals of Statistics

DAY 3: Wednesday 28 April

- MODULE 9 | Model Creation and Validation
- MODULE 10 | Operationalisation and the Model Life Cycle
- MODULE 11 | Panel: Building a Data-Driven Enterprise
- MODULE 12 | Case Study



DI COOK

Professor | Monash University



DENNIS CLARIDGE

Business Director | double IQ



MICHAEL BRAND

Associate Professor | Monash University



DR DICKSON LUKOSE

Chief Data Scientist | GCS Agile



JAMES HORTON

Managing Director | Datanomics



STUART GROWSE

Chief Digital Officer | GCS Agile



KIM MARRIOTT

Professor | Monash University



MARK STAMMERS

Technical Director | doubleIQ



SALIM NAIM

CTO Advance and Data Science | Microsoft Services

PRICING

Early bird ends 24 February 2017	\$3295 (exc GST)
Early bird (3+ attendees) ends 24 February 2017	\$2995 (exc GST)
Standard ends 23 April 2017	\$3895 (exc GST)
Standard (3+ attendees) ends 23 April 2017	\$3695 (exc GST)

BOOKINGS & FURTHER INFORMATION

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SECURE YOUR SEAT

<http://it.monash.edu/data-science>

IN ASSOCIATION WITH



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