7TH ANNUAL
DOCTORAL
COLLOQUIUM
6 SEPTEMBER 2019

PROGRAM

#CIS_DC19
cis-dc@unimelb.edu.au
cis.unimelb.edu.au/colloquium
@CIS_DC
Keynote Speaker

Dr Niels Wouters
Head of Research and Emerging Practice, Science Gallery; and Research Fellow, Interaction Design Lab, University of Melbourne

In his role, Niels supports academic colleagues in exploring the collision between arts and science as a mechanism to engage the public with creativity and innovation, and expose the breadth of STEMM (Science, Technology, Engineering, Mathematics and Medicine). He also leads the development of Science Gallery Melbourne’s digital portfolio.

His own research practice in Human-Computer Interaction revolves around the democratization of technology in order to achieve tangible benefits for society. Most recently, Niels led a study on the ethics of artificial intelligence and automated decision-making, empowering the public to participate in the complex discussion about norms and values that inform the use of emerging technologies.

Niels is an avid science communicator by way of publications about technology for social good in relevant media outlets and frequent public speaking engagements including for adolescents and young adults. Niels’ work is regularly featured in national and international media, highlighting the impact of new technology on urban life.

Before permanently migrating to Australia, Niels acquired a PhD in Architectural Engineering. He also holds degrees in Architectural Design, Computer Science and Human-Computer Interaction.

Venue Map

As you enter the building, please head down the stairs to the right.

Elevator access is also available.
Registration Desk
The Doctoral Colloquium (DC) Registration Desk will be located in the Basement 1 foyer at 221 Bouverie Street. The desk will be open from 8:30 - 17:00 on Friday 6 September.

Visitor Wi-Fi
Wireless internet is available to visitors attending the DC.
Join Network: Visitor Access
Username: cdoctoralcolloquium
Password: oeG&7y

Catering
The event is fully catered, including lunch, morning and afternoon tea, and late afternoon refreshments. We have done our best to cater for any advised dietary requirements. For break times, please refer to the DC schedule.

Emergency Details
In an emergency, call 000, for an Ambulance, Fire Service or Police.

To contact campus security, call 834 46666 or 1800 246 066 (free call) at anytime.

Lost Property
Please hand in or ask for lost property at the registration desk.
This year, the organising committee asked speakers to consider the real-world impacts and applications of their work and to address a wider audience – beyond their immediate research peers.

The **Short Talks** and **Poster Tracks** were accepted after submission to the organising committee for review. Posters that were previously displayed at recent academic events were also accepted.

**Exemplar Talks** (long talks) are an opportunity to celebrate some of the excellent research by our graduate researchers. In an open call, the CIS graduate research team invited PhD supervisors, in the School of Computing and Information Systems, to nominate candidates whose research was accepted at top research conferences in the last year. Some potential nominees are in fact currently overseas at conferences, so could not join us today.

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:00</td>
<td><strong>Arrival and Registration</strong></td>
<td>Basement 1, 221 Bouverie Street, Carlton</td>
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<td>9:00 – 9:40</td>
<td><strong>Welcome</strong></td>
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<td><strong>Keynote Address: Dr Niels Wouters</strong></td>
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<td><strong>We’re all Artists: Impact your Practice through Public Engagement</strong></td>
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<td>9:45 – 10:30</td>
<td><strong>Session 1A</strong></td>
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<td><strong>Data and Knowledge</strong></td>
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<td></td>
<td>1. Fei Liu</td>
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<td></td>
<td><em>Exemplar Talk: A Recurrent Entity Network for Anaphora Resolution</em></td>
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<td>2. Ziad Al Bkhetan</td>
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<td><em>Allele-Gene Expression Association Analysis at Block Scale</em></td>
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<td>3. Shima Rashidi</td>
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<td><em>A Computational Model of Visual Attention for Machine Vision Applications</em></td>
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<td>4. Unni Krishnan</td>
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<td><em>Abstraction of Query Auto Completion Logs for Anonymity-Preserving Analysis</em></td>
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<td><strong>Session 1B</strong></td>
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<td><strong>Data and Knowledge</strong></td>
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<td>1. Leyla Roohi</td>
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<td><em>Exemplar Talk: Differentially-Private Two-Party Egocentric Betweenness Centrality</em></td>
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<td>2. Renlord Yang</td>
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<td><em>Realising a Decentralized Cryptocurrency for All</em></td>
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<td>3. Dongge Liu</td>
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<td><em>Legion: Best-First Concolic Testing</em></td>
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<td>4. Biaoyan Fang</td>
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<td><em>Coreference Resolution in Biochemical Text</em></td>
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<td>10:30 – 10:50</td>
<td><strong>CIS-GReS Morning Break</strong></td>
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# Session 2A
**People and Organisations**
**Theatre 1**

1. **Neil Marchant**  
   *Exemplar Talk: Analysing Human Rights Abuses using Bayesian Entity Resolution*

2. **Ehsan Abedin**  
   What Makes a Review Credible? Heuristic and Systematic Factors for the Credibility of Online Reviews

3. **Sadia Nawaz**  
   Analysis of Students’ Confusion in Online Learning Environments

4. **Brian McKitrick**  
   Let’s Play Communities: Definitions, Development, and Economies

5. **Alvin Jia**  
   *Exemplar Talk: Improving Quality of Explanation by Local Embedding Perturbation*

6. **David Cumming**  
   Between places: Spectatorship at an Australian Esports Bar

7. **Abid Shah**  
   Enhancing Strategic Information Security Management in Organizations through Warfare Practices

8. **Namrata Srivastava**  
   Using Contactless Sensors to Estimate Learning Difficulty in Digital Learning Environments

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# Session 2B
**People and Organisations**
**Theatre 2**

1. **Ronny Andrade**  
   *Exemplar Talk: Improving Accessibility in Digital Games for People with Visual Impairment*

2. **Tafheem Ahmad Wani**  
   BYOD in Hospitals-Security Issues and Mitigation Management

3. **Madeleine Antonellos**  
   Personas at Play: Cosplay and Digitally Supported Careers

4. **Francesco Cataldo**  
   Videoconference in Psychotherapy: Understanding Research and Practical Implications

5. **Shuai Yuan**  
   Caregivers’ Attitudes towards Care Robots in Aged Care

6. **Atlarelang Basetsana Kesilwe**  
   Digital health and its Impact on the Workforce - the Case of an Emergency Department

7. **Timothy Kariotis**  
   Ethico-Legal Considerations of Electronic Health Record Systems

8. **Mahtab Mirmomeni**  
   Time Series Analytical Techniques for Tracking Patients’ Rehabilitation Exercises using Wearable Sensors

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**Poster Session and Lunch Break**
**Basement Foyer**
<table>
<thead>
<tr>
<th>Session 3A:</th>
<th>Session 3B:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data and Knowledge</td>
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<tr>
<td>Theatre 1</td>
<td>Theatre 2</td>
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</tbody>
</table>
| 1. **Prashan Madumal**  
*Exemplar Talk:* Explainability in Artificial Intelligence Systems | 1. **Jiayuan He**  
*Exemplar Talk:* A joint context-aware embedding for trip recommendation |
| 2. **Zenan Zhai**  
Improving Chemical Named Entity Recognition in Patents with Contextualized Word Embeddings | 2. **Sadegh Motallebi**  
Traffic Optimization in the Era of Connected Autonomous Vehicles |
| 3. **Haonan Li**  
Spatial Relation Parser for Answering Geospatial Questions over RDF Data | 3. **Hossein Alipour**  
Dynamic Maximum Flow Problem with Flow-Dependent Transit Times: Features and Algorithms |

### Session 4A: Panel Discussion
**Recent Graduates**
Mediator: Professor Tony Wirth
**Theatre 1**

- Dr Sarah Fan  
Manager, 49x, Management Consulting, KPMG
- Dr Marco Lui  
Head of Data Science, Rome2rio
- Dr Ling Luo  
Lecturer, University of Melbourne
- Dr Moha Ganji  
AI and Advanced Analytics Practice Lead, Mondo

### Session 4B: Panel Discussion
**Recent Graduates**
Mediator: Samantha Harris-Wetherbee  
**Theatre 2**

- Dr Bahar Salehi  
Senior Data Scientist, GO1
- Dr Ying Xu  
Postdoctoral Research Fellow, IBM - Research Australia
- Dr Andrew Peel  
R&D Software Engineer, Scram Software
- Dr Sehrish Kanwal  
Computational Data Analyst, University of Melbourne

### Session 5: Careers Panel Discussion
Mediator: Dr Eduardo Velloso  
**Theatre 1**

- Dr Jürg von Känel  
Director, IBM - Research Australia Lab
- **Laura Shakespeare**  
Analyst, Google
- Dr Andy MacKinlay  
Lead Engineer, Culture Amp

- Professor Karin Verspoor  
University of Melbourne
- Dr Eduardo Velloso  
University of Melbourne
16:10 - 16:25  **Words from an Artist: Ben Storch**  
Theatre 1

16:25 – 16:40  **Award Ceremony**  
Theatre 1

16:40 – 17:30  **IBM - Research Australia**  
Refreshments and Networking

17:30  Close

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**Poster Session**  
Basement Foyer

- **Tabinda Sarwar**  
  Predicting Functional Connectivity of Human Brain using Deep Learning

- **Prashan Madumal**  
  Explainable Reinforcement Learning

- **Yuxia Wang**  
  Clinical Semantic Textual Similarity

- **Xin Zhang**  
  Correlation Clustering in Multipass Streams with a Space Budget

- **Han Liu**  
  Tracing Disciplinary Knowledge Diffusion Through Topic Modelling

- **Brian Hur**  
  Using Natural Language Processing and VetCompass to understand antimicrobial usage patterns in Australia

- **Ebrahim Babaei**  
  Design of an Attentional State Aware System for Researchers

- **Muhammad Hilman**  
  Scientific Workflow as a Service Platform in The Clouds: A Multiple Workflows Scheduling Approach

- **Mona Alshardan**  
  Students Use of Internet Technologies for Interactions in Learning Practices: A Case Study from Saudi Higher Education

- **Abid Shah**  
  Enhancing Strategic Information Security Management in Organizations through Warfare Practices

- **Ehsan Abedin**  
  Towards a Credibility Analysis Model for Online Reviews
Thank You to our Sponsors and Supporters

We would also like to thank the Student Services and Amenities Fund