Lachlan Birdsey
Curriculum Vitae

PERSONAL DETAILS

Birth	April 6, 1988
Address	Aleksanterinkatu 48 B 34 Oulu 90120 Finland
Phone	+358 417 9747 00
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EDUCATION

PhD (Computer Science)   `2015-2019`
University of Adelaide

> Dissertation: "Modeling, Simulation, and Analysis of Complex Adaptive Systems" Unfinished.
> Supervisors: Dr. Claudia Szabo and Prof. Katrina Falkner

Bachelor of Computer Science (Honours)   `2010-2014`
University of Adelaide

> Dissertation: "Measuring and Visualizing Behavior in Complex Systems"
> Awarded First Class Honours. Supervised by Dr. Claudia Szabo.

RESEARCH EXPERIENCE

PostDoc Researcher   `July 2018 - present`
a

PhD Student   `Apr 2015 - Feburary 2019`
University of Adelaide

> Focused on studying a wide-range of complex adaptive systems. Developed a modeling language and analysis framework called CASL and CASTLE respectively. Developed new methods for detecting macro-scale properties.

Research Intern   `Jan-Apr 2015`
National University of Singapore

> Worked with the Computer Systems Research Group using agent-based models to study user behavior and emergent properties on social media. Supervisors: Dr. Claudia Szabo and Prof. Yong Meng Teo

TEACHING EXPERIENCE

Lecturer   `2014-2017`
University of Adelaide

> Tasks included presenting lectures, designing lecture materials and assignments, managing a number of support staff, exam authoring, and course administration duties. Courses involved with:

- Foundations of Computer Science S2 2014, S1 2015

- Introduction to Programming for Engineers S2 2015

- Introduction to Programming S1, S2 2016, S1 2017 (also co-course designer)

Tutor & Practical Demonstrator   2013-2014
University of Adelaide
    Tasks included assisting undergraduate students with queries and concerns, coordinating with other demonstrators, marking assignments, and delivering course material to small groups. Courses involved with:

- Algorithm Design and Data Structures S2 2013 (Demonstrator)

- Web And Database Computing S2 2014 (Demonstrator)

- Advanced Programming Paradigms S2 2014 (Tutor)

SCHOLARSHIPS/AWARDS

- University of Adelaide Divisional PhD Scholarship, 2015 - 2018

- Best Applied Paper Award for *Twitter Knows: Understanding The Emergence Of Topics In Social Networks*, Winter Simulation Conference, 2015

- ACM SIGSIM WSC Travel Grant, 2016

SKILLS

Languages	Java, C, Bash, Python, C#, Javascript, XText/Xtend
Presenting	Presented at multiple conferences, PhD colloquiums, guest lectures, and poster and demo sessions

CONFERENCE ORGANIZATION

- Social Media Chair for Self-Adaptive and Self-Organizing Systems Conference 2018

- Member of SIGSIM-PADS Reproducibility Committee 2018

- Reviewer for SIMUTOOLS 2015, TOMACS

REFERENCES

Available on Request

CONFERENCE PUBLICATIONS

- L. Birdsey, C. Szabo, K. Falkner: Identifying Self-Organization and Adaptability in Complex Adaptive Systems, *Proceedings of the 11th IEEE Self-Adaptive and Self-Organizing Systems Conference*, 2017, **Presenter**

- L. Birdsey, C. Szabo, K. Falkner: Large-scale complex adaptive systems using multi-agent modeling and simulation, *Proceedings of the Autonomous Agents and Multi-Agent Systems Conference*, 2017, **Presenter (Poster)**

- L. Birdsey: A Framework And Language For Complex Adaptive System Modeling And Simulation, *Autonomous Agents and Multi-Agent Systems Conference PhD Colloquium*, 2016, **Presenter**

- L. Birdsey, C. Szabo, K. Falkner: CASL: A Declarative Domain Specific Language For Modeling Complex Adaptive Systems, *Proceedings of the Winter Simulation Conference*, 2016, **Presenter**

- L. Birdsey: A Framework And Language For Complex Adaptive System Modeling And Simulation, *Winter Simulation Conference PhD Colloquium*, 2016, **Presenter**

- L. Birdsey, C. Szabo, Y.M. Teo: Twitter Knows: Understanding The Emergence Of Topics In Social Networks, *Proceedings of the Winter Simulation Conference*, 2015, **Presenter**

- L. Birdsey, C. Szabo: An Architecture for Identifying Emergent Behavior in Multi-Agent Systems, *Proceedings of the Autonomous Agents and Multi-Agent Systems Conference*, 2014, **Presenter (Poster)**

BOOK CHAPTERS

- C. Szabo and L. Birdsey: Toward the Automated Detection of Emergent Behavior,*Emergent Behavior in Complex Systems Engineering: A Modeling and Simulation Approach*, Wiley, 2018, 229-263

- C. Szabo, L. Birdsey: Validating Emergent Behavior in Complex Systems, *Advances in Modeling and Simulation*, Springer, Cham, 2017. 47-62