# Yue Jiang

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Website: https://yuejiang-nj.github.io/ LinkedIn: www.linkedin.com/in/yuejianguoft Google Scholar: shorturl.at/zDN56

## Education

2022 - 2025 **Ph.D.** in **Intelligent Systems** 

(Expected) Aalto University & Finnish Center for Artificial Intelligence (FCAI), Finland

Supervisors: Prof. Antti Oulasvirta and Prof. Vikas Garg

2018 - 2020 Master of Science in Computer Graphics

University of Maryland, College Park, USA

Supervisor: Prof. Matthias Zwicker

2014 - 2017 Honors Bachelor of Science in Computer Science Specialist and Mathematics Major (High Distinction) [Degree granted in 2018]

University of Toronto, Canada

Supervisor: Prof. Gerald Penn

# **Full Paper Publications**

- [10] **Yue Jiang**, Luis A. Leiva, Hamed Rezazadegan Tavakoli, Paul R. B. Houssel, Julia Kylmala, Antti Oulasvirta. UEyes: Understanding Visual Saliency across User Interface Types. *In Proceedings of the 41st Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2023*).
  - [9] **Yue Jiang**, Marc Habermann, Vladislav Golyanik, Christian Theobalt. HiFECap: High-Fidelity and Expressive Capture of Human Performances from Monocular Videos. *In Proceedings of the 2022 British Machine Vision Virtual Conference* (*BMVC2022*).
  - [8] Jiao Sun, Tongshuang Wu, **Yue Jiang**, Ronil Awalegaonkar, Xi Victoria Lin, Diyi Yang. Pretty Princess vs. Successful Leader: Gender Roles in Greeting Card Messages. *In Proceedings of the 40th Annual SIGCHI Conference on Human Factors in Computing Systems* (**CHI2022 Best Paper Honorable Mention**).
  - [7] Yue Jiang, Wolfgang Stuerzlinger, Christof Lutteroth. ReverseORC: Reverse Engineering of Resizable User Interface Layouts with OR-Constraints. In Proceedings of the 39th Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2021).
  - [6] Karan Ahuja, **Yue Jiang**, Mayank Goel, Chris Harrison. Vid2Doppler: Synthesizing Doppler Radar Data from Videos for Training Privacy-Preserving Activity Recognition. *In Proceedings of the 39th Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2021)*.
  - [5] Zhicong Lu, **Yue Jiang**, Chenxinran Elise Shen, Margaret C Jack, Daniel Wigdor, Mor Naaman. Study of Perceptions of COVID-19 Misinformation in China. *In Proceedings of the 24th ACM Conference on Computer-Supported Cooperative Work and Social Computing* (**CSCW2021**).
  - [4] Yue Jiang, Dantong Ji, Zhizhong Han, Matthias Zwicker. SDFDiff: Differentiable Rendering of Signed Distance Fields for 3D Shape Optimization. Conference on Computer Vision and Pattern Recognition (CVPR 2020 Oral (Top 5%)).
  - [3] **Yue Jiang**, Wolfgang Stuerzlinger, Matthias Zwicker, Christof Lutteroth. ORCSolver: An Efficient Solver for Adaptive GUI Layout with OR-Constraints. *In Proceedings of the 38th Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2020)*.

- [2] Zhicong Lu, **Yue Jiang**, Cheng Lu, Mor Naaman, Daniel Wigdor. The Government's Dividend: Complex Perceptions of Social Media Misinformation in China. *In Proceedings of the 38th Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2020)*.
- [1] Yue Jiang, Ruofei Du, Christof Lutteroth, Wolfgang Stuerzlinger. ORCLayout: Adaptive GUI Layout with OR-Constraints. In Proceedings of the 37th Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2019).

# Workshop Organization

- [4] Yue Jiang, Yuwen Lu, Dr. Tiffany Knearem, Clara E Kliman-Silver, Christof Lutteroth, Toby Jia-Jun Li, Jeffrey Nichols, Wolfgang Stuerzlinger. Computational Methodologies for Understanding, Automating, and Evaluating User Interfaces. In Proceedings of the 41st Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2024).
- [3] Yue Jiang, Yuwen Lu, Christof Lutteroth, Toby Jia-Jun Li, Jeffrey Nichols, Wolfgang Stuerzlinger. The Future of Computational Approaches for Understanding and Adapting User Interfaces. In Proceedings of the 41st Annual SIGCHI Conference on Human Factors in Computing Systems (CH12023).
- [2] Yao Wang, Ludwig Sidenmark, Teresa Hirzle, **Yue Jiang**, Andreas Bulling. 8th International Workshop on Pervasive Eye Tracking and Mobile Eye-based Interaction (PETMEI). *ACM Symposium of Eye Tracking Research and Applications* (*ETRA2023*).
- [1] Yue Jiang\*, Yuwen Lu\*, Jeffrey Nichols, Wolfgang Stuerzlinger, Chun Yu, Christof Lutteroth, Yang Li, Ranjitha Kumar, Toby Jia-Jun Li. Computational Approaches for Understanding, Generating, and Adapting User Interfaces. In Proceedings of the 40th Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2022).

# Workshop Papers, Demos, and Other Writings

- [6] Yue Jiang. Computational Representations for Graphical User Interfaces. In Proceedings of the 42st Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2024 Doctoral Consortium).
- [5] Garreth Tigwell, Yue Jiang. Disability Semantics for Academic Writing. AccessSIGCHI.
- [4] Yue Jiang, Luis A. Leiva, Hamed Rezazadegan Tavakoli, Paul R. B. Houssel, Julia Kylmala, Antti Oulasvirta. UEyes: An Eye-Tracking Dataset across User Interface Types. In Proceedings of the 41st Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2023 Workshop Paper).
- [3] Lena Hegemann, Yue Jiang, Joon-Gi Shin, Yi-Chi Liao, Markku Laine, Antti Oulasvirta. Computational Assistance for User Interface Design: Smarter Generation and Evaluation of Design Ideas. In Proceedings of the 41st Annual SIGCHI Conference on Human Factors in Computing Systems (CHI2023 Interactivity).
- [2] **Yue Jiang**, Vikas Garg, Antti Oulasvirta. Designer-in-the-Loop Layout Autocompletion with Graph Neural Networks. *Finnish Center for Artificial Intelligence AI Day, 2022*
- [1] Yue Jiang. DocShop: Bringing Document Content to Life. Adobe Research Project Expo, 2020

## Patent

[1] **Yue Jiang**, Vlad Morariu, Christopher Tensmeyer, Rajiv Jain, Varun Manjunatha. Responsive Document Using OR Constraint Optimization (Under Review)

# Academic Service (Program Committee / Session Chair)

- 2024 Associate Chair (AC), CHI2024 Late-Breaking Work (SIGCHI Short Paper)
- 2024 Accessibility Co-Chair, CHI2024

- 2023 Accessibility Co-Chair, CHI2023
- 2023 **Program Committee Member**, AI and HCI Workshop, ICML2023
- 2023 **Session Chair**, Human AI Collaboration, CHI2023
- 2023 Session Chair, Text Input and Textual Communication, CHI2023
- 2023 Workshop Juror, CHI2023 Workshop
- 2023 Associate Chair (AC), CHI2023 Late-Breaking Work (SIGCHI Short Paper)
- 2023 Program Committee Member, IUI2023
- 2023 Co-Organizer & Poster Chair, HelsinCHI Symposium 2023
- 2023 Organizing Committee Member & Keynote Chair, ELLIS Doctoral Symposium 2023
- 2023 Ph.D. Admission Committee Member, Finnish AI Center, Finland
- 2022 Associate Chair (AC), CHI2022 Late Breaking Work (SIGCHI Short Paper)
- 2022 **Co-Host**, ACM SIGCHI Conference on Designing Interactive Systems (DIS2022) Ask-Me-Anything Session
- 2021 Session Chair, Interaction and Touch Session, MobileHCI
- 2021 Now ACM SIGGRAPH Research Development Committee DEI and Accessibility
- 2021 Now Co-Organizer Seminar of HCI for Chinese HCI Researchers around the World
  - 2021 Ph.D. & Master Admission Committee Member, University of Maryland, College Park, USA
  - 2021 **Program Committee Member (PC)**, ACM IUI2021 Demos and Posters
  - 2021 Associate Chair (AC), CHI2021 Late-Breaking Work (SIGCHI Short Paper)
  - 2020 Ph.D. & Master Admission Committee Member, University of Maryland, College Park, USA
  - 2020 Associate Chair (AC), CHI2020 Late-Breaking Work (SIGCHI Short Paper)
  - 2019 Ph.D. & Master Admission Committee Member, University of Maryland, College Park, USA
  - Nov 2019 Graduate Mentor for Technica Research Bootcamp, USA
- March 2019 Ph.D Student Panel Leader for Prospective Students, University of Maryland, USA
  - Nov 2018 Graduate Mentor for Technica Research Bootcamp, USA
    - 2016 Department of Mathematics Ambassador, University of Toronto, Canada

## Academic Service and Awards (Reviewed 107 submissions)

- 2022 Special Recognitions for Outstanding Reviews for UIST2022
- 2021 Special Recognitions for Outstanding Reviews for CHI2021
- 2020 2024 SIGCHI Conference on Human Factors in Computing Systems (CHI)
- 2020 2023 ACM User Interface Software and Technology Symposium (UIST)
- 2022 2023 ACM Transactions on Computer-Human Interaction (TOCHI)
- 2019 2023 SIGCHI Late Breaking Work (CHI LBW)
- 2022 2023 SIGCHI Workshop paper
  - 2023 SIGCHI Workshop proposal
  - 2023 ICML Workshop paper
  - 2022 ACM SIGGRAPH
  - 2022 ACM SIGGRAPH Asia
  - 2022 International Symposium on Mixed and Augmented Reality (ISMAR)
  - 2022 ACM Multimedia (MM)
  - 2021 Computers & Graphics (C&C)
  - 2020 Australian Computer-Human Interaction Conference (OzCHI)
  - 2020 ACM International Conference on Interactive Surfaces and Spaces (ISS)
  - 2020 ACM Symposium on Virtual Reality Software and Technology (VRST)

2020 IEEE Virtual Reality Conference (IEEE VR) 2019 IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2019 Pacific Graphics (PG) 2019 IFIP Conference on Human-Computer Interaction (INTERACT) 2019 Graphics Interface (GI) Grants and Honors 2023 Meta Research PhD Fellowship 2022 Google Europe Students with Disabilities Scholarship (\$7,000) 2023 - 2024 Finnish Center for Artificial Intelligence (FCAI) Travel Grant (22,000 Euros 2022 Finnish Center for Artificial Intelligence (FCAI) Grants 2022 Best Paper Honorable Mention, CHI2022 2022 Special Recognitions for Outstanding Reviews for UIST2022 2022 ACM SIGCHI Gary Marsden Travel Award (In-person) 2021 Special Recognitions for Outstanding Reviews for CHI2021 2021 ACM SIGCHI Gary Marsden Travel Award (Virtual) Sept. 2020 Adobe Research Gift Grant for Document Intelligent Research (\$10,000) May 2020 Adobe Research Gift Grant for Document Intelligent Research (\$10,000) 2019 Jacob K. Goldhaber Travel Grant Award 2019 Department of Computer Science Travel Grant Award, University of Maryland 2018 - 2020 Graduate Dean's Scholarship, University of Maryland, College Park (\$10,000) Sept. 2018 Maryland Center For Women In Computing (MCWIC) Grace Hopper Scholarship 2014 - 2018 Dean's List Scholar x 4, University of Toronto 2014 - 2016 New College Council In-Course Scholarship x 2, University of Toronto 2014 - 2015 Award for Outstanding Achievement in Mathematical Expression and Reasoning for Computer Science, University of Toronto 2012 National Olympiad in Biology in Provinces, First Prize 2011 China Adolescents Science and Technology Innovation Contest, First Prize Professional Experience and Internship Jan 2024 Visiting PhD Student - June 2024 Carnegie Mellon University, USA Supervisor: Prof. Jeffery Bigham June 2023 Research Intern - Sept 2023 Apple, USA Supervisor: Dr. Jeffery Nichols Oct 2020 Research Candidate - Apr 2022 Max Planck Institute for Informatics (MPII), Germany Supervisor: Prof. Christian Theobalt

- Developed a system for high-fidelity and expressive capture of human performances from

June 2020 Research Intern

- Aug 2020 **Carnegie Mellon University**, Pennsylvania, USA

monocular videos (Published at BMVC2022).

Supervisor: Prof. Chris Harrison

- Developed a privacy-preserving activity recognition system based on Doppler radar data (CHI2021).

Mar 2020 Research Intern

- Aug 2020 Adobe Research, College Park, Maryland, USA

Supervisor: Dr. Vlad Morariu

- Document Intelligence Lab.
- Created a new document layout with dynamic viewing. (A paper in submission)
- June 2019 Visiting Research Student
- Aug 2019 **Shenzhen University**, Shenzhen, China

Supervisor: Prof. Hui Huang & Prof. Daniel Cohen-Or

- Worked on differentiable sketching methods.

May 2017 Software Engineer

- April 2018 Intel Corporation, San Jose, California, USA
  - Programmable Intellectual Property Engineering (PIPE) Infrastructure Group.
  - Developed software tools for all the FPGA IP groups at Intel.
  - May 2016 Research Assistant
- Apr 2017 University of Toronto, Toronto, Canada

Supervisor: Prof. Gerald Penn

- Worked on vector addition tree automata and reachability problem for vector addition systems
- Explored the correctness of an algorithm about Lambek Categorial Grammar for Practical Parsing.

#### **Invited Talks**

- June 28, 2023 **Computational Approaches for UI Understanding**, Google, USA (Hosted by Tiffany Knearem)
- Apr 13, 2023 **UEyes: Understanding Visual Saliency across User Interface Types**, HelsinCHI Symposium, Finland (Hosted by Antti Oulasvirta)
- Apr 13, 2023 Demo: Computational Assistance for User Interface Design: Smarter Generation and Evaluation of Design Ideas, HelsinCHI Symposium, Finland (Hosted by Antti Oulasvirta)
- Apr 12, 2023 **Computational Approaches for User Interfaces**, City University of Hong Kong, China (Hosted by Zhicong Lu)
- Apr 12, 2023 **UEyes: Understanding Visual Saliency across User Interface Types**, CHI Lux Seminar, Luxembourg (Hosted by Luis Leiva)
- Aug 24, 2022 **Computational Design Optimization for Adaptive User Interfaces**, DELTA Summer Workshop 2022, Finland (Hosted by Jari Nurmi)
  - Apr 8, 2022 **Adaptive User Interfaces**, Hasso Plattner Institute, Germany (Hosted by Ran Zhang & Patrick Paudisch)
- Mar 17, 2022 Adaptive User Interfaces, University of Luxembourg, Luxembourg (Hosted by Luis Leiva)
  - Dec 7, 2021 **Adaptive User Interfaces and 3D Reconstruction**, ETH Zurich, Switzerland (Hosted by Christian Holz & Otmar Hilliges)
- Sept 27, 2021 Adaptive User Interface, Seminar of HCI for Chinese HCI Researchers
  - Dec 2, 2020 Adaptive GUI Layout, DGP HCI Session, University of Toronto, Canada (Hosted by DGP Lab)
- Sept 4, 2020 **Responsive Document Using OR-Constraint Optimization**, Document Intelligence Lab Talk, Adobe Research, USA (Hosted by Vlad Morariu)

- Aug 18, 2020 **High-Speed, High-Accuracy, Low-Latency Touch Tracking**, Apple Annual Showcase for FIGLab, Apple & CMU, USA (Hosted by Chris Harrison)
- Aug 18, 2020 **Doppler Radar for Activity Recognition**, Apple Annual Showcase for FIGLab, Apple & CMU, USA (Hosted by Chris Harrison)
- July 31, 2020 **High-Speed, High-Accuracy, Low-Latency Touch Tracking**, FIGLab Research Review Presentation, Apple & CMU, USA (Hosted by Chris Harrison)
- July 31, 2020 **Doppler Radar for Activity Recognition**, FIGLab Research Review Presentation, Apple & CMU, USA (Hosted by Chris Harrison)
- July 14, 2020 **Document Layout with OR-Constraints**, Graphics Intelligence Lab Talk, Adobe Research, USA (Hosted by Paul Asente)
- June 27,2020 SDFDiff: Differentiable Rendering of Signed Distance Fields for 3D Shape Optimization, DeeCamp AI Training Camp, AI Institute of Sinovation Ventures, China (Hosted by Ran Zhang (IST Austria))
- May 29, 2020 **ORCSolver: An Efficient Solver for Adaptive GUI Layout with OR-Constraints**, German CHI Week, German HCI, Germany (Hosted by Teresa Hirzle & Christina Schnegass)
- May 20, 2020 **ORCSolver: An Efficient Solver for Adaptive GUI Layout with OR-Constraints**, BathCHI 2020 Seminar, University of Bath, UK (Hosted by Christof Lutteroth)
  - Dec 3, 2019 **ORC Layout: Adaptive GUI Layout with OR-Constraints**, Document Intelligence Lab Talk, Adobe Research, USA (Hosted by Vlad Morariu & Tong Sun)
- July 11, 2019 **ORC Layout: Adaptive GUI Layout with OR-Constraints**, Visual Computing Summer School 2019, Shenzhen University, China (Hosted by Hui Huang)
- May 15, 2019 **Signed Distance Function Based Differentiable Rendering**, Capital Graphics 2019, George Mason University, Arlington, VA, USA (Hosted by Yotam Gingold)
- May 2, 2019 **ORC Layout: Adaptive GUI Layout with OR-Constraints**, UMD HCI Lab BBL Talk, University of Maryland, USA
- April 4, 2019 **ORC Layout: Adaptive GUI Layout with OR-Constraints**, Human-Computer Interaction Lab 36th Annual Symposium, USA (Hosted by Niklas Elmqvist)
- April 1, 2019 **ORC Layout: Adaptive GUI Layout with OR-Constraints**, UMD HCI Lab SIGCHI Paper Talk Session, University of Maryland, USA (Hosted by Hernisa Kacorri)
- Jun 21, 2018 **Neural Programmer Interpreter**, Knowledge Representation and Reasoning Talk Session, University of Toronto, Canada (Hosted by Sheila McIlraith)
- Nov 8, 2016 **Vector Addition Systems Reachability Problem**, Mathematical Linguistics Talk Session, University of Toronto, Canada (Hosted by Gerald Penn)
- Oct 25, 2016 **Supertagging: A Non-Statistical Parsing-Based Approach**, Mathematical Linguistics Talk Session, University of Toronto, Canada (Hosted by Gerald Penn)
- Oct 3, 2016 **Reachability Problems for Vector Addition Systems**, University of Toronto Undergraduate Computer Theory Talk Session, University of Toronto, Canada
- July 20, 2016 Reachability Problems and Vector Addition Tree Automata, Undergraduate Summer Research Program (UGSRP) Talk, University of Toronto, Canada

## Teaching Experience

- May 2023 Guest Lecturer & Exam Monitor Topic: Visual Perception, Human Factors Engineering
  Aalto University
  Instructor: Prof. Antti Oulasvirta
- Jan 2023 Research Project Mentor Research Project in Human-Computer Interaction
- May 2023 Aalto University
   Instructor: Prof. Antti Oulasvirta

Nov 2022	Guest Lecturer - Topic: Visual Saliency, Computational Design and Interaction
	Aalto University
	Instructor: Prof. Antti Oulasvirta
May 2022	Exam Monitor - Human Factors Engineering
	Aalto University
	Instructor: Prof. Antti Oulasvirta
Oct 2021	Co-Instructor - Seminar: Computing the User and their interface
- Feb 2022	Saarland University
	Instructors: Prof. Anna Maria Feit, Yue Jiang, Kevin Baum, Markus Langer
Apr 2021	Co-Supervisor - Seminar: Computer Vision and Machine Learning for Computer Graphics
– Aug 2021	Max Planck Institute for Informatics
	Instructors: Prof. Christian Theobalt, Dr. Mohamed Elgharib, Dr. Vladislav Golyanik
Jan 2020	Teaching Assistant - CMSC740 Advanced Computer Graphics
- May 2020	Department of Computer Science, University of Maryland
•	Instructor: Prof. Matthias Zwicker
Aug 2019	Teaching Assistant - CMSC427 Computer Graphics
-	Department of Computer Science, University of Maryland
	Instructor: Prof. Matthias Zwicker
Aug 2018	Teaching Assistant - CMSC427 Computer Graphics
-	Department of Computer Science, University of Maryland
	Instructor: Prof. Matthias Zwicker
Jan 2017	Teaching Assistant - CSC263 Data Structures and Analysis
– Apr 2017	Department of Computer Science, University of Toronto
	Instructors: Prof. Sam Toueg and Prof. François Pitt
Sept 2016	Teaching Assistant - CSC263 Data Structures and Analysis
– Dec 2016	Department of Computer Science, University of Toronto
	Instructor: Prof. David Liu
Jan 2016	Teaching Assistant - CSC165 Mathematical Expression and Reasoning for computer Science
– Apr 2016	Department of Computer Science, University of Toronto
	Instructors: Dr. Ilir Dema and Dr. Abdallah Farraj
Sept 2015	Peer Tutor - MAT223/224 Linear Algebra I & II
– Apr 2016	Department of Mathematics, University of Toronto
Sept 2015	Peer Tutor - MAT137 Calculus
– Apr 2016	Department of Mathematics, University of Toronto
2014	Teaching Volunteer - High School Mathematics and Physics
2011	Qinyuan, Shanxi Province, China
	Mentoring Experience
	Students Mentored:
2023	Ananya Dutta (Undergraduate student, Manipal University Jaipur)
	Topic: Scanpath-based UI Optimization

2023 Busra Asan (Master student, Istanbul Technical University)

	lopic: Color Optimization for Uls
2023	Changkong Zhou (Master student, Aalto University)
	Topic: UI Autocompletion
2023	Henrik Kauppi (Master student, Aalto University)
	Topic: Scanpath Dataset for UI Transitions
2023	Lotta Merisaari (Master student, Aalto University)
	Topic: Scanpath Dataset for UI Transitions
2023	Yao Zhang (Master student, Aalto University)
	Topic: UI Embedding
2023	Elham Sadri (Master student, Simon Fraser University)
	Topic: Design and Evaluation of a New Editor for Responsive Graphical User Interfaces
2021	Kartik Teotia (Master student, Max Planck Institute) [Seminar Supervisor]
	Topic: NeRF and Signed Distance Field (SDF)
2020	Duotun Wang (Master student, University of Maryland)
	Topic: Signed Distance Field-Based Differentiable Sketching
2018, 2019	Graduate Mentor for Technica (All-Women Hackathon)
2018 - 2020	Graduate Mentor at Maryland Center For Women In Computing (MCWIC) Peer mentoring
	Press Coverage
May 11, 2021	CMU researchers show potential of privacy-preserving activity tracking using radar — TechCrunch
May 8, 2019	Eases the pain of multiple UI designs - IT Works Solution
May 7, 2019	New open source software eases the pain of multiple UI designs - Phys.org
May 7, 2019	New software eases the pain of multiple UI designs - University of Bath, UK
	Voluntary Experience
May 2022	Student Volunteer for the SIGCHI Conference on Human Factors in Computing Systems (CHI2022), New Orleans, USA.
Oct 2021	Student Volunteer for the ACM Symposium on User Interface Software and Technology (UIST2021) (Virtual).
Sept 2021	Student Volunteer for the ACM International Conference on Mobile Human-Computer Interaction (MobileHCI2021), Toulouse, France (Virtual).
Nov 2020	Student Volunteer for the ACM Interactive Surfaces and Spaces (ISS2020), Lisbon, Portugal (Virtual).
April 2019	Student Volunteer for <b>Human-Computer Interaction Lab 36th Annual Symposium</b> , Maryland, USA

## References

May

**Prof. Antti Oulasvirta** – Professor, Aalto University, Finland

**Prof. Wolfgang Stuerzlinger** – Professor, Simon Fraser University, Canada

May 2016 Volunteer for **Doors Open Toronto 2016**, City Cultural Events, Toronto, Canada

**Prof. Christof Lutteroth** – Associate Professor, University of Bath, UK