

## Curriculum Vitae - Chu Luo - Feb 09, 2021

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Nationality: Chinese  
Age: 29

### RESEARCH INTEREST

Chu strives for new discoveries in computer science and mathematics with his unwavering devotion. Currently, he is interested in the following areas:

- Ubiquitous Computing: Internet of Things, Mobile Sensing Systems, Embedded Computing
- Software Engineering: Mobile App Testing, Verification and Simulation
- Multimedia: Mobile Video/Audio-Based Apps
- Artificial Intelligence: Context-Aware Techniques, Mobile App Big Data Analysis
- Discrete Mathematics: Combinatorics, Graph Theory, Number Theory

### WORK EXPERIENCE

- |                              |                                    |  |
|------------------------------|------------------------------------|--|
| <b>Feb. 2020 - Feb. 2021</b> | <b>Research Fellow</b>             | Nanyang Technological University<br>(School of Computer Science and Engineering)   |
| <b>Mar. 2018 - Mar. 2019</b> | <b>Research Assistant</b> at CIS   | The University of Melbourne<br>(School of Computing & Information Systems)<br>Project: Advanced Models of Online Metalearning in Highly Dynamic Scenarios (sponsored by Samsung) |
| <b>Dec. 2018 - Jan. 2019</b> | <b>Visiting Research Assistant</b> | Tsinghua University<br>(Department of Electronic Engineering)<br>Project: Inferring IoT Device Types by Mining Network Flows (with Dr. Yong Li)                                  |
| <b>Nov. 2017 - Feb. 2018</b> | <b>Full-Time Intern</b> at OTC     | Intel, Shanghai, China<br>(Open Source Technology Centre)<br>Project: SoC Thermal Management Using Reinforcement Learning  |

## EDUCATION

- Feb. 2017 - Sep. 2019**    **Ph. D.** in Computer Science    The University of Melbourne  
(Transferred In, **Testamur Conferred**)  
Supervisors: Vassilis Kostakos, Eduardo Velloso, Jorge Goncalves
- Apr. 2015 - Sep. 2016**    **Ph. D.** in Computer Science    University of Oulu  
(Transferred Out)  
Supervisors: Vassilis Kostakos, Jorge Goncalves
- Sep. 2013 - Nov. 2014**    **M. Sc.** in Software Engineering    University of Southampton  
(with **Distinction, Testamur Conferred**)
- Sep. 2009 - Jul. 2013**    **B. Eng.** in Software Engineering    Shanghai Jiao Tong University  
(**Testamur Conferred**)

## REFEREES

Prof. Vassilis Kostakos, Email: [vassilis.kostakos@unimelb.edu.au](mailto:vassilis.kostakos@unimelb.edu.au)

Dr. Jorge Goncalves, Email: [jorge.goncalves@unimelb.edu.au](mailto:jorge.goncalves@unimelb.edu.au)

Dr. Eduardo Velloso, Email: [eduardo.velloso@unimelb.edu.au](mailto:eduardo.velloso@unimelb.edu.au)

## SELECTED PUBLICATIONS

- [8] **Chu Luo**, Jorge Goncalves, Eduardo Velloso, and Vassilis Kostakos. 2020. A Survey of Context Simulation for Testing Mobile Context-Aware Applications. *ACM Computing Surveys (CSUR)*, 53, 1, Article 21 (February 2020), 39 pages. URL: <https://doi.org/10.1145/3372788>
- [7] **Chu Luo**, Zewen Xu, Ruining Dong, Jorge Goncalves, Eduardo Velloso, and Vassilis Kostakos. 2019. CamTest: A laboratory testbed for camera-based mobile sensing applications. *Pervasive and Mobile Computing*. URL: <https://doi.org/10.1016/j.pmcj.2019.04.001>
- [6] **Chu Luo** et al. 2019. Energy-Efficient Prediction of Smartphone Unlocking. *Personal and Ubiquitous Computing*. 23, 1, 159-177. URL: <https://doi.org/10.1007/s00779-018-01190-0>
- [5] **Chu Luo**, Miikka Kuutila, Simon Klakegg, Denzil Ferreira, Huber Flores, Jorge Goncalves, Mika Mäntylä and Vassilis Kostakos. 2017. TestAWARE: A Laboratory-Oriented Testing Tool for Mobile Context-Aware Applications. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*. 1, 3, Article 80 (September 2017), 29 pages, Presented at UbiComp 2017. URL: <https://doi.org/10.1145/3130945>
- [4] **Chu Luo**, Angelos Fylakis, Juha Partala, Simon Klakegg, Jorge Goncalves, Kaitai Liang, Tapio Seppänen and Vassilis Kostakos. 2016. A Data Hiding Approach for Sensitive Smartphone Data. *Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp '16)*, 557-568. URL: <http://dx.doi.org/10.1145/2971648.2971686>
- [3] Niels van Berkel, **Chu Luo**, Theodoros Anagnostopoulos, Denzil Ferreira, Jorge Goncalves, Simo Hosio and Vassilis Kostakos. 2016. A Systematic Assessment of Smartphone Usage Gaps. *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16)*, 4711-4721. URL: <http://dx.doi.org/10.1145/2858036.2858348>

[2] Jiyou Li and **Chu Luo**. 2016. The simplified weighted sum function and its average sensitivity. *Information Processing Letters* 116, 5, 331-336. URL: <http://dx.doi.org/10.1016/j.ipl.2016.01.002>

[1] **Chu Luo**. 2014. Video Summarization for Object Tracking in the Internet of Things. *Next Generation Mobile Apps, Services and Technologies (NGMAST), 8th International Conference on*. IEEE. URL: <http://dx.doi.org/10.1109/NGMAST.2014.20>

## SELECTED PREPRINT

[1] **Chu Luo** and Yuehui Zhang. 2020. Arranged Forests: Enhancing Random Forests by Reducing Feature Overlap between Trees. (Submitted to *Journal of Machine Learning Research*)  
URL: <http://dx.doi.org/10.13140/RG.2.2.19763.58403>

## TUTORING

- University of Melbourne
  - 2018 Jul. - Mobile Computing Systems Programming (COMP90018)
  - 2017 Jul. - Graphics and Interaction (COMP30019)
  - 2017 Jul. - Mobile Computing Systems Programming (COMP90018)
- ACM Summer School
  - 2017 Jul. - ACM Summer School on Crowdsourcing, Suzhou
- University of Oulu
  - 2016 Jan. - Mobile and Social Computing (521147S)

## INVITED TALKS

- 2018 Dec. - Tsinghua University - "Chu Luo Research"
- 2016 Jul. - Ningxia Normal University - "Ubiquitous Computing in Northern Finland"

## INVITED LECTURES

- 2017 Nov. - Xi'an Jiaotong-Liverpool University - "Connecting Mobile Big Data: Developing Mobile Apps with Azure"
- 2016 Dec. - Hangzhou Polytechnic - "Ubiquitous Computing in Our Pocket: Smartphone Sensing Technology"

## SUPERVISION

- MSc Students
  - Yuan Wang (2018 May.- Nov.)
  - Yitong Chen (2017 Aug.- 2018 Nov.)

## MAJOR PROGRAMMING SKILLS

C/C++, L<sup>A</sup>T<sub>E</sub>X, Java, JavaScript, Promela, Python, R

## **LANGUAGES**

Mandarin Chinese: Native Speaker

English: IELTS (2014) Overall 7.0, Listening 8.0, Reading 7.0, Writing 7.0, Speaking 6.5

Finnish: Level A1.1

## **ACADEMIC EVENT SERVICE**

- Publicity Chair
  - PerCrowd 2018 (1st International Workshop on Context-Awareness for Multi-Device Pervasive and Mobile Computing)
- Program Committee
  - IEEE ISC2 2020 (International Smart Cities Conference)
  - PerCrowd 2019
  - OzCHI 2019
  - OzCHI 2018 (Australian Conference on Computer-Human Interaction)
- Student Volunteer
  - OzCHI 2018

## **GRANTS, SCHOLARSHIPS AND AWARDS**

- 2020 - ACM Complimentary Membership for being an author of ACM Computing Surveys (CSUR)
- 2018 - Travel Grant, School of Computing and Information Systems, University of Melbourne
- 2017 - Google PhD Travel Scholarship
- 2017 - Travel Grant, School of Engineering, University of Melbourne
- 2017 - Melbourne Research Scholarship (Faculty Scholarship), University of Melbourne

## **REVIEWING**

IEEE Transactions on Mobile Computing, ACM IMWUT, Future Generation Computer Systems, CSCW, Microprocessors and Microsystems, NordiCHI, OzCHI, International Journal of Human-Computer Studies, WWW, UbiComp, DIS, CHI, AMI, PerCom, IEEE ISC2.

## **CONFERENCES ATTENDED**

[8] 30th Australian Conference on Computer-Human Interaction (OzCHI 2018), Melbourne, VIC, Australia, December 04-07, 2018.

[7] ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2017), Maui, Hawaii, USA, September 11-15, 2017.

[6] ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2016), Heidelberg, Germany, September 12-16, 2016.

[5] ACM SIGCHI Conference on Human Factors in Computing Systems (CHI), San Jose, USA, May 07-12, 2016.

[4] ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2015), Osaka, Japan, September 07-11, 2015.

[3] 17th International Conference on Human-Computer Interaction with Mobile Devices and Services, Copenhagen, Denmark, August 24-27, 2015.

[2] Algebraic Combinatorics Workshop at University of Science and Technology of China, Hefei, China, November 26-29, 2014.

[1] 8th International Conference on Next Generation Mobile Apps, Services and Technologies (NG-MAST2014), Oxford, UK, September 10-12, 2014.

## **MEDIA MENTIONS**

Pursuit: Using AI to make your smartphone smarter (2019) reposted in Futurity: Research News, Phys.Org, CIO Australia

ACM SIGCHI: Summer School On Crowdsourcing At XJTU (2018)

The Economist: Buddy, can you spare a Watt? (30/4/2016)

## **ERDŐS NUMBER**

4

Jiyou Li and **Chu Luo**. 2016. The simplified weighted sum function and its average sensitivity. *Information Processing Letters* 116, 5, 331-336. URL: <http://dx.doi.org/10.1016/j.ipl.2016.01.002>

Jiyou Li, David B. Chandler and Qing Xiang. 2010. Permutation polynomials of degree 6 or 7 over finite fields of characteristic 2. *Finite Fields and Their Applications* 16, 6, 406-419.

Richard M. Wilson and Qing Xiang. 1997. Constructions of Hadamard difference sets. *Journal of Combinatorial Theory, Series A* 77, 1, 148-160.

Paul Erdős, Joel C. Fowler, Vera T. Sós and Richard M. Wilson. 1985. On 2-designs. *Journal of Combinatorial Theory, Series A* 38, 2, 131-142.