**Curriculum Vitae ♡ Chu Luo ♡ April 27, 2016**

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Nationality: Chinese
Birthdate: December 30, 1991

## RESEARCH INTEREST

I strive for new discoveries in computer science and mathematics with my unwavering devotion. Currently, I am interested in the following areas:

- Ubiquitous Computing: Smartphone Sensing Systems, Mobile Applications
- Artificial Intelligence: Context-Aware Techniques
- Discrete Mathematics (only in leisure time): Combinatorics, Graph Theory, Number Theory

## EDUCATION

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|---|---|---|
| **Apr. 2015 - Now** | **Ph. D.** in Computer Science | University of Oulu |
| **Sep. 2013 - Nov. 2014** | **M. Sc.** in Software Engineering with **Distinction** | University of Southampton |
| **Sep. 2009 - Jul. 2013** | **B. Eng.** in Software Engineering | Shanghai Jiao Tong University |

## PUBLICATION

[8] 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 34th Annual ACM Conference on Human Factors in Computing Systems (CHI)*. (Accepted).

[7] Simo Hosio, Denzil Ferreira, Jorge Goncalves, Niels van Berkel, Chu Luo, Muzamil Ahmed, Huber Flores and Vassilis Kostakos. 2016. Monetary Assessment of Battery Life on Smartphones. *Proceedings of the 34th Annual ACM Conference on Human Factors in Computing Systems (CHI)*. (Accepted).

[6] 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

[5] Niels van Berkel, Chu Luo, Denzil Ferreira, Jorge Goncalves and Vassilis Kostakos. 2015. The Curse of Quantified-Self: An Endless Quest for Answers. *Adjunct Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp15)*, 973-978. URL: http://dx.doi.org/10.1145/2800835.2800946

[4] 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

## PREPRINT

[3] Chu Luo. 2015. A Mathematical Theorem about Northern Europe and Its Proof. URL: http://dx.doi.org/10.13140/RG.2.1.2026.3121

[2] Chu Luo. 2015. Solving a Mathematical Problem in Square War: a Go-like Board Game. arXiv Preprint. URL: http://arxiv.org/abs/1509.09240

[1] Jiyou Li, Chu Luo and Zeying Xu. 2015. The Minimal and Maximal Sensitivity of the Simplified Weighted Sum Function. arXiv Preprint. URL: http://arxiv.org/abs/1505.00887

## RESEARCH EXPERIENCE

Doctoral Student, Supervised by Prof. Vassilis Kostakos
Center for Ubiquitous Computing, University of Oulu, Finland.
Apr. 2015 - Now

- The research will focus on the development of mobile sensing techniques to capture and model human behavior. The work is expected to extend the AWARE framework developed by our group (http://awareframework.com), which aims to make smartphones into valuable scientific instruments. Our research draws on human-computer interaction, ubiquitous computing, social network analysis, behavioural analysis, and data mining techniques. We experimentally collect data from communities of people through their use of interactive technologies such as mobile phones and social media, and subsequently analyse and model this data to characterise behavioural vectors of these communities.

Visiting Graduate Researcher, with Prof. Yaokun Wu and Dr. Jiyou Li
Department of Mathematics, Shanghai Jiao Tong University, Shanghai, China
Oct. 2014 - Feb. 2015

- In our research, we explore two main domains in combinatorics: phylogenetic trees and Boolean functions. With the aid of computers, some conjectures of these areas can be developed. We then find potentially effective methods for proof. Up to now, we have proven that the weighted sum Boolean function has some interesting properties of sensitivity, which is a useful measure. We have also made great progress in determining the leaf-to-leaf distance set of phylogenetic trees.

MSc Dissertation, Supervised by Lester Gilbert
Department of Electronics and Computer Science, University of Southampton, Southampton, UK
May. 2014 - Sep. 2014

- Designing serious games to train users of complex systems is a non-trivial task. To simplify the integration of pedagogical content and game elements in serious game development, this research presents a novel framework to convert the system design of software engineering methodologies into the design of serious games. A converter for automatic diagram conversion is also implemented and tested.

Undergraduate Dissertation, Supervised by Dr. Dong Wang
School of Software, Shanghai Jiao Tong University, Shanghai, China
Oct. 2012 - Jun. 2013

- In the project "Traceable Video Surveillance on Demand System based on the Internet of Things" , my research focuses on item-level object monitoring and tracking using RFID and video processing techniques. In the RFID-based scenario, a video surveillance solution, including ActiveX players and RTP multimedia servers, is designed to perform this functionality.

Undergraduate Summer Project, Supervised by Dr. Hongming Cai
School of Software, Shanghai Jiao Tong University, Shanghai, China
Jun. 2012 - Sep. 2012

- The goal of the project is to develop a multi-tenancy system designer module for ORIPS, the Open Resource Integrated Platform System. The development of this module includes web services and reusable user interfaces embedded with web services. Using this module, users can design a set of user interfaces or manage their existing user interface sets according to requirements.

Participation in Research Program, No. T071PRP19002, Supervised by Yumei Xin
Department of Mathematics, Shanghai Jiao Tong University, Shanghai, China
Sep. 2010 - Jun. 2011

- In this program, a study of E/R diagrams is presented by exploiting topological methods, especially the homology theory. Since an E/R diagram can be regarded as a simplicial complex, the structure of this E/R diagram is associated with the related homological group. Thus, the homology theory is useful for efficient maintenance of database systems.

## CONFERENCES ATTENDED

[4] ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2015), Osaka, Japan, September 7-11, 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 (NGMAST2014), Oxford, UK, September 10-12, 2014.

## REVIEWING

[5] International Journal of Human-Computer Studies, 2016.

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

[3] ACM SIGCHI Conference on Designing Interactive Systems (DIS), Brisbane, Australia, June 4-8, 2016.

[2] ACM SIGCHI Conference on Human Factors in Computing Systems (CHI), San Jose, USA, May 7-12, 2016.

[1] European Conference on Ambient Intelligence (AMI2015), Athens, Greece, Nov 11-13, 2015.

## PROGRAMMING SKILLS

ActionScript, C, C++, C#, Event-B, Html5, Java, JavaScript, Matlab, Mathematica, PHP, Promela, Python, R, SQL, UnrealScript

## LANGUAGES

Mandarin Chinese: Native Speaker
English: IELTS Overall 7.0, Listening 8.0, Reading 7.0, Writing 7.0, Speaking 6.5

## 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.