

Xuan-Bach LE

PERSONAL DATA

PLACE & DATE OF BIRTH: Vietnam — 07 October 1988
ADDRESS: Department of Computer Science
University of Oxford,
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WEBSITE: <https://lexuanbach.github.io/>
RESEARCH INTERESTS: Formal Methods, Decision Procedures, Separation Logic,
Computational Complexity, Certified Programming

EDUCATION

JAN 2013 - AUG 2017 PhD candidate in Computer Science
National University of Singapore, Singapore

Thesis: Tree Share Structure in Verification: Applications,
Systems and Theory
Supervisors: Aquinas HOBOR and Anthony W. LIN

AUG 2007 - MAY 2012 Undergraduate Degree in Computer Science
FIRST-CLASS HONOURS
National University of Singapore, Singapore
Specialization: Algorithms and Computation

Undergraduate Degree in Pure Mathematics
FIRST-CLASS HONOURS
National University of Singapore, Singapore

WORK EXPERIENCE

AUG 2018 - NOW | Research Associate at UNIVERSITY OF OXFORD, UK
Project: Algorithmic Verification of String-Manipulating Programs
Supervisor: Anthony W. LIN

JAN 2018 - AUG 2018 | Research Fellow at NUS, Singapore
Project: Symbolic Exploration for Finding Memory Errors
Supervisor: Joxan JAFFAR

SEP 2017 - DEC 2017 | Research Associate at YALE-NUS, Singapore
Project: Formal Methods in Program Verification
Supervisor: Aquinas HOBOR

JULY 2012 - DEC 2012 | Research Assistant at NUS, Singapore
Project: Grammatical Error Correction in NLP
Supervisor: Hwee Tou NG

MAY 2010 - AUG 2010 | Intern at A*STAR, Singapore
Project: Transfer Learning
Supervisor: Sinno Jialin PAN

PUBLICATIONS

1. Xuan-Bach Le, Cristian Gherghina, and Aquinas Hobor. Decision procedures over so-

- phisticated fractional permissions. In *APLAS*, 2012
2. Xuan-Bach Le, Aquinas Hobor, and Anthony W. Lin. Decidability and complexity of tree shares formulas. In *FSTTCS*, 2016
 3. Xuan-Bach Le, Thanh Toan Nguyen, Wei Ngan Chin, and Aquinas Hobor. A certified decision procedure for tree shares. In *ICFEM*, 2017
 4. Xuan-Bach Le and Aquinas Hobor. Reasoning over disjoint permissions. In *ESOP*, 2018
 5. Xuan-Bach Le, Aquinas Hobor, and Anthony W. Lin. Complexity analysis of tree share operations. In *APLAS*, 2018

RESEARCH ACTIVITIES

External sub-reviewer: APLAS 2016, ICALP 2017, PLDI 2018, LICS 2018, APLAS 2018, VMCAI 2019

Attended Conferences: APLAS 2016, FSTTCS 2016, ICFEM 2017, ESOP 2018, APLAS 2018

Attended Workshops: Academia Sinica Information (Taiwan, MAY 2016). Automata, Logic and Games (Singapore, SEP 2016). Fairness, Accountability and Transparency in AI and Big Data (Singapore, JULY 2017)

TEACHING EXPERIENCE

JAN 2017 - MAY 2017 | Grader at Yale-NUS:

1. YCC1212 (Introduction to CS, S2/16-17)
2. YCC2202 (Data Structures & Algorithm, S2/16-17)

2009 - 2015

Teaching Assistant and Lab Assistant at NUS:

1. CS1231 (Discrete Maths, S1/11-12, S1/13-14)
2. CS1010 (Programming Methodology, S1/10-11)
3. CS1102/1020 (Data Structures I, S2/09-10, S2/10-11)
4. CS3234 (Logic & Formal Systems, S1/10-11, S2/12-13)

SCHOLARSHIPS AND CERTIFICATES

JAN 2013 - JAN 2017 | President Graduate Fellowship

AUG 2007 - MAY 2012 | A*STAR Pre-graduate Scholarship
 NUS Donated Scholarship
 Dean List Award 2007, 2008, 2010
 Certificate of Special Program in Computing

TECHNICAL SKILLS

Expert Knowledge: Coq, JAVA, C++, OCAML
 Intermediate Knowledge: Web Programming (JavaScript, PHP, HTML, MySQL), LINUX, Discrete Optimizations (Integer Programming, Constraint Solving, Z3)
 Basic Knowledge: Machine Learning (SVM, Network Modeling)

LANGUAGES

ENGLISH: Fluent
 VIETNAMESE: Mother tongue
 FRENCH: Basic Knowledge