

Education

The University of Hong Kong

PHD IN COMPUTER SCIENCE

Hong Kong, China

Sep. 2014 - Expected Aug. 2018

- Research interests: Programming Languages, Type Systems, Type Theory
- Advisor: Dr. Bruno C. d. S. Oliveira

Zhejiang University

B.S. IN COMPUTER SCIENCE AND ENGINEERING

Zhejiang, China

Sep. 2010 - Aug. 2014

- Thesis Advisor: Prof. Huajun Chen
- Enlisted in He Zhijun Honor Class (20 / 160)
- Cum. GPA: 3.9 / 4.0

Simon Fraser University

EXCHANGE FOR TWO SEMESTERS

Vancouver, Canada

Sep. 2012 - Apr. 2013

- Cum. GPA: 3.9 / 4.0

Programming Skills

Working Knowledge Haskell • Coq • Agda • Idris

Basic Knowledge Scala • OCaml • Racket • C • C++ • Java • JavaScript • Python

Example Projects

Haskell SEDEL - Type system for first-class traits

Coq NeColus - A simply typed calculus that supports nested composition

Haskell + Java Fcore - Research middleware compiler from System F-based languages to Java

Agda Category theory formalized in Agda

Publications

Typed First-Class Traits

Amsterdam, Netherlands

XUAN BI, BRUNO C. D. S. OLIVEIRA

ECOOP 2018

- Proposed a type system for first-class traits

The Essence of Nested Composition

Amsterdam, Netherlands

XUAN BI, BRUNO C. D. S. OLIVEIRA, TOM SCHRIJVERS

ECOOP 2018

- Proposed a type-safe and coherent calculus with support for nested composition and subtyping

Consistent Subtyping for All

Thessaloniki, Greece

NINGNING XIE, XUAN BI, BRUNO C. D. S. OLIVEIRA

ESOP 2018

- Proposed a general mechanism of integrating gradual typing with implicit higher-rank polymorphism

Unified Syntax with Iso-Types

Hanoi, Vietnam

YANPENG YANG, XUAN BI, BRUNO C. D. S. OLIVEIRA

APLAS 2016

- Proposed a dependently typed calculus with unified syntax and decidable type-checking

Memory-Efficient Tail Calls in the JVM with Imperative Functional Objects

Pohang, South Korea

TOMAS TAUBER, XUAN BI, ZHIYUAN SHI, WEIXIN ZHANG, HUANG LI, ZHENRUI ZHANG, BRUNO C. D. S. OLIVEIRA

APLAS 2015

- Proposed a new JVM compilation technique for functional programs

BioTCM-SE: A Semantic Search Engine for the Information Retrieval of Modern Biology and Traditional Chinese Medicine

XI CHEN, HUAJUN CHEN, XUAN BI, PEIQIN GU, JIAOYAN CHEN, ZHAOHUI WU

Comp. Math. Methods in Medicine 2014

- Designed the data processing engine in Scala

Professional Activities

2017 **Subreviewer**, ESOP 2017
2016 **Subreviewer**, SBLP 2016

Teaching

COMP 3258: Functional Programming

TEACHING ASSISTANT

HKU
Fall 2017 • Spring 2017

- Gave oral tutorials every week and designed assignments

COMP 3259: Principles of Programming Languages

TEACHING ASSISTANT

HKU
Fall 2016 • Spring 2015 • Fall 2014

- Gave oral tutorials every week and designed assignments

Extracurricular Experience

Morgan Stanley

LEAD STUDENT HELPER

HKU
2017

- In charge of coordinating student tasks for the talk by Dr. Bjarne Stroustrup, Father of C++

DeepSpec Summer School

FUNDED PARTICIPANT

UPenn
2017

- This is the first DeepSpec Summer School on Verified Systems

Programming Languages Mentoring Workshop at ICFP

FUNDED PARTICIPANT

Nara, Japan
2016

Hong Kong Functional Programming Meetup

INVITED SPEAKER

Hong Kong

- Talk titled “Programming with dependent types in Idris”
- Talk titled “New Buzz in Haskell Reloaded”