

Xuan Bi

CONTACT INFORMATION	15/F, Two International Finance Centre 8 Finance Street, Central, Hong Kong	(+852) 62477457 bixuanxbi@gmail.com
RESEARCH FIELDS	Programming Language Design, Type Systems, Functional Programming, Gradual Typing, Program Verification	
EDUCATION	The University of Hong Kong , Hong Kong, China	
	Ph.D. in Computer Science	Sep. 2014 - Nov. 2018
	<ul style="list-style-type: none">• Thesis Topic: <i>Disjoint Intersection Types: Theory and Practice</i>• Advisors: Dr. Bruno C. d. S. Oliveira and Prof. T.H. Tse	
	Zhejiang University , Hangzhou, China	
	B.S. in Computer Science and Engineering	Sep. 2010 - Aug. 2014
	<ul style="list-style-type: none">• Cum. GPA: 3.9 out of 4.0• He Zhijun Honor Class• Thesis Advisor: Prof. Huajun Chen	
	Simon Fraser University , Vancouver, Canada	
	Exchange in Computing Science	Sep. 2012 - Apr. 2013
	<ul style="list-style-type: none">• Cum. GPA: 3.9 out of 4.0	
WORKING EXPERIENCE	Standard Chartered , Hong Kong, China	
	Quantitative Developer at Strats	Mar. 2019 - Present
	The University of Hong Kong , Hong Kong, China	
	Part-time Research Assistant in Computer Science	Sep. 2018 - Nov. 2018
PUBLICATIONS	<ol style="list-style-type: none">1. Ningning Xie, Bruno C. d. S. Oliveira, Xuan Bi, Tom Schrijvers. Row and Bounded Polymorphism via Disjoint Polymorphism <i>In European Conference on Object-Oriented Programming (ECOOP 2020)</i>.2. Xuan Bi, Ningning Xie, Bruno C. d. S. Oliveira, Tom Schrijvers. Distributive Disjoint Polymorphism for Compositional Programming. <i>In European Symposium on Programming (ESOP 2019)</i>.3. Ningning Xie, Xuan Bi, Bruno C. d. S. Oliveira, Tom Schrijvers. Consistent Subtyping for All. <i>In the Transactions on Programming Languages and Systems (TOPLAS 2019)</i>.4. Xuan Bi, Bruno C. d. S. Oliveira, Tom Schrijvers. The Essence of Nested Composition. <i>In European Conference on Object-Oriented Programming (ECOOP 2018)</i>.5. Xuan Bi, Bruno C. d. S. Oliveira. Typed First-Class Traits. <i>In European Conference on Object-Oriented Programming (ECOOP 2018)</i>.	

6. Ningning Xie, **Xuan Bi**, Bruno C. d. S. Oliveira. **Consistent Subtyping for All**. *In European Symposium on Programming (ESOP 2018)*.
7. Yanpeng Yang, **Xuan Bi**, Bruno C. d. S. Oliveira. **Unified Syntax with Iso-Types**. *In Asian Symposium on Programming Languages and Systems (APLAS 2016)*.
8. Tomas Tauber, **Xuan Bi**, Zhiyuan Shi, Weixin Zhang, Huang Li, Zhenrui Zhang, Bruno C. d. S. Oliveira. **Memory-efficient Tail Calls in the JVM with Imperative Functional Objects**. *In Asian Symposium on Programming Languages and Systems (APLAS 2015)*.
9. Xi Chen, Huajun Chen, **Xuan Bi**, Peiqin Gu, Jiaoyan Chen, Zhaohui Wu. **BioTCM-SE: A Semantic Search Engine for the Information Retrieval of Modern Biology and Traditional Chinese Medicine**. *Comp. Math. Methods in Medicine 2014*.

PROJECTS

GPC: Gradually Polymorphic Calculus

- [Github link](#)
- We proposed the first design of combining gradual typing with implicit higher-rank polymorphism. **GPC** is implemented in Haskell.

SEDEL: Type system for first-class traits

- [Github link](#)
- We proposed the first design of typed first-class traits with support for dynamic inheritance, abstract methods, etc. **SEDEL** is implemented in Haskell.

NeColus: Nested Composition calculus

- [Github link](#)
- We proposed a simple calculus that features disjoint intersection types and nested composition. Type safety and coherence are verified in the Coq proof assistant.

FCore: Research middleware compiler from System F-based languages to Java

- [Github link](#)
- We proposed a JVM implementation of System F with support for tail-call elimination. **FCore** is implemented in Haskell and Java.

PROGRAMMING SKILLS

Working Knowledge: Haskell • Java • Coq

Basic Knowledge: Scala • Agda • Idris • Racket • C • Python

TEACHING

Teaching Assistant

Fall 2017, Spring 2017

COMP 3258: Functional Programming

Instructor: Dr. Bruno C. d. S. Oliveira

Teaching Assistant

Fall 2016, Spring 2015, Fall 2014

COMP 3259: Principles of Programming Languages

Instructor: Dr. Bruno C. d. S. Oliveira

PROFESSIONAL SERVICE

- ESOP 2017, subreviewer
- SBLP 2016, subreviewer

SCHOLARSHIPS & AWARDS	<ul style="list-style-type: none"> • Conference Support for Research Postgraduate Students • Postgraduate Scholarship (PGS) 	<p>Apr. 2018</p> <p>Sep. 2014 - Aug. 2018</p>
EXTRACURRICULAR EXPERIENCE	<p>ECOOP</p> <ul style="list-style-type: none"> • Student volunteer <p>Morgan Stanley</p> <ul style="list-style-type: none"> • Lead student helper, in charge of coordinating student tasks for the talk by Dr. Bjarne Stroustrup, Father of C++ <p>DeepSpec Summer School</p> <ul style="list-style-type: none"> • Funded participant of the first DeepSpec Summer School on Verified Systems <p>Hong Kong Functional Programming Meetup</p> <ul style="list-style-type: none"> • Invited speaker, talk titled “Programming with dependent types in Idris” • Invited speaker, talk titled “New Buzz in Haskell Reloaded” 	<p>Netherlands, 2018</p> <p>Hong Kong, 2017</p> <p>USA, 2017</p> <p>Hong Kong</p>