

Xuan Bi

CONTACT INFORMATION	Room 430, Chow Yei Ching Building The University of Hong Kong, Hong Kong https://bixuanzju.github.io/	(+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 - (Expected) Fall 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 4.0He Zhijun Honor ClassThesis 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	
PUBLICATIONS	<ol style="list-style-type: none">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>.Xuan Bi, Bruno C. d. S. Oliveira. Typed First-Class Traits. <i>In European Conference on Object-Oriented Programming (ECOOP 2018)</i>.Ningning Xie, Xuan Bi, Bruno C. d. S. Oliveira. Consistent Subtyping for All. <i>In European Symposium on Programming (ESOP 2018)</i>.Yanpeng Yang, Xuan Bi, Bruno C. d. S. Oliveira. Unified Syntax with Iso-Types. <i>In Asian Symposium on Programming Languages and Systems (APLAS 2016)</i>.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. <i>In Asian Symposium on Programming Languages and Systems (APLAS 2015)</i>.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. <i>Comp. Math. Methods in Medicine 2014</i>.	
DRAFTS	<ol style="list-style-type: none">Ningning Xie, Xuan Bi, Bruno C. d. S. Oliveira, Tom Schrijvers. Consistent Subtyping for All. <i>Invited submission to TOPLAS</i>.	

PROJECTS	<p>GPC: A type checker for Gradually Polymorphic Calculus</p> <ul style="list-style-type: none"> • Github link • We proposed the first design of combining gradual typing with implicit higher-rank polymorphism. GPC is implemented in Haskell. <p>SEDEL: Type system for first-class traits</p> <ul style="list-style-type: none"> • 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. <p>NeColus: Coq formalization of a type-safe calculus that supports nested composition</p> <ul style="list-style-type: none"> • Github link • We proposed a simple calculus that supports nested composition and disjoint intersection types. Type safety and coherence are verified in the Coq proof assistant. <p>FCore: Research middleware compiler from System F-based languages to Java</p> <ul style="list-style-type: none"> • 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	<p>Working Knowledge: Haskell • Java • Coq</p> <p>Basic Knowledge: Scala • Agda • Idris • Racket • C • Python</p>
TEACHING	<p>Teaching Assistant Fall 2017, Spring 2017</p> <p>COMP 3258: Functional Programming</p> <p>Instructor: Dr. Bruno C. d. S. Oliveira</p> <p>Teaching Assistant Fall 2016, Spring 2015, Fall 2014</p> <p>COMP 3259: Principles of Programming Languages</p> <p>Instructor: Dr. Bruno C. d. S. Oliveira</p>
PROFESSIONAL SERVICE	<ul style="list-style-type: none"> • ESOP 2017, subreviewer • SBLP 2016, subreviewer
SCHOLARSHIPS & AWARDS	<ul style="list-style-type: none"> • Conference Support for Research Postgraduate Students Apr. 2018 • Postgraduate Scholarship (PGS) Sep. 2014 - Aug. 2018
EXTRACURRICULAR EXPERIENCE	<p>ECOOP Amsterdam, Netherlands, 2018</p> <ul style="list-style-type: none"> • Student volunteer <p>Morgan Stanley HKU, 2017</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 UPenn, USA, 2017</p> <ul style="list-style-type: none"> • Funded participant of the first DeepSpec Summer School on Verified Systems <p>Hong Kong Functional Programming Meetup Hong Kong</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”