

# Yixue Zhao

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## Education

University of Southern California (USC)	USA
<b>Doctor of Philosophy</b> in Computer Science	2014 – 2020
Advisor: Nenad Medvidović	
Cumulative GPA - 3.91/4.0	
University of Oxford & York University	UK
Engineering Summer School	Summer, 2013
Harbin Institute of Technology (HIT)	China
<b>Bachelor of Engineering</b> in Software Engineering	2010 – 2014
Advisor: Zhongjie Wang	
Cumulative GPA - 88.93/100 (Rank 1/136)	

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## Research Experience

LASER Lab • Postdoctoral Research Associate	UMass, USA
Improving Natural Language Feedback Quality	Current
SoftArch Lab • PhD Student	USC, USA
Infrastructure Support for Open Science	Current
Reducing User-Perceived Latency in Mobile Apps via Prefetching & Caching (Dissertation)	2015 – 2020
Reducing Inter-Component Security Vulnerabilities in Android Apps	2016 – 2017
Architecture Change and Decay in Open-Source Systems	2015 – 2017
CREST Centre • Visiting Scholar	UCL, UK
Designed and Developed a Framework for Evaluating UI Test Reuse	Summer, 2019
Intelligent Computing Lab • Undergraduate	HIT, China
Designed and Developed Methods for Personal Data Integration in Heterogeneous Services	2013 – 2014

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## Awards & Honors

<b>William F. Ballhaus Jr. Best Dissertation Award, Finalist (4 recipients in Viterbi)</b>	USC, 2021
<b>Computing Innovation Fellow</b>	CRA & CCC, 2020
<b>Microsoft Research Dissertation Grant (11 recipients in North America)</b>	MSR, 2019 – 2020
UIUC Rising Star in EECS	UIUC, 2019
WiSE Merit Award (3 recipients in Viterbi School of Engineering)	USC, 2019
Best Research Assistant Award (3 recipients in CS Department)	USC, 2018
Jenny Wang Excellence in Teaching Award (1 recipient in CS Department)	USC, 2018
1st Place in MOBILESoft Student Research Competition	MOBILESoft, 2017
University Graduate Fellowship	USC, 2014
University Scholarships, <i>consecutive</i>	HIT, 2010 – 2014
Outstanding Student Awards, <i>consecutive</i>	HIT, 2010 – 2014
<b>China National Scholarship (0.2% in China)</b>	Ministry of Education of China, 2013
2nd Place of The Oxford Study Programme Scholarship	Kingdom Education, 2013
Honorable Mention of 2013 Interdisciplinary Contest In Modeling	COMAP, 2013

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## Publications

### PhD Dissertation

**Reducing User-Perceived Latency in Mobile Applications via Prefetching and Caching**  
Yixue Zhao. 2020. [[pdf](#)]

### Full Conference Papers

**F8: Identifying Casualty Changes in Software Patches (to appear)**

Adriana Sejfa, Yixue Zhao, and Nenad Medvidovic

Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2021).

**F7: Assessing the Feasibility of Web-Request Prediction Models on Mobile Platforms**

Yixue Zhao, Siwei Yin, Adriana Sejfa, Marcelo Schmitt Laser, Haoyu Wang and Nenad Medvidovic

International Conference on Mobile Software Engineering and Systems (MOBILESoft 2021), acceptance rate: 38%.

[[pdf](#)] [[talk](#)] [[artifact](#)]

**F6: FrUITeR: A Framework for Evaluating UI Test Reuse**

Yixue Zhao, Justin Chen, Adriana Sejfa, Marcelo Schmitt Laser, Jie Zhang, Federica Sarro, Mark Harman, Nenad Medvidovic

Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020), acceptance rate: 28% = 101/360.

[[pdf](#)] [[talk](#)] [[artifact](#)]

**F5: Empirically Assessing Opportunities for Prefetching and Caching in Mobile Apps**

Yixue Zhao, Paul Wat, Marcelo Schmitt Laser, Nenad Medvidovic

International Conference on Automated Software Engineering (ASE 2018), acceptance rate: 19.9% = 69/346.

[[pdf](#)] [[talk](#)] [[artifact](#)]

**F4: Leveraging Program Analysis to Reduce User-Perceived Latency in Mobile Applications**

Yixue Zhao, Marcelo Schmitt Laser, Yingjun Lyu, Nenad Medvidovic

International Conference on Software Engineering (ICSE 2018), acceptance rate: 20.9% = 105/502.

[[pdf](#)] [[talk](#)] [[artifact](#)]

**F3: A SEALANT for Inter-App Security Holes in Android**

Youn Kyu Lee, Jae young Bang, Gholamreza Safi, Arman Shahbazian, Yixue Zhao, Nenad Medvidovic

International Conference on Software Engineering (ICSE 2017), acceptance rate: 17.1% = 68/398.

**F2: Code Anomalies Flock Together: Exploring Code Anomaly Agglomerations for Locating Design Problems**

Willian Oizumi, Alessandro Garcia, Leonardo da Silva Sousa, Bruno Cafeo, Yixue Zhao

International Conference on Software Engineering (ICSE 2016), acceptance rate: 19.1% = 101/530

**F1: A Linked Data based Personal Service Data Collection and Semantics Unification Method**

Yixue Zhao, Zhongjie Wang, Liping Zou, Jiaqiu Wang, Youqiang Hao

International Conference on Service Science (ICSS 2014)

### Short Conference Papers

**S5: Mobile-App Analysis and Instrumentation Techniques Reimagined with DECREE**

Yixue Zhao, Nenad Medvidovic

International Conference on Software Engineering (ICSE 2019), ROSE Festival (Position Paper).

[[pdf](#)] [[talk](#)]

**S4: A Microservice Architecture for Online Mobile App Optimization**

Yixue Zhao, Nenad Medvidovic

International Conference on Mobile Software Engineering and Systems (MOBILESoft 2019), Visions Track.

[[pdf](#)] [[talk](#)]

**S3: Mobile-App Analysis and Instrumentation Techniques Reimagined with DECREE**

Yixue Zhao

International Conference on Software Engineering (ICSE 2019), Doctoral Symposium, acceptance rate: 29% = 9 (oral presentation)/31. [[pdf](#)]

**S2: MOBILESoft: G: Reducing Latency in Mobile Apps via Program Analysis**

Yixue Zhao

ACM Student Research Competition Grand Final 2018. [[pdf](#)]

## S1: Toward Client-Centric Approaches for Latency Minimization in Mobile Applications

Yixue Zhao

International Conference on Mobile Software Engineering and Systems (MOBILESoft 2017), Student Research Competition. [pdf]

### Book Chapters

#### B1: Mining the Social Web, 2<sup>nd</sup> Edition. Matthew A. Russell (Chinese Translation)

Tonghua Su, Tong Wei, Yixue Zhao, Shuoxing Wang, Zhiyue Liu  
China Machine Press, 2015

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## Academic Services

Program Committee: ICSE 2022, womENCourage 2021, SERVICES-IWIOS 2021, MOBILESoft 2021

Organizing Committee: ICSE 2023, MOBILESoft 2020, ASE 2019, MOBILESoft 2019

Journal Review: TSE 2020

Panelist: ESEC/FSE 2020, ICSE 2018

Session Chair: ESEC/FSE 2020, MOBILESoft 2019

Student Volunteer: ICSE 2017

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## Mentoring and Teaching

Mentored high school student Diana Balderas in Young Researchers Program *Summer, 2017*

Outcome: the resulting project has won the 2017 Congressional App Challenge

Mentored undergraduates: Justin Chen, Siwei Yin, Paul Wat, Marcelo Laser *2017 – Present*

Outcome: 4 full conference papers

Mentored PhD students: Adriana Sejfia, Marcelo Laser, Saghar Talebipour *2017 – Present*

Outcome: 2 full conference papers

TA for CSCI-310: Software Engineering, Instructor: Nenad Medvidović *USC, Fall 2016, 2017*

TA for CSCI-585: Database Systems, Instructor: Saty Raghavachary *USC, Spring 2016*

Outcome: Jenny Wang Excellence in Teaching Award (1 recipient in CS Department)

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## Invited Talks

From Mobile App Technique to Open Science Infrastructure *HKUST, 2020*

Reducing User-Perceived Latency in Mobile Apps via Data Prefetching *UIUC, 2019*

Networking at Research Conferences *USC, 2019*

Reducing User-Perceived Latency in Mobile Apps via Data Prefetching *PKU, 2018*

Program Analysis for Latency Optimization in Mobile Apps (Guest Lecture) *USC, 2018*

Program Analysis for Latency Optimization in Mobile Apps (Networked Systems Lab) *USC, 2017*

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## Professional Activities

CRA-WP Early Career Mentoring Workshop, Participant *2020*

PL + HCI “Swimmer” School, Participant *2020*

Women in Computing Club Organizing Committee *USC, 2019 – 2020*

Microsoft Research PhD Summit, Participant *MSR, 2019*

UIUC EECS Rising Stars Workshop, Participant *UIUC, 2019*

Byte of Life Seminar on Work-Life Balance, Panelist *USC, 2019*

Viterbi Teaching Assistant Training, Panelist *USC, 2018*

Quantitative Finance Women’s PhD Mentorship Program (8 recipients in USA) *Morgan Stanley, 2017*

CRA-WP Grad Cohort, Participant *CRA-WP, 2017*

Fake Fancy - Academic and Industry Panel, Panelist *USC, 2017*

Grace Hopper Celebration of Women in Computing, Participant *AnitaB.org, 2015*

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## Press Coverage

Rising Star Honored for Early Achievements and Promise *USC, 2019*

Dissertation grant recipients embarking on diverse paths to scientific and societal impact *MSR, 2019*

Interviewed by American Language Institute to Represent International Students *USC, 2018*