XIN QIN

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EDUCATION

University of Southern California (USC)	**Los Angeles, CA, USA**
Ph.D. in Computer Science	*Aug 2018 - Present*
UC Berkeley	**Berkeley, CA, USA**
Visiting Student in EECS	*Aug 2017 - May 2018*
University of Chicago	**Chicago, IL,USA**
Summer School Student	*Jul 2015 - Aug 2018*
ShanghaiTech University	**Shanghai, China**
B.S. in Computer Science	*Sep 2014 - Jul 2018*

PUBLICATIONS

1. **Xin Qin**, Yuan Xia, Aditya Zutshi, Chuchu Fan, Jyotirmoy V. Deshmukh, "Statistical Verification and Risk Estimation of Cyber-Physical Systems using Surrogate Models and Conformal Inference", Transactions on Cyber-Physical Systems (TCPS), 2023.

2. **Xin Qin**, Navid Hashemi, Lars Lindemann, Jyotirmoy V. Deshmukh, "Conformance Testing for Stochastic Cyber-Physical Systems", Formal Methods in Computer-Aided Design (FMCAD), 2023.

3. **Xin Qin**, Nikos Aréchiga, Andrew Best, Jyotirmoy Deshmukh, "Robust Testing for Cyber-Physical Systems using Reinforcement Learning", ACM-IEEE International Symposium on Formal Methods and Models for System Design (MEMOCODE), 2023.

4. Lars Lindemann*, **Xin Qin***, Jyotirmoy V. Deshmukh, George J. Pappas, "Conformal Prediction for STL Runtime Verification", ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS), 2023. ***co-first author.***

5. Navid Hashemi, **Xin Qin**, Lars Lindemann, Jyotirmoy V. Deshmukh, "Data-Driven Reachability Analysis of Stochastic Dynamical Systems with Conformal Inference", IEEE Conference on Decision and Control (CDC), 2023

6. Navid Hashemi, **Xin Qin**, Jyotirmoy V. Deshmukh, Georgios Fainekos, Bardh Hoxha, Danil Prokhorov, Tomoya Yamaguchi, "Risk-Awareness in Learning Neural Controllers for Temporal Logic Objectives", American Control Conference (ACC), 2023.

7. **Xin Qin**, Yuan Xia, Aditya Zutshi, Chuchu Fan, Jyotirmoy V. Deshmukh, "Statistical Verification of Cyber-Physical Systems using Surrogate Models and Conformal Inference", ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS), 2022.

8. Ezio Bartocci, Jyotirmoy Deshmukh, Felix Gigler, Cristinel Mateis, Eleonora Nesterini, Dejan Nickovic and **Xin Qin**, "Mining Shape Expressions with ShapeIt", International Conference on Software Engineering and Formal Methods (SEFM), 2021. ***Alphabetical order.***

9. Dejan Nickovic, **Xin Qin**, Thomas Ferrère, Cristinel Mateis, Jyotirmoy Deshmukh, "Specifying and Detecting Temporal Patterns with Shape Expressions", International Journal on Software Tools for Technology Transfer (STTT), 2021.

10. **Xin Qin**, Jyotirmoy V. Deshmukh, "Clairvoyant Monitoring for Signal Temporal Logic Patterns", International Conference on Formal Modeling and Analysis of Timed Systems (FORMATS), 2020.

11. Ezio Bartocci, Jyotirmoy Deshmukh, Felix Gigler, Cristinel Mateis, Dejan Nickovic and **Xin Qin**, "Mining Shape Expressions from Examples", International Conference on Embedded Software (EMSOFT), 2020. ***Alphabetical order.***

12. Dejan Nickovic, **Xin Qin**, Thomas Ferrère, Cristinel Mateis, Jyotirmoy Deshmukh, "Shape Expressions for Specifying and Extracting Signal Features", International Conference on Runtime Verification (RV), 2019. **Best Paper Award**

13. Anand Balakrishnan, Aniruddh G. Puranic, **Xin Qin**, Adel Dokhanchi, Jyotirmoy V. Deshmukh, Heni Ben Amor, Georgios Fainekos, "Specifying and Evaluating Quality Metrics for Vision-Based Perception Systems", IEEE Proceedings of Design, Automation and Test in Europe (DATE), 2019.

14. **Xin Qin**, Jyotirmoy V. Deshmukh, "Predictive monitoring for signal temporal logic with probabilistic guarantees: poster abstract", Proceedings of the 22nd ACM International Conference on Hybrid Systems: Computation and Control (HSCC), 2019.

15. **Xin Qin**, Jyotirmoy V. Deshmukh, "Joint Probability Distribution of Prediction Errors of ARIMA", Arxiv, 2019.

TEACHING

University of Southern California   **Spring 2023**
Teaching Assistant, Human Subject Research in Software Systems

University of Southern California   **Fall 2022**
Teaching Assistant, Autonomous Cyber-Physical Systems

ShanghaiTech University   **Spring 2017**
Teaching Assistant, Computer Architecture

SERVICES

Program Committee VMCAI, ICCPS Artifact Evaluation	2024
Program Committee HSCC Repeatability Evaluation	2021
Reviewer L4DC, HSCC poster, CDC	2023
Subreviewer IV	2020 & 2021

INTERNSHIP

Toyota Research Institute   **Jun 2019 - Aug 2019**
Simulation Team
Use reinforcement learning stress-test an autonomous vehicle in simulation.

HONORS AND AWARDS

Selected as one of the **CPS Rising Stars**. (Awarded to 34 out of 118 applications)	2023
Received an NSF student travel award (CPS-IoT Week)	2023
Nominated for Microsoft Research Ada Lovelace Fellowship (3 students in CS dept.)	2020
Best Paper Award (International Conference on Runtime Verification)	2019
Outstanding Scholarship (ShanghaiTech)	2016 - 2017
Merit Student Award (ShanghaiTech)	2014 & 2015 & 2016
Third place in the Shanghai Students Sports Games, Taekwondo. (Held every four years.)	2016
Third place in the Shanghai Taekwondo Championship	2015