

INDUSTRY EXPERIENCE	Bosch Research, China 03/2022 – 06/2023
	<i>Senior Research Scientist, Reliable Distributed System (5 patents)</i>
	<ul style="list-style-type: none"> ▪ Led research on reliable distributed systems for autonomous driving. ▪ Directed teams to integrate solutions into products, impacting industry standards. ▪ Developed 5 patents related to distributed systems.
	Elastisys, Sweden 09/2018 – 12/2021
	<i>System Scientist, Advisors: Johan Tordson, Erik Elmorth (MicroX papers)</i> <ul style="list-style-type: none"> ▪ Research on performance diagnosis and recovery in cloud microservices. ▪ Published MicroX papers. ▪ Developed and open-sourced the MicroRCA project.
	Las Naves, Spain 09/2020 – 03/2021
	<i>Researcher, Advisors: Guillaume Pierre (LivingFog platform and hackathon)</i>
	<ul style="list-style-type: none"> ▪ Design and implement the LivingFog platform for IoT devices. ▪ Organized and presented at a hackathon centered around the LivingFog platform. ▪ Authored a paper published in ICIN'22.
	IBM, China 05/2015 – 09/2018
	<i>Software Developer/Site Reliable Engineer, IBM Cloud (1 patent)</i> <ul style="list-style-type: none"> ▪ Developed and operated key cloud computing techniques, including Kubernetes and OpenStack. ▪ Issued 1 US patent.
PUBLICATIONS	Highly Cited Papers
	MicroRCA: Root cause localization of performance issues in microservices 2020 <i>Wu L, Tordsson J, Elmroth E, Kao O</i> <i>2020 IEEE/IFIP Network Operations and Management Symposium (NOMS)</i> <i>Citations: 190+</i>
	Fog computing applications: Taxonomy and requirements 2019 <i>Ahmed, A., Arkian, H., Battulga, D., Fahs, A. J., Farhadi, M., Giouroukis, D., ... & Wu, L (Contributed equally)</i> <i>arXiv:1907.11621</i> <i>Citations: 70+</i>
	MicroDiag: Fine-grained performance diagnosis for microservice systems 2021 <i>Wu L, Tordsson J, Bogatinovski J, Elmroth E, Kao O</i> <i>IEEE/ACM International Workshop on Cloud Intelligence (CloudIntelligence)</i> <i>Citations: 50+</i>
	Performance diagnosis in cloud microservices using deep learning 2020 <i>Wu L, Bogatinovski J, Nedelkoski S, Tordsson J, Kao O</i> <i>Service-Oriented Computing – ICSOC 2020 Workshops: AIOPS</i> <i>Citations: 40+</i>
	Other Notable Publications
	Acies-OS: A Content-Centric Platform for Edge AI Twinning and Orchestration 2024 <i>Li J, Chen Y, Kimura T, Wang T, Wang R, Kara D, Hu Y, Wu L, Hanafy WA, Souza A, Shenoy P</i> <i>33rd International Conference on Computer Communications and Networks (ICCCN)</i>
	SLO-Power: SLO and Power-aware Elastic Scaling for Web Services 2024 <i>Savasci M, Souza A, Wu L, Irwin D, Ali-Eldin A, Shenoy P</i> <i>24th IEEE International Symposium on Cluster, Cloud and Internet Computing (CCGrid)</i>
	Failure-Resilient ML Inference at the Edge through Graceful Service Degradation 2023 <i>Hanafy WA, Wu L, Abdelzaher T, Diggavi S, Shenoy P</i> <i>2023 IEEE Military Communications Conference (MILCOM)</i>
	Failure identification from unstable log data using deep learning 2022 <i>Bogatinovski J, Nedelkoski S, Wu L, Cardoso J, Kao O.</i> <i>22nd IEEE International Symposium on Cluster, Cloud and Internet Computing (CCGrid)</i>

LivingFog: Leveraging fog computing and LoRaWAN technologies for smart marina management (experience paper) 2022
Battulga D, Farhadi M, Tamiru MA, Wu L, Pierre G (Contributed equally)
5th Conference on Innovation in Clouds, Internet, and Networks (ICIN)

Causal inference techniques for microservice performance diagnosis: Evaluation and guiding recommendations 2021
Wu L, Tordsson J, Elmroth E, Kao O
2021 IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS)

MicroRAS: Automatic recovery in the absence of historical failure data for microservice systems 2021
Wu L, Tordsson J, Acker A, Kao O
13th International Conference on Utility and Cloud Computing (UCC)

Journal Papers

Experimental Study on Sound Wave Transit Time Measurement in Furnace Acoustic Temperature Measurement 2018
Wu L, Chen Lijun
Acoustic Technology

Experimental Evaluation of Sound Wave Propagation Characteristics in Waveguides 2015
Xu C, Wu L, Chen Lijun
Acoustics and Electronic Engineering

Research on Matching Technology for Ultrasonic Fruit and Vegetable Washing Machines 2013
Wu L, Zhu Changping
Acoustics and Electronic Engineering

Under Review

Failure-Resilient ML Inference at the Edge through Graceful Service Degradation 2024
Wu L, Hanafy WA, Souza A, Abdelzaher T, Verma G, Shenoy P
2024 IEEE Military Communications Conference (MILCOM)

In Preparation

Leveraging Fine-grain Spatial Carbon-Intensity Variations for Edge Computing 2024
Wu L, Hanafy WA, Souza A, Shenoy P
Sigmetrics'25

Resilient Model Inference at Resource-Constrained Edge 2024
Wu L, Hanafy WA, Souza A, Shenoy P
OSDI'25 / ATC'25

Enabling Device-to-device Collaboration in Dynamic IoT Environments 2024
Shastri H, Wu L, Shenoy P
Mobisys'25

PATENTS

Granted Patents

Testing an online system for service oriented architecture (SOA) services 2021
L Cai, YM Yin, L Wu, XG Ding
US Patent 11,169,905

Pending Patents

5 Patents on reliable distributed systems for autonomous driving.

HONORS & AWARDS

- Best of IBMer: Best new SRE of Cloud Foundation Services, IBM 2017
- SEU Alumnus Scholarship for Outstanding Students 2013 – 2014

	<ul style="list-style-type: none"> ▪ The Third Prize in the National Graduate Student Mathematical Contest in Modeling 2013 ▪ Best Bachelor Thesis (Top 1%) 2012 ▪ National Scholarship (Top 0.2% nationwide), The Chinese Ministry of Education 2011 ▪ 2nd Prize in the Physical and Experimental Science Technology Innovation 2011 ▪ 1st Prize in the TI Cup Electronic Design competition 2010 ▪ 1st Prize in the Physics Contest of HHU 2010 ▪ 1st Prize in the Mathematics Contest of HHU 2009 ▪ HHU Academic Excellence Scholarship, Science and Technology Innovation Scholarship 2008 – 2012 	
INVITED TALKS	<p>Automatic Performance Diagnosis and Recovery in Cloud Microservices <i>Zscaler, US</i> 08/2024</p> <p>MicroRCA: Root Cause Localization of Performance Issues in Microservices <i>Ericsson, Sweden</i> 08/2021</p>	
SERVICE TO PROFESSION AND UNIVERSITY	<p>Conference Organization</p> <p>Second International Workshop on Artificial Intelligence for IT Operations at ICSOC 2021</p> <p>The 16th IEEE International Conference on Autonomic Computing (ICAC) 2019</p> <p>Reviewer</p> <p>IEEE Transactions on Services Computing 2024</p> <p>Sustainable Computing: Informatics and Systems 2024</p> <p>Journal of Parallel and Distributed Computing 2024</p> <p>Performance Evaluation 2024</p> <p>International World Wide Web Conference 2020</p> <p>Hackathon Organization: Hack the fog 2021</p> <ul style="list-style-type: none"> ▪ Organized and coordinated the event. <p>Workshop Leadership: 15th Cloud Control Workshop 2019</p> <ul style="list-style-type: none"> ▪ Led the discussion panel on "Anomaly detection in edge/fog computing". <p>Outreach: UMass Turing Summer Program 2024</p> <ul style="list-style-type: none"> ▪ Role: Organizer and Coordinator ▪ Promoted and organized the program to attract high school participants in western Massachusetts. ▪ Coordinated with professors and lecturers to ensure the smooth execution of the three-week program. 	
TEACHING	<p>University of Massachusetts Amherst 2024</p> <p>UMass Turing Summer Program – https://none.cs.umass.edu/turing/</p> <ul style="list-style-type: none"> ▪ Coordinator and Teacher ▪ Syllabus, class, and tutorial preparations. ▪ Delivered lectures on "Introduction to Python Programming". ▪ Capstone projects coordination and supervision. <p>Technische Universität Berlin 2020-2021</p> <p>Teaching Assistant : Distributed and Operating System Seminar</p> <ul style="list-style-type: none"> ▪ Prepared and organized research topics for seminar students. ▪ Guided students in developing research ideas, crafting their reports, and preparing presentations. ▪ Managed grading and provided feedback on student work. <p>Hackathon: Hack the fog – http://www.fogguru.eu/living-lab/hackthefog/ 2021</p> <ul style="list-style-type: none"> ▪ Coordinator and Teacher ▪ Delivered lectures on "Using Node-Red for the IoT and fog platform". ▪ Supervised and mentored participating teams. 	

**ADVISING &
MENTORING**

07/2023 - Present: Hetvi Shastri (Ph.D.)
09/2023 - 05/2024: Khai Nguyen (MSc)
08/2022 - 06/2023: Xiangyu Wu (MSc, University of Science and Technology of China)
06/2024 - Present: Riley Kim Connell (BSc., REU)
Summer, 2024: Akshay Prabhu (MSc., Summer Intern)
09/2020 - 11/2021: +4 BSc./MSc. students in research seminar (Technische Universität Berlin)
09/2023 - Present: +3 MSc. students in *Independent studies*.