Sina Keshvadi

Dr. Sina Keshvadi, P.Eng.
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WORK EXPERIENCE

2022 - Present   **Assistant Professor**
Engineering Dept., Faculty of Science
Thompson Rivers University, Kamloops, BC, Canada

2022 - 2022   **Research Scientist**
Data-Driven Networking Protocols Team
Huawei Technologies Canada, Toronto, ON, Canada

2020 - 2021   **Sessional Instructor**
Computer Science Dept., Faculty of Science
University of Calgary, Calgary, AB, Canada

2012 - 2017   **Assistant Professor - Teaching Stream**
Computer Science and IT Dept.
Payame Noor University, Bushehr, Iran

EDUCATION

2017 - 2021   **PhD in Computer Science**
University of Calgary, Calgary, Alberta, Canada
Advisor: Prof. Carey Williamson
Thesis: Traffic Characterization of Social Network Applications

2009 - 2011   **M.Eng.Sc. in Computer Engineering - Software**
Islamic Azad University, Ahvaz, Iran
Advisor: Prof. Amir Masoud Rahmani
Thesis: Design a Recommender System in a P2P File Sharing System

2005 - 2009   **B.S. in Computer Science**
Payame Noor University, Shiraz, Iran

PUBLICATIONS

PEER-REVIEWED CONFERENCE PUBLICATIONS

2025   Nithiya Shri Muruganandham and **Sina Keshvadi**, "Assessing the Network Security Threats Posed by Unregulated Free Live Streaming Services", In *2025 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, Vancouver, Canada, 2025.

2023   **Sina Keshvadi** and Yogesh Sharma, "Exploring HTTPS Certificate Ecosystem: Analyzing the Entire IPv4 Address Space", In *2023 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, Regina, Canada, September 2023.

2023   **Sina Keshvadi** and Yogesh Sharme, "Enhancing Video Streaming Quality of Service with Software-Defined Networking and Network Slicing: A Scalable AV1 Approach", In *2023 IEEE 19th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, pp. 255-260, Montreal, Canada, June 2023.

2021   **Sina Keshvadi** and Carey Williamson, "An Empirical Measurement Study of Free Live Streaming Services", *Passive and Active Measurement: 22st International Conference (PAM 2021)*, pp 111-127, Online Event, March 2021.

2020   **Sina Keshvadi**, Mehdi Karamollahi, and Carey Williamson, "Traffic Characterization of Instant Messaging Applications: A Campus-Level View", *IEEE 45th Conference on Local Computer Networks (LCN)*, pp. 225-232, Sydney, Australia, November 2020.

2020   **Sina Keshvadi** and Carey Williamson, "MoVIE: A Measurement Tool for Mobile Video Streaming on Smartphones", *Proceedings of the ACM/SPEC International Conference on Performance Engineering*, pp. 230-237, Edmonton, AB, Canada, April 2020.

2019   Steffen Berg Klenow, Carey Williamson, Martin Arlitt, and **Sina Keshvadi**, "Campus-level Instagram Traffic: A Case Study", *IEEE 27th International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS)*, pp. 228-234, Rennes, France, October 2019.

JOURNAL ARTICLES

2023   **Sina Keshvadi**, Shuihai Hu, Geng Li, and Yi Lian, "OpenData: A Framework to Train and Deploy ML Solutions in Wide-Area Networks," In *IEEE Network*, 2023.

2017   **Sina Keshvadi**, A. M. Rahmani, and H. Rostami, "Recommend Top-K Most Downloaded Files in the Chord-based P2P File-Sharing System", *Peer-to-Peer Networking and Applications, Springer*, pp. 208-215, 2017.

Engineering Education Publications

2025 — Matia Landry, **Sina Keshvadi**, and Geoff Fink, "The Missing Software Engineering Course for Developing Essential Skills for Co-Op Success", In *2025 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, Vancouver, Canada, 2025.

2025 — Raiden Yamaoka, Shaylee Broadfoot, Catherine M. Tatarniuk, and **Sina Keshvadi**, "StudyHub: A Virtual Sanctuary for Focused Studying and Connection," In *Canadian Engineering Education Association (CEEA25)*, Montreal, Canada, 2025.

2025 — Shaylee Broadfoot, Raiden Yamaoka, Catherine M. Tatarniuk, and **Sina Keshvadi**, "Developing an Online Cybersecurity Literacy Awareness Module for Post-Secondary Students," In *Canadian Engineering Education Association (CEEA25)*, Montreal, Canada, 2025.

2024 — **Sina Keshvadi**, Geoff Fink, and Catherine M. Tatarniuk, "The Development of an Extracurricular Course to Reduce the Knowledge Gap Between Industry and Academia in a Software Engineering Degree Program," In *Canadian Engineering Education Association (CEEA24)*, Edmonton, Canada, 2024.

2024 — **Sina Keshvadi**, Leanne Mihalicz, and Mikhayla Maurer, "Navigating the Software Engineering Landscape: A Career Mentorship Program for Academic-to-Industry Transition," In *Canadian Engineering Education Association (CEEA24)*, Edmonton, Canada, 2024.

2023 — **Sina Keshvadi**, "Enhancing Western Organizational Cybersecurity Resilience through Tailored Education for Non-Technical Employees", In *2023 IEEE International Humanitarian Technology Conference (IHTC)*, Cartagena de Indias, Colombia, 2023.

Teaching Experience

2022 - Present — Lecturer, Software Engineering Dept., Thompson Rivers University
Software Security (W23, W24, W25)
Web App Development (W23, W24, W25)
Practical Cloud Computing (F23, F24, F25)
Software Requirement and Spec (F22, F23)

2020 - 2021 — Sessional Instructor, Computer Science Dept., University of Calgary
CPSC 441 (Computer Networks) (F20, F21)

2017 - 2021 — Teaching Assistant, Computer Science Dept., University of Calgary
CPSC 447 (Operating Systems) (F17, W18, F18, F19)
CPSC 441 (Computer Networks) (W19)

2012 - 2017 — Lecturer, Payame Noor University, Computer Science and IT Dept., Iran
Principles of Operating Systems (F12, F13, F15, F16)
Computer Networks (W12, W13, W16)

Data Structures and Algorithms (W12, W13, W16)
Web Programming (W15, W16)
C++ Programming(W12, W13, W14)
Compiler Construction (W15)
Computer Simulation (W12)

RESEARCH GRANTS

2025   CSA Research Scholarships.
CSA Group, $6,000
Role: Supervisor
Student Supported: Isaac Latta (undergraduate engineering)

2025   SoTL Scholars Development Program, $2,500
Centre for Excellence in Learning & Teaching, Thompson Rivers University

2025   Internal Research Fund (IRF) Grant, $5,000
Thompson Rivers University

2025   Mitacs Globalink Research Internship, $12,000
(Estimated value; paid directly to student)
Role: Supervisor
Student Supported: Alissa Baumeister (Germany)

2025   Mitacs Globalink Research Internship, $12,000
(Estimated value; paid directly to student)
Role: Supervisor
Student Supported: Damien Rossi (France)

2025   Mitacs Globalink Research Internship, $12,000
(Estimated value; paid directly to student)
Role: Supervisor
Student Supported: Lars Herschbach (Germany)

2024   Undergraduate Research Apprenticeship Fund, $3,000
Thompson Rivers University
UG Student: Michael Nolander

2024   Undergraduate Research Apprenticeship Fund (Co-Investigator), $3,000
Thompson Rivers University
Co-investigator: Dr. Catherine Tatarniuk
UG Student: Shaylee Broadfoot

2024   Undergraduate Research Apprenticeship Fund (Co-Investigator), $3,000
Thompson Rivers University
Co-investigator: Dr. Catherine Tatarniuk
UG Student: Raiden Yamaoka

2024   Google Cloud Research Credits, $7,021 (USD Cloud Credits)
Google

2024	Mitacs Globalink Research Internship, $12,000 (Estimated value; paid directly to student) Role: Supervisor Student Supported: Nithiya Shri Muruganandham (India)
2024	Mitacs Globalink Research Internship, $12,000 (Estimated value; paid directly to student) Role: Supervisor Student Supported: Varun Mayilvaganan (India)
2023	TRU Faculty Research Funds (non-competitive), $7,500 Thompson Rivers University
2023	TRU Internal Research Fund (IRF), $4,824 Thompson Rivers University

SCHOLARSHIPS

2020	Computer Science Alumni Chapter Graduate Scholarship (competitive) University of Calgary
2019	Computer Science Alumni Chapter Graduate Scholarship (competitive) University of Calgary
2019	International Graduate Recruitment Award (non-competitive) University of Calgary

Professional Service

GRADUATE EXAMINATIONS AND COMMITTEE MEMBER

2025	Chair of Defence Committee, (Master's defense) Student: Jamil Reza
2025	Judge, Engineering Capstone Final Project Presentations
2024	Panelist, Final Project Presentations (Master's) Students: Jiaze Wang, Zijian Wang, Max Li, Lei Meng
2024	Moderator, Final Project Presentations (Master's) Students: Qiuhan Li, Yueyue Zhang
2024	Chair of Defence Committee (Master's defense) Student: Komeil Sharafi
2024	Judge, Engineering Capstone Final Project Presentations
2023	Chair of Defence Committee (Master's defense) Student: Bindubritta Acharjee

INTERNAL SERVICE

Thompson Rivers University, Canada

2023 - Present Committee Member for Academic Planning and Priorities Committee (APPC)
Thompson Rivers University

2024 - Present Committee Member for Science Curriculum Review Committee (SCRC)
Faculty of Science

2022 - Present Committee Member for Unspent Professional Allowance Allocation Committee
Faculty of Science

2024 - Present Chair of Engineering Design and Exams Committee
Department of Engineering

2023 - Present Committee Member for Health & Safety Committee
Department of Engineering

2022 - Present Committee Member for Course and Curriculum Planning Committee
Department of Engineering

2022 - Present Committee Member for Department Recruitment & Retention Committee
Department of Engineering

University of Calgary, Canada

2020 - 2021 Graduate Student Representative for Teaching & Learning Committee, Faculty
of Science

EXTERNAL SERVICE

2025 Reviewer: Canadian Engineering Education Association (CEEA25) Conference

2025 Reviewer: Thompson-Okanagan Teaching & Learning Conference Conference

2024 - Present Researcher Member, ACCP Alliance Canada

2024 - Present Reviewer: Canadian Journal of Learning and Technology

2023 - Present AWS Academy Educator at TRU

2023 - Present Reviewer: Journal of Complex Networks

2023 - Present Reviewer: International Journal of Mobile Network Design and Innovation

2022 - Present Reviewer: IEEE Canadian Journal of Electrical and Computer Engineering

2022 Program Committees: Passive and Active Measurement Conference, 2023

2019 - 2020 Reviewer: International Journal of Sensors, Wireless Communications and
Control

2017 Reviewer: The Journal of Supercomputing

Undergrad Supervision

Thompson Rivers University, Canada

2025   Alissa Baumeister: Mitacs Globalink Research Internship Program

2025   Damien Rossi: Mitacs Globalink Research Internship Program

2025   Lars Herschbach: Mitacs Globalink Research Internship Program

2024-2025   Michael Nolander: Undergrad Research Assistant

2024 - 2025   Shaylee Broadfoot: Undergrad Research Assistant
Co-supervised with: Dr. Catherine Tatarniuk

2024 - 2025   Raiden Yamaoka: Undergrad Research Assistant
Co-supervised with: Dr. Catherine Tatarniuk

2024   Varun Mayilvaganan: Mitacs Globalink Research Internship Program

2024   Nithiya Muruganandham: Mitacs Globalink Research Internship Program

2023 - 2024   Trevor Drayton: Undergrad Research Assistant

2023 - 2024   Megan Rouault: Undergrad Research Assistant

2023 - 2024   Mikhayla Maurer: Undergrad Research Assistant
Co-supervised with: Dr. Leanne Mihalicz

2023   Chris Coulthard: Undergrad Research Assistant

2023   Andrew Peaker, Nicholas Plumtree, and Chase Swanson (first-year engineering students)
2023 Acers Competition (team awarded first place)