

## Education

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### University of Victoria

Ph.D. in Electrical Computer Engineering (GPA:3.9/4.0)

May 2020 – Present

Advisor: Dr. Lin Cai

### Northwestern Polytechnical University

M.Sc. in Computer technology (GPA: 3.82/4.0)

Aug 2017 – May 2020

Advisor: Dr. Shining Li

B.Eng. in Software Engineering

Aug 2012 – May 2016

## Research Experience

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### Computer network

Network Optimization, Protocol Design and Performance Analysis

### 6G network architecture

Delay Guaranteed networking, Intelligent Forwarding, and Routing Protocol Architecture

### Wireless Avionics Intra-Communications

Sub-6G channel modeling, OFDMA, 5G New Radio

## Work Experience

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### Computing Research Institute of Aviation Industry Corporation of China

Dec. 2018 – Dec. 2019

Researcher

Xi'an, China

- Sub-6G (4 200 MHz - 4 400 MHz)channel modeling
- Wireless communication system design based on Universal Software Radio Peripheral (USRP)
- Excellence Research Intern Award Recipient

### New Protocol Architecture Design for 6G

Dec. 2020 – Jul. 2023

Ph.D student

Victoria, Canada

- Self-Evolving and Transformative Protocol Architecture for 6G design
- Updatable eXpress Transport Protocol design
- Delay-Guaranteed Routing Protocol design

## Publications

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- **P. Yang**, T. Chang, L. Cai, “DDR: A Deadline-Driven Routing Protocol for Delay Guaranteed Service” IEEE International Conference on Computer Communications (INFOCOM), Jan 15. 2024.
- **P. Yang**, L. Cai, T. Chang, “DGR: Delay-Guaranteed Routing Protocol” The 20th IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS), July. 2023.
- X. Ren, L. Cai, **P. Yang**, and J. Ji, “Congestion-aware Delay-guaranteed Scheduling and Routing with Renewal Optimization,” Computer Networks, June 2023.
- X. Fan , S. Li , W. Cui , **P. Yang**, G. Huang, ”Mixed-Numerology Channel Division for Wireless Avionics Intracommunications”, Wireless Communications and Mobile Computing, April. 2022
- **P. Yang**, L. Cai, Z. Huang, J. Pan, ”ROMAM : An Intelligent Distributed Routing Protocol Architecture”, USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2025 (submitted)

## Teaching experience

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LAB Instructor for CSC 111

Jan 2024 - Apr 2024

**Talks**

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**Toward the 6G network architecture**

July 2022

*Wireless Networking Technology Forum Huawei Canada, Victoria, Canada*

- Presented key design principles and challenges for the development of 6G networks, including ultra-low latency, massive connectivity, and enhanced security. Discussed the role of AI-driven network management and potential use cases such as smart cities and autonomous systems.

**Multi-path routing protocol to support Quality of Service**

Sep, 2023

*IEEE MASS 2023, Toronto, Canada*

- Discussed methods to improve network stability in case of congestion and network jamming through the application of multi-path routing protocols, emphasizing their ability to maintain service quality under varying traffic conditions.

**Deadline Driven Routing Protocol**

May 2024

*IEEE Conference on Computer Communications, Vancouver, Canada*

- Presented the Deadline Driven Routing (DDR) protocol, designed to guarantee service with strict delay constraints in real-time communication systems. Discussed the design, implementation, and evaluation of DDR, focusing on its performance in achieving delay guarantees and improving reliability in delay-sensitive applications.

**Enhancing Cloud Computing with Networking Technique**

July 2024

*GenAI and Future Network Forum (Ericsson), Victoria, Canada*

- Explored the integration of advanced networking techniques to enhance the efficiency and scalability of cloud computing infrastructures. Demonstrated how novel routing protocols and optimization strategies can improve cloud service delivery, particularly in large-scale distributed environments.

**Professional Activities**

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**IEEE INFOCOM 2024 Vancouver**

Tech Support for Sessions and Registration from May 20 to 23

May 2024

**IEEE Victoria Section Workshop on Ubiquitous Intelligence**

Poster Competition Workshop

Nov 2023

**Explore University of Victoria**

Organize the activities and introduce the laboratory research achievements.

Nov 2023

**The 11th Multidisciplinary Symposium of Canadian Academy of Chinese Professors**

Volunteered to assist in organizing the event

Jun 2023

**Reviewer**

IEEE INFOCOM (2021–2024)

IEEE/ACM Transactions on Networking (2022–2024)

Computer Networks (2023)

IEEE Internet of Things Journal (2023)

**Awards & Scholarships**

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<b>UVic Graduate Fellowship</b>	2023
For outstanding academic performance.	
<b>Chinese Government Award for Outstanding Self-financed Students Abroad</b>	2023
The highest government award granted by the Chinese government to Chinese doctoral students overseas.	
<b>UVic Graduate Fellowship</b>	2022
For outstanding academic performance.	
<b>UVic Graduate Fellowship</b>	2021
For outstanding academic performance.	
<b>UVic Graduate Fellowship</b>	2020
For outstanding academic performance.	
<b>NWPU Graduate Scholarship</b>	2019
For outstanding academic performance during graduate study	
<b>Excellent Research Intern Achievement</b>	2020
For the contribution to WAIC project	
<b>NWPU Graduate Scholarship</b>	2018
For outstanding academic performance during graduate study	
<b>NWPU Graduate Scholarship</b>	2017
For outstanding academic performance during graduate study	
<b>ACM-ICPC Second Prize of NWPU</b>	2013
International Collegiate Programming Contest	