Yongqiang Deng

Postdoctoral Associate, Ph.D., in Electrical and Computer Engineering

University of Western Ontario, London, ON, Canada

www.yongqiangdeng.com | +1 (226) 977-8782 | ydeng92@uwo.ca

Eligible to obtain a Professional Engineering license in Canada

Employment

Postdoctoral Associate — Jan. 2025–Present

University of Western Ontario, Canada Supervisor: Prof. Jin(Jing) Jiang

Research Engineer — July 2014–May 2017

Chengdu Green Energy and Green Manufacturing Technology R&D Centre, China

Education

University of Western Ontario — London, Canada

Ph.D. in Electrical and Computer Engineering (Supervisor: Prof. Jin Jiang) — Sept. 2017–Dec. 2024

University of Electronic Science and Technology of China — Chengdu, China

MASc. in Mechatronics — Sept. 2011–June 2014

Nanjing Agricultural University — Nanjing, China

B.Eng. in Agricultural Electrification and Automation — Sept. 2007–June 2011

Research Interests

- Optical fiber sensors with applications to energy
- Algorithms for optimal placement and implementations of optical fiber sensors in harsh environments
- Additive manufacturing

Publications

Journals:

- **Yongqiang Deng**, Jing Jiang, “An In-situ Multipoint Optical Fiber Temperature Sensor with Applications to Small Modular Reactors and Thermal Energy Storage Systems”, Progress in Nuclear Energy, vol. 191, (2026) (IF: 3.2).
- **Yongqiang Deng**, Jing Jiang, "A High Spatial Resolution Multipoint Optical Fiber Temperature Sensor with an Interlaced Sheath—Design, Analysis, and Experimental Validation," IEEE Sensors Journal, vol. 25, no. 2, (2024): 2646-2657 (IF: 4.3)
- **Yongqiang Deng**, Jing Jiang. "Optical Fiber Sensors in Extreme Temperature and Radiation Environments: A review." IEEE Sensors Journal Vol. 22 no. 14 (2022): 13811-13834 (IF: 4.3)
- Qiang Huang, Jing Jiang, and **Yongqiang Deng**, "Evaluation of Ionizing Radiation Effects on Device Modules Used in Wireless-Based Monitoring Systems" Journal of Electronic Testing Vol. 36 Iss. 4 (2020):499-508 (IF: 0.596)
- Qiang Huang, Jing Jiang, and **Yongqiang Deng**, "Comparative Evaluation of Six Wireless Sensor Devices in a High Ionizing Radiation Environment" IET Wireless Sensor Systems Vol. 10 Iss. 6 (2020): 276-282 (IF: 2.58)
- Qiang Huang, Jing Jiang, and **Yongqiang Deng**, "Comparative Evaluation of Three Wireless Sensor Network Transceivers in a High Radiation Environment" EPJ Web of Conferences Vol. 225 (2020): 08007-08011(IF: 0.184)

Patent:

- Jing Jiang, **Yongqiang Deng**, “System and method for a sensor cable for high spatial resolution multipoint temperature sensing”, PCT Patent Acquired.

Conference:

- Yanqiu Chen, **Yongqiang Deng**, Yu Liu, Jin Jiang, How Precise Can Direct Ink Writing Move To _ Studied by A Latest System, The American Society of Mechanical Engineers Conferences (2019), Paper Number: 98445.
- Yu Liu, **Yongqiang Deng**, Yanqiu Chen, Peishi Yu, Junhua Zhao, Jin Jiang. New Digital Printing Process for Manufacturing of Conductive Patterns in Flexible Electronics, (2017), 33rd International Conference on Digital Printing Technologies.

Workshops:

- **Yongqiang Deng**, and Jing Jiang, "Optical Fiber Sensors (OFSs) Based Monitoring Applications in Small Modular Reactors (SMRs)", 15th Annual UNENE I&C Workshop, 2019, Toronto, ON, Canada
- **Yongqiang Deng**, and Jing Jiang, "Potential applications of Optical Fiber Sensors (OFSs) for monitoring applications in Small Modular Reactors (SMRs)", 14th Annual UNENE I&C Workshop, 2018, Toronto, ON, Canada

Before doctoral research

Journal:

- Xiong Jin, **Yongqiang Deng**, et al. Material design and process development of electrostatically patterning silver capsuled composite particle for preparing conductive tracks on a flexible substrate. Composites Part B: Engineering, 2016, 105: 111-115.
- Hao Wang, **Yongqiang Deng**, He J, et al. Subwavelength light focusing of plasmonic lens with dielectric filled nanoslits structures. Journal of Nanophotonics, 2014, 8(1): 083079.
- Xiaowei Zhu, Yanqiu Chen, Yu Liu, **Yongqiang Deng** et al. Additive manufacturing of elastomeric foam with cell unit design for broadening compressive stress plateau. Rapid Prototyping Journal, 2018, 24(9):1579-1585.
- Hailiang Yan, Yanqiu Chen, **Yongqiang Deng**, et al. Coaxial printing method for directly writing stretchable cable as strain sensor. Applied Physics Letters, 2016, 109(8): 083502.

Internships

- “Experimental investigation of using optical fiber sensors for monitoring pipe vibrations and potential applications in CANDU power plants”, 1st May 2023 to Present, founded by Mitacs, Internship Ref.: IT35683.
- “Feasibility Study of using Fiber Optical Sensor Technologies for Detecting Flow-induced Vibrations on Feeder Pipes”, 1st June 2022 to 30th September 2022, founded by Mitacs, Internship Ref.: IT30478.

Teaching Experience

Teaching Assistant

Jan. 2019–April 2021

ECE 4439B Conventional, Renewable, and Nuclear Energy, Western University

Jan. 2018–April 2019

MSE 2202 Introduction to Mechatronic Design, Western University

Award

- Hydro One Scholarship 2021, Canada
- A Canada's Distinguished Dissertation Award, 2025 (nominated by ECE, UWO)

Additional Information

- Programming: Matlab, Labview, Python
- Software: COMSOL, SolidWorks, Altium, Fusion 360, Blender