Jeong Min Kong

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Background

- Nationality: **Canada**
- Country of Birth: **Republic of Korea**

Education

- **University of California, Los Angeles** - **Ph.D. in Electrical and Computer Engineering** *2024 - 2028*
  -Advisor: Professor **Ian Roberts**
  -Received the *UCLA Electrical and Computer Engineering Departmental Award (Fellowship)*
- **University of Toronto** - **M.A.Sc. in Electrical and Computer Engineering** *2022 - 2024*
  -Advisor: Professor **Elvino Sousa**
  -Received the *Edward S. Rogers Sr. Graduate Scholarship and Research Fellowship*
- **University of Toronto** - **B.A.Sc. in Electrical and Computer Engineering (Honors)** *2016 - 2022*
  -Major in Communications, Signal Processing, and Photonics
  -Awarded the *J. E. Reid Memorial Prize*, which is given to the graduating undergraduate student with the highest aggregate marks in electronic communications
- **Regiopolis-Notre Dame Catholic Secondary School** - **O.S.S.D.** *2012 - 2016*

Research Position

- **Researcher** - Dept. of Electrical and Computer Engineering, UCLA *2024/09 - Present*
  Advisor: Professor **Ian Roberts**
- **Researcher** - Dept. of Electrical and Computer Engineering, University of Toronto *2022/09 - 2024/04*
  Advisor: Professor **Elvino Sousa**
- **Research Assistant** - Dept. of Mathematics, University of Toronto *2021/05 - 2021/08*
  Advisor: Professor **Adrian Nachman**
- **Research Intern** - Huawei Mathematical and Algorithmic Sciences Lab *2020/05 - 2021/04*
  Advisor: Professor **Merouane Debbah** and Professor **George Alexandropoulos**
- **Research Student** - Dept. of Physics, The University of Tokyo *2018/11 - 2019/02*
  Advisor: Professor **Kathrin Wimmer**

Publication

- Jeong Min Kong and Ian P. Roberts, “Active Beam Learning for Full Duplex mmWave Systems”, *2024 Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, USA, 2024, pp. 1-5.
- Jeong Min Kong and Elvino Sousa, “Piggybacking on UAV Package Delivery Systems to Simultaneously Provide Wireless Coverage: A Deep Reinforcement Learning-Based Trajectory Design”, *2024 IEEE Conference on Computer Communications (INFOCOM) Workshop*s, Vancouver, BC, Canada, 2024, pp. 1-6.
- Jeong Min Kong and Elvino Sousa, “Adaptive Ratio-Based-Threshold Gradient Sparsification Scheme for Federated Learning”, *2023 International Symposium on Networks, Computers and Communications (ISNCC)*, Doha, Qatar, 2023, pp. 1-5.

Skill

- **Language**: English, Korean
- **Programming Language**: Python, C++, C, MATLAB, Simulink, Julia, GEANT4, ROOT, HTML, CSS, LaTeX, Excel
- **Programming Library**: NumPy, SciPy, Matplotlib, Tkinter, Pandas, PyTorch, TensorFlow

- **Coursework**: Communication Systems, Digital Communications, Wireless Communications/Advanced Cellular Systems (4G/5G), Information Theory, Detection and Estimation Theory, Game Theory and Evolutionary Games, Optical Communications and Networks, Multimedia Systems, Signals and Systems, Optics, Fields and Waves, Electric and Magnetic Fields, Quantum and Semiconductor Physics, Algorithms and Data Structures, Artificial Intelligence, Medical Imaging, Multivariable and Vector Calculus, Complex Analysis, Probability Theory and Applications, Differential Equations, Linear Algebra, Engineering Economics

Teaching Assistant

- **MAT290** - **Advanced Engineering Mathematics** | University of Toronto *Fall 2023*
  Held weekly tutorial sessions for 30 undergraduate students.
- **ECE316** - **Communication Systems** | University of Toronto *Spring 2023, Spring 2024*
  Held weekly tutorial and/or lab sessions for 25 to 45 undergraduate students, graded midterms and final exams.
- **ECE472** - **Engineering Economics** | University of Toronto *Fall 2022, Spring 2023*
  Held weekly tutorial sessions for 45 to 60 undergraduate students, graded final exams.

Other Activities

- **Member of the Technical Program Committee**
  2025 IEEE Wireless Communications and Networking Conference (WCNC)
- **Member of the Technical Program Committee**
  2024 IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)
- **Member of the Technical Program Committee**
  2024 IEEE Wireless Communications and Networking Conference (WCNC)

Award

- **UCLA Electrical and Computer Engineering Departmental Award (Fellowship)** *2024*
  Issued: UCLA
- **Edward S. Rogers Sr. Graduate Scholarship and Research Fellowship** *2022*
  Issued: University of Toronto
- **J. E. Reid Memorial Prize** *2022*
  Issued: University of Toronto
- **President's Scholarship** *2016*
  Issued: University of Toronto
- **Mary Alice Murray Scholarship** *2016*
  Issued: City of Kingston
- **Research Assistant Fellowship** *2019* (*Declined*)
  Issued: Nobel Laureate in Physics Professor Theodor Haensch's Group at the Max Planck Institute of Quantum Optics
- **2nd Place**, **Microsoft College Team Coding Competition** *2017*
  Issued: Microsoft and University of Toronto

Reference

- **Ian P. Roberts, Assistant Professor**
  Dept. of Electrical and Computer Engineering, UCLA, Los Angeles, USA
  Contact: ianroberts@ucla.edu
- **Elvino Sousa**, **Professor**
  Dept. of Electrical and Computer Engineering, University of Toronto, Toronto, Canada
  Contact: es.sousa@utoronto.ca
- **Adrian Nachman**, **Professor**
  Dept. of Mathematics, University of Toronto, Toronto, Canada
  Contact: nachman@math.toronto.edu
- **Merouane Debbah**, **Professor and Director**
  6G Centre, Khalifa University, Abu Dhabi, UAE

Contact: merouane.debbah@ku.ac.ae

- **Kathrin Wimmer**, **Researcher**
  GSI Helmholtz Centre for Heavy Ion Research, Darmstadt, Germany
  Contact: k.wimmer@gsi.de
- **Raviraj Adve**, **Professor**
  Dept. of Electrical and Computer Engineering, University of Toronto, Toronto, Canada
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