# Harry (Hyeong-Seok) Oh

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## EDUCATION

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| **University of California, Berkeley** | **In-Progress Ph.D.**, Electrical Engineering and Computer Science, GPA: 4.0/4.0<br>Major: Integrated Circuits, Minor: Artificial Intelligence<br>2024 **M.S.**, Electrical Engineering and Computer Science |
| **Seoul National University** | 2021 **B.S.**, Electrical Engineering and Computer Science, GPA: 4.16/4.3 |
| **ETH Zurich** | 2018 Exchange Student |

## RESEARCH EXPERIENCE

My research areas are 1. electronic-photonic integrated systems for data communication and biomedical sensing, and 2. analog/mixed-signal circuit design

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| **University of California, Berkeley**<br>EECS Department<br>(Berkeley, CA, USA) | 8/2021 – now | **Graduate Student Researcher**<br>Berkeley Wireless Research Center<br>Supervisors: Prof. Jun-Chau Chien, Prof. Vladimir M. Stojanović, and Prof. Ali M. Niknejad |
| **Seoul National University**<br>EECS Department<br>(Seoul, South Korea) | 03/2014 – 02/2021<br>2 years absent for military service | **Undergraduate Student Researcher**<br>Supervisors: Prof. Deog-Kyoon Jeong, and Prof. Woo-Seok Choi |

## TEACHING EXPERIENCE

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| **University of California, Berkeley**<br>EECS Department<br>(Berkeley, CA, USA) | Fall 2023 | **Graduate Student Instructor**<br>Digital Design and Integrated Circuits<br>Supervisor: Prof. Borivoje Nikolic |
| **Seoul National University**<br>EECS Department<br>(Seoul, South Korea) | Fall 2018 | **Undergraduate Student Instructor**<br>Digital Logic Design and Lab<br>Supervisor: Prof. Jangwoo Kim |

## INDUSTRY EXPERIENCE

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| **Ayar Labs**<br>AMS/Firmware Team | 05/2023 – 08/2023 | **Intern**<br>Supervisor: Dr. Pavan Bhargava |

## PUBLICATIONS AND PAPERS

- **H.-S. Oh**†, X. Zhang†, M. Singh†, R. Wang†, A. Khodkumbhe, R. Li, D. Čabrić, A. M. Niknejad, J. Chien, V. M. Stojanović, M. A. Popović, "Efficient wideband RF/mmwave-to-optical signal transduction by a monolithic CMOS LNA and photonic molecule modulator," *CLEO(Conference on Laser and Electro-Optics)*, 2025. †Equally Credited Authors (ECAs)
- **H.-S. Oh**†, X. Zhang†, M. Singh†, A. Khodkumbhe, R. Wang, R. Li, D. Onural, V. M. Stojanović, D. Čabrić, A. M. Niknejad, J. Chien, M. A. Popović, "High-Efficiency mmWave-to-Optical Converter with $>$ 30dB Sideband SNR on a Monolithic Integration Platform," *CLEO(Conference on Laser and Electro-Optics)*, 2025. †Equally Credited Authors (ECAs)
- **H-S. Oh**†, C. Adamopoulos†, S. Buchbinder, P. Zarkos, P. Bhargava, A. Gharia, A. M. Niknejad, M. Anwar, V. M. Stojanović, "Monolithic Electronic–Biophotonic System-on-Chip for Label-Free Real-Time Molecular Sensing," *JSSC(Journal of Solid-State Circuits)*, 2024. †Equally Credited Authors (ECAs)
- H. Kim, **H-S. Oh**, W. Jung, Y. Song, J. Oh, D-K. Jeong, "A 100MHz-Reference, 8GHz/16GHz, 177fsrms/223fsrms RO-Based IL-ADPLL Incorporating Reference Octupler with Probability-Based Fast Phase-Error Calibration," *ISSCC(International Solid-State Circuits Conference)*, 2022.

## TECHNICAL SKILLS

- ASIC EDA Tool: Cadence Toolchain, ADS
- Photonic Design and Simulation Tool: Ansys Lumerical, BPG(Berkeley Photonics Generator)
- Programming Language: Python, Matlab, C, C++, LaTeX
- Hardware Description Language: Verilog, SystemVerilog
- PCB Design: Altium Designer

## REFERENCES

- **Jun-Chau Chien**: Ph.D. Advisor, Dept. EECS, UC Berkeley ✉ jcchien@berkeley.edu
- **Vladimir M. Stojanovic**: Ph.D. Advisor, Dept. EECS, UC Berkeley ✉ vladimir@ayarlabs.com
- **Ali M. Niknejad**: Ph.D. Advisor, Dept. EECS, UC Berkeley ✉ niknejad@berkeley.edu
- **Deog-Kyoon Jeong**: B.S. Advisor, Dept. EECS, SNU ✉ dkjeong@snu.ac.kr
- **Woo-Seok Choi**: B.S. Advisor, Dept. EECS, SNU ✉ wooseokchoi@snu.ac.kr
- **Pavan Bhargava**: Manager, Director of AMS Design, Ayar Labs ✉ pavan@ayarlabs.com