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S Simon Wong

Professor of Electrical Engineering, Emeritus

CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

Wong studies the fabrication and design of high-performance integrated circuits.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Electrical Engineering
- Member, Bio-X
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Fellow, IEEE

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Adviser, Atheros Qualcomm (1998 - 2018)
- Board Director, Pericom Semiconductor (2006 - 2015)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- PhD, UC Berkeley (1983)

Teaching

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

George Alexopoulos

Publications

PUBLICATIONS

- **An international study presenting a federated learning AI platform for pediatric brain tumors.** *Nature communications*
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- **Dimensional Scaling of Ferroelectric Properties of Hafnia-Zirconia Thin Films: Electrode Interface Effects.** *ACS nano*
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- **A New 1C1T1R nv-TCAM with Simultaneously Hybrid Ferroelectricity and Memristor Layers Feasible for Ultra-highly-dense and High-performance In-memory-searching**
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- **Enhanced Switching Reliability of Hf0.5Zr0.5O2 Ferroelectric Films Induced by Interface Engineering.** *ACS applied materials & interfaces*
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  2023

- **First Observation of Ultra-high Polarization (~ 108 µC/cm2) in Nanometer Scaled High Performance Ferroelectric HZO Capacitors with Mo Electrodes** *IEEE Symposium on VLSI Technology and Circuits*
  Huang, F., Saini, B., Wan, L., Lu, H., He, X., Qin, S., Tsai, W., Gruverman, A., Meng, A., Wong, H., McInytre, P., Wongf, S.
  2023

- **Foundry Monolithic 3D BEOL Transistor + Memory Stack: Iso-performance and Iso-footprint BEOL Carbon Nanotube FET+RRAM vs. FEOL Silicon FET+RRAM** *IEEE Symposium on VLSI Technology and Circuits*
  Srimani, T., Yu, C., Radway, R., Rich, D., Nelson, M., Wong, S., Murphy, D., Fuller, S., Hills, g., Mitra, S., Shulaker, M.
  2023

- **Measurement of Ferroelectric Properties of Nanometer Scaled Individual Metal/Hf0.5Zr0.5O2/Metal Capacitors** *IEEE ELECTRON DEVICE LETTERS*
  Huang, F., Passlack, M., Liew, S., Yu, Z., Lin, Q., Babadi, A., Hou, V., McIntyre, P. C., Wong, S.
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- **4 Bits/cell Hybrid 1F1R for High Density Embedded Non-Volatile Memory and its Application for Compute in Memory** *IEEE Symposium on VLSI Technology and Circuits*
  Chen, W., Huang, F., Qin, S., Yu, Z., Lin, Q., McIntyre, P., Wong, S., Wong, H.
  2022

- **8-Layer 3D Vertical Ru/AlOxNy/TiN RRAM with Mega-Ω Level LRS for Low Power and Ultrahigh-density Memory** *IEEE Symposium on VLSI Technology and Circuits*
  Qin, S., Tung, M., Belliveau, E., Liu, S., Kwon, J., Chen, W., Jiang, Z., Wong, S., Wong, H.
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- **RADAR: A Fast and Energy-Efficient Programming Technique for Multiple Bits-Per-Cell RRAM Arrays** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
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- **3-D Vertical via Nitrogen-Doped Aluminum Oxide Resistive Random-Access Memory** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
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- **A shallow convolutional neural network predicts prognosis of lung cancer patients in multi-institutional computed tomography image datasets** *Nature Machine Intelligence*
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- **Analysis and Design of a Passive Switched-Capacitor Matrix Multiplier for Approximate Computing** *IEEE JOURNAL OF SOLID-STATE CIRCUITS*
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