KUAN-YU CHANG

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PROFESSIONAL EXPERIENCES

Verification IP (VIP) Engineer
Upper Layer Group of PCIe VIP Team
Avery Design Systems, Inc., Taiwan[1]
Jul. 2021 - Apr. 2023

- PCI Express® (PCIe) Revision 6.0.1 – *served as the de facto interconnect of choice for nearly two decades*
  - · Enhance the Bus Functional Model (BFM) to support Flit mode.
  - · Enhance / Develop compliance test cases for Flit mode.
- Streaming Fabric Interface (SFI) – *mapping Load/Store protocols (like PCIe) between an agent and a fabric*
  - · Design the architecture of the BFM.
  - · Lead the schedule of the product development.
  - · Develop the functionality to align with the latest specification.
- Resolved 300+ issues while supporting customers on the bug tracking system (Bugzilla)
  - · **67.6%** Customer Issues / **27.6%** Product Enhancements
- Contributed 10k+ lines of SystemVerilog code on the Concurrent Versions System (CVS, Linux)
  - · **16.36%** PCIe BFM / **29.66%** SFI BFM / **53.98%** Test cases

EDUCATION

National Tsing Hua University, Hsinchu, Taiwan

Advisor: Prof. Chun-Yi Lee

- M.S. in Computer Science – *Jun. 2021* (GPA: **4.22** / 4.30)
  - Thesis Title: *Mapping Nearest Neighbor Compliant Quantum Circuits onto a 2-D Hexagonal Architecture* [NDLTD]
- B.S. in Interdisciplinary Program of Science – *Jun. 2017* (CS-Major GPA: **4.10** / 4.30)
  - Double expertise in *Computer Science* and *Chemistry*

PUBLICATIONS

[1] **K.-Y. Chang** and C.-Y. Lee, "Mapping Nearest Neighbor Compliant Quantum Circuits onto a 2-D Hexagonal Architecture," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol. 41, no. 10, pp. 3373–3386, Oct. 2022, ISSN: 1937-4151. DOI: 10.1109/TCAD.2021.3127868.

[2] Y.-H. Chang, **K.-Y. Chang**, H. Kuo, and C.-Y. Lee, "Reusability and Transferability of Macro Actions for Reinforcement Learning," *ACM Transactions on Evolutionary Learning and Optimization (TELO)*, vol. 2, no. 1, Apr. 2022, ISSN: 2688-299X. DOI: 10.1145/3514260.

[3] Y.-M. Chen, **K.-Y. Chang**, C. Liu, T.-C. Hsiao, Z.-W. Hong, and C.-Y. Lee, "Composing Synergistic Macro Actions for Reinforcement Learning Agents," *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, pp. 1–8, 2022. DOI: 10.1109/TNNLS.2022.3213606.

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[1]Siemens Digital Industries Software acquired Avery Design Systems, Inc. in March 2023. [Read more]