

Curriculum Vitae

Yang-Ming Yeh



Education

- Ph.D., 2016/09 - 2023/2
Graduate Institute of Electronics Engineering, National Taiwan University
- M.S., 2013/09 - 2015/07
Graduate Institute of Electronics Engineering, National Taiwan University
- B.S., 2009/09 - 2013/06
Electrical Engineering, National Taiwan University

Experience

- Teaching Assistant, Integrated Circuit Design (2019 Spring, 2020 Spring, 2021 Spring, 2022 Spring)
- Research Assistant, Research Center for Information Technology Innovation, Academia Sinica (2015-2018)
- Summer Intern, Mediatek (2014)

Honors

- Best Paper Award, IEEE International Conference on Consumer Electronics - Asia (2019)
- Honorary Member of the Phi Tau Phi Scholastic Honor Society of the Republic of China (2015)

Publications

- **Y.-M. Yeh**, and Y.-C. Lu, "MSRCall: A Multi-scale Deep Neural Network to Basecall Oxford Nanopore Sequences," *Bioinformatics*, vol. 38, no. 16, pp. 3877–3884, 2022.
- Y.-Y. Tseng, Y.-L. Wu, Y.-P. Lin, **Y.-M. Yeh**, and Y.-C. Lu "Design of a Power Efficient Accelerator for Reconstructing Videos from Gaussian Mixture Model Data," in *2022 IEEE Region 10 Conference*, 2022, pp. 1-4.
- R.-T. Chien, M.-J. Lin, **Y.-M. Yeh**, and Y.-C. Lu "Traceback Memory Reduction for Three-Sequence Alignment Algorithm with Affine Gap Models," in *14th Asia Pacific Signal and Information Processing Association Annual Summit and Conference*, 2022, pp. 1014-1018.
- H.-W. Liu, Z.-W. Shen, **Y.-M. Yeh**, and Y.-C. Lu "A Nucleotide-Position-Based Data Format for Fast Variant Calling and Its Hardware Analyzer Design," in *2022 IEEE Biomedical Circuits and Systems*

Conference, 2022, pp. 529-533.

- S.-S. Weng, **Y.-M. Yeh**, and Y.-C. Lu "An Alignment-Based Hardware Accelerator for Rapid Prediction of RNA Secondary Structures," in *2022 IEEE International Symposium on Circuits and Systems*, 2022, pp. 2700-2704.
- B.-F. Chen, **Y.-M. Yeh**, and Y.-C. Lu, "CF-NET: Complementary fusion network for rotation invariant point cloud completion," in *2022 IEEE International Conference on Acoustics, Speech and Signal Processing*, 2022, pp. 2275-2279.
- Y.-C. Chou, Y.-P. Lin, **Y.-M. Yeh**, and Y.-C. Lu, "3D-GFE: a three-dimensional geometric-feature extractor for point cloud data," in *13th Asia Pacific Signal and Information Processing Association Annual Summit and Conference*, 2021, pp. 2013-2017.
- Y.-P. Lin, **Y.-M. Yeh**, Y.-C. Chou, and Y.-C. Lu, "Attention EdgeConv for 3d point cloud classification," in *13th Asia Pacific Signal and Information Processing Association Annual Summit and Conference*, 2021, pp. 2018-2022.
- C.-Y. Yang, **Y.-M. Yeh**, and Y.-C. Lu, "Hardware architecture and implementation of clustered tensor approximation for multi-dimensional visual data," in *2020 International Symposium on VLSI Design, Automation and Test*, 2020, pp. 1-3.
- **Y.-M. Yeh**, J. S.-I. Hu, Y.-Y. Lin, and Y.-C. Lu, "Compressing DNN parameters for model loading time reduction," in *2019 4th IEEE International Conference on Consumer Electronics - Asia*, 2019, pp 78-79.
- Y.-Y. Lin, Y.-H. Lin, M.-J. Lin, **Y.-M. Yeh**, and Y.-C. Lu, "A depth-assisted deblurring flow using dual cameras with different exposure times," in *2019 4th IEEE International Conference on Consumer Electronics - Asia*, 2019, pp. 9-10. **(Best Paper Award)**
- C.-F. Chiang, **Y.-M. Yeh**, C.-Y. Yang, and Y.-C. Lu, "Colorization of high-frame-rate monochrome videos using synchronized low-frame-rate color data," in *2019 IAPR Workshop series on Computational Color Imaging*, 2019, pp. 276-285.
- P.-H. Hsu, **Y.-M. Yeh**, C.-M. Yeh, and Y.-C. Lu, "A high dynamic range light field camera and its built-in data processor design," in *2018 IEEE International Symposium on Circuits and Systems*, 2018, pp. 1-5.
- Y.-F. Shih*, **Y.-M. Yeh***, Y.-Y. Lin, M.-F. Weng, Y.-C. Lu, and Y.-Y. Chuang, "Deep co-occurrence feature learning for visual object recognition," in *2017 IEEE Conference on Computer Vision and Pattern Recognition*, 2017, pp. 7302-7311. (*: equal contribution)
- **Y.-M. Yeh**, C.-M. Yeh, Y.-Y. Tseng, and Y.-C. Lu, "An orthogonal matching pursuit processor for sparse-representation-based light field data compression," in *2016 IEEE 5th Global Conference on Consumer Electronics*, 2016, pp. 1-2.

Research Interests

- Machine Learning and Deep Neural Networks
- Hardware Accelerator Architecture and its ASIC/FPGA Realization
- Image Processing and Computer Vision
- DNA Sequence Analysis