

# Stanford

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## Kalhan Koul

Ph.D. Student in Electrical Engineering, admitted Autumn 2019

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### Bio

#### BIO

Kalhan Koul is an EE Ph.D. student at Stanford University supervised by Prof. Priyanka Raina. Previously, he was a Digital Design Intern at Micron and Silicon Labs. He received a B.S. in Electrical Engineering Honors and a B.A. in Plan II Honors (Liberal Arts) from The University of Texas in 2018. His current research focuses on automatically mapping applications, ranging from machine learning to image processing, onto reconfigurable logic devices (CGRAs). Previously, he helped design and tape-out a DNN accelerator utilizing resistive memory (RRAM) for low-energy inference and training. This chip exploited the low read cost and non-volatility of RRAM to store the weights of a DNN model, providing a low energy solution for edge and IoT devices.

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### Publications

#### PUBLICATIONS

- **AHA: An Agile Approach to the Design of Coarse-Grained Reconfigurable Accelerators and Compilers** *ACM Transactions on Embedded Computing Systems*  
Koul, K., Melchert, J., Sreedhar, K., Truong, L., Nyengele, G., Zhang, K., Liu, Q., Setter, J., Chen, P., Mei, Y., Strange, M., Daly, R., Donovick, et al  
2023; 22 (2)
- **CHIMERA: A 0.92-TOPS, 2.2-TOPS/W Edge AI Accelerator With 2-MByte On-Chip Foundry Resistive RAM for Efficient Training and Inference** *IEEE JOURNAL OF SOLID-STATE CIRCUITS*  
Prabhu, K., Gural, A., Khan, Z. F., Radway, R. M., Giordano, M., Koul, K., Doshi, R., Kustin, J. W., Liu, T., Lopes, G. B., Turbiner, V., Khwa, W., Chih, et al  
2022