Sai Sanjeet Yerraguntala

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Education

Indian Institute of Technology Kharagpur / Ph.D.
AUGUST 2021 - PRESENT, KHARAGPUR
Ph.D. student in the Department of Electronics and Electrical Communication Engineering, under the supervision of Prof. Bibhu Datta Sahoo.
CGPA: 9.29/10

Indian Institute of Technology Kharagpur / B.Tech + M.Tech
JULY 2016 - MAY 2021, KHARAGPUR
Dual Degree in the Department of Electronics and Electrical Communication Engineering, specializing in Visual Information Processing and Embedded Systems.
CGPA: 8.09/10

Projects and Experience

Visiting Researcher / University of Minnesota
JANUARY 2023 - MARCH 2023, Prof. Keshab K. Parhi

Invited to the University of Minnesota as a visiting researcher. Worked on scheduling algorithms for high throughput training of Spiking Neural Networks (SNNs).

M.Tech Thesis Project / Neuronal Network Simulator
AUGUST 2020 - MAY 2021, Prof. Aniket Singha
Built a math-based neuronal network simulator that simulates a given network of neurons with either existing biological models or a system of the user's choice.

B.Tech Thesis Project / Network-on-Chip Simulator
JULY 2019 - MAY 2020, Prof. Santanu Chattopadhyay
Built a cycle-accurate NoC simulator that simulates and outputs the schedulability of any given network architecture.

Exams and Achievements

Anveshan 2021 Challenge
Part of one of the two finalist teams in the Anveshan 2021 Design Challenge conducted by Analog Devices India.

IWLS Programming Contest 2021
Part of the third-place winning team, in partnership with the University of Tokyo, in the International Workshop on Logic and Synthesis Programming Contest.

up.AI Challenge 2018
Part of the three-member team which secured 1st place in the up.AI Challenge conducted by the Centre for Artificial Intelligence, IIT Kharagpur.

Publications

S. Sanjeet, S. Konwar, and B. D. Sahoo, "Transition Point Estimation using RC-Filtered Square Wave for Calibration of SAR ADC," *IEEE Trans. on Circuits and Sys. II*, to appear.

S. Sanjeet, R. K. Meena, B. D. Sahoo, K. K. Parhi, and M. Fujita, "IIR Filter-Based Spiking Neural Network," *2023 ISCAS*, Monterey, CA, May. 21-25, 2023.

S. Sanjeet, B. D. Sahoo, and M. Fujita, "Energy-Efficient FPGA Implementation of Power-of-2 Weights Based Convolutional Neural Networks with Low Bit-Precision Input Images," *IEEE Trans. on Circuits and Sys. II*, vol. 70, no. 2, pp. 741-745, 2023.

S. Sanjeet, B. D. Sahoo, and K. K. Parhi, "Low-Energy Real FFT Architectures and their Applications to Seizure Prediction from EEG," *Analog Integrated Circuits and Signal Processing*, pp. 1-12, 2022.

S. Sanjeet, B. D. Sahoo, and K. K. Parhi, "Comparison of Real-Valued FFT Architectures for Low-Throughput Applications using FPGA," *2021 MWSCAS*, pp. 112-115, MI, Aug. 9-11, 2021.

M. Palaria, **S. Sanjeet**, B. D. Sahoo, and M. Fujita, "Adder-Only Convolutional Neural Network with Binary Input Image," *2019 MWSCAS*, pp. 319-322, TX, Aug. 4-7, 2019.