Society News

Manuel Delgado Restituto, Past-President, IEEE Circuits and Systems Society

IEEE CASS Awards 2024

IEEE CAS Society is pleased to congratulate the following recipients of the 2024 IEEE Circuits and Systems Society Awards. The Society is especially proud and happy to honor their outstanding accomplishments and we look forward to their continued involvement and close contact with the CAS Society.

Society and Achievement Awards

IEEE Circuits and Systems Society Charles A. Desoer Technical Achievement Award

Wenwu Zhu

For contributions to visual signal processing and video communications technologies.

IEEE Circuits and Systems Society John Choma Education Award

Gordana Jovanovic Dolecek

For contributions to education in signal processing.

IEEE Circuits and Systems Society Meritorious Service Award (2 awards)

Victor Grimblatt

For his work promoting the microelectronics ecosystem both globally and regionally through CASS activities.

Yong Lian

For long-term outstanding services to the IEEE Circuits and Systems Society as the Vice President for Region 10, Vice President for Publications, and as the President.

Best Paper Awards

IEEE Transactions on Circuits and Systems Guillemin-Cauer Best Paper Award

Alex P. James and Leon O. Chua

For the paper entitled "Analog Neural Computing with Super-Resolution Memristor Crossbars," in *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 68, no. 11, pp. 4470–4481, Nov. 2021, doi: 10.1109/TCSI.2021.3079980.

IEEE Transactions on Circuits and Systems Darlington Best Paper Award

Mohammad Oveisi, Huan Wang, and Payam Heydari

For the paper entitled "A Study of a Millimeter-Wave Transmitter Architecture Realizing QAM Directly in RF Domain," in *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 70, no. 6, pp. 2243–2256, June 2023, doi: 10.1109/TCSI.2023.3255109.

IEEE Transactions on Circuits and Systems for Video Technology Best Paper Award

Zhenxun Yuan, Xiao Song, Lei Bai, Zhe Wang, and Wanli Ouyang

For the paper entitled "Temporal-Channel Transformer for 3D Lidar-Based Video Object Detection for Autonomous Driving," in *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 32, no. 4, pp. 2068–2078, April 2022, doi: 10.1109/TCSVT.2021.3082763.

IEEE Transactions on Very Large-Scale Integration Systems Prize Paper Award

Kun-Chih (Jimmy) Chen, Yuan-Hao Liao, Cheng-Ting Chen, and Lei-Qi Wang

For the paper entitled "Adaptive Machine Learning-Based Proactive Thermal Management for NoC Systems," in *IEEE Transactions on Very Large-Scale Integration (VLSI) Systems*, vol. 31, no. 8, pp. 1114–1127, Aug. 2023, doi: 10.1109/TVLSI.2023.3282969.

IEEE Transactions on Biomedical Circuits and Systems Best Paper Award

Gawsalyan Sivapalan, Koushik Kumar Nundy, Soumyabrata Dev, Barry Cardiff, and Deepu John

For the paper entitled "ANNet: A Lightweight Neural Network for ECG Anomaly Detection in IoT Edge Sensors," in *IEEE Transactions on Biomedical Circuits and Systems*, vol. 16, no. 1, pp. 24–35, Feb. 2022, doi: 10.1109/TBCAS.2021.3137646.

on electrical engineering and related areas. The focus is on finding a solution to a real-life problem based on circuits and systems. The competition takes place in three phases, the first at the chapter level, the second at the regional level, and the final at the world level.

The final this year took place during the 2024 IEEE International Symposium on Circuits and Systems (ISCAS 2024) in Singapore. Four finalists, one for each region—Region 1–7 (USA and Canada), Region 8 (Europe, Middle East, Africa), R9 (Latin America), and Region 10 (Asia, Australia, Pacific) competed on the final stage! The results of the competition are listed below.

2023–2024 Student Design Competition— World Winner

A Wearable Cardiopulmonary Healthcare System For Real-Time Monitoring Of Multi-Modal Physiological Signals

Hanyu Shi, Yichen Long, Zhiyu Huang, Shuxun Li, Jiaxun Zhou, Zhengshi Liang, Yanchang Yang, Changyan Chen, and Yuhang Zhang
Shanghai Chapter

2023–2024 Student Design Competition— Regional Winners

Winner in North America

Ghost in the Machine: High-Performance FPGA Implementation for Deep Learning Acceleration

Maya Borowicz, James Ding, Winnie Fan, Zhongqi Gao, Davis Jackson, Zhengyi Lu, and Sophia Rohlfsen
Houston Chapter

Winner in Europe, Middle East, and Africa
FeatherTech

Victor Kimaru, Sheila Otuko, and Mercy Runo
Kenya Chapter

Winner in Latin America

Low Cost Interactive Embedded Device for Attention Training in Children with ADHD

Dennys J. Báez-Sanchez, María del Cisne Ortega-Cabrera, Luis J. Serpa-Andrade, Luis F. Guerrero-Vásquez, and Jorge O. Ordoñez-Ordoñez
Ecuador Chapter

Society News

IEEE Journal on Emerging and Selected Topics in Circuits and Systems Best Paper Award
Soyed Tuhin Ahmed, Kamal Danouchi, Christopher Münch, Guillaume Prenat, Lorena Anghel, and Mehdi B. Tahoori
For the paper entitled "SpinDrop: Dropout-Based Bayesian Binary Neural Networks with Spintronic Implementation," in *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, vol. 13, no. 1, pp. 150–164, March 2023, doi: 10.1109/JETCAS.2023.3242146.

IEEE Outstanding Young Author Award
Zunjin Zhao, Bangshu Xiong, Lei Wang, Qiaofeng Ou, Lei Yu, and Fa Kuang
For the paper entitled "RetinexDIP: A Unified Deep Framework for Low-Light Image Enhancement," in *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 32, no. 3, pp. 1076–1088, March 2022, doi: 10.1109/TCSVT.2021.3073371.

Best Chapter Awards
Chapter of the Year Award
IEEE CASS Kerala Chapter
Chapter Chair: Sreelal S Pillai.

Regions 1–7 Chapter of the Year Award
IEEE CAS/EDS North Jersey Chapter
Chapter Chair: Durgamadhab (Durga) Misra.

Region 8 Chapter of the Year Award
IEEE CAS Kenya Chapter
Chapter Chair: Allan K. Koech.

Region 9 Chapter of the Year Award
IEEE Peru CAS Chapter
Chapter Chair: Walter Calienes Bartra.

Region 10 Chapter of the Year Award
IEEE CAS Tainan Chapter
Chapter Chair: Cheng-Ta Chiang.

The following awards were not given in 2024.
IEEE Circuits and Systems Society Mac Van Valkenburg Award.
IEEE Circuits and Systems Society Industrial Pioneer Award.
IEEE Circuits and Systems Society Vitold Belevitch Award (not eligible in 2024).