Volume 25, Issue 3
Spring '25

CECS eNEWS

Center for Embedded and Cyber-physical Systems, University of California, Irvine

Inside this Issue:

- CPS IoT Week '25
- Dang to travel as Fulbright Scholar
- Kurdahi Receives Eng Faculty Service Award
- Xu Joins Young Fellow Program
- Gajski Ranked Top Scholar
- Seminars
- Student Profile
- Visitor Profiles
- Publications

CECS Hosts CPS IoT Week 2025



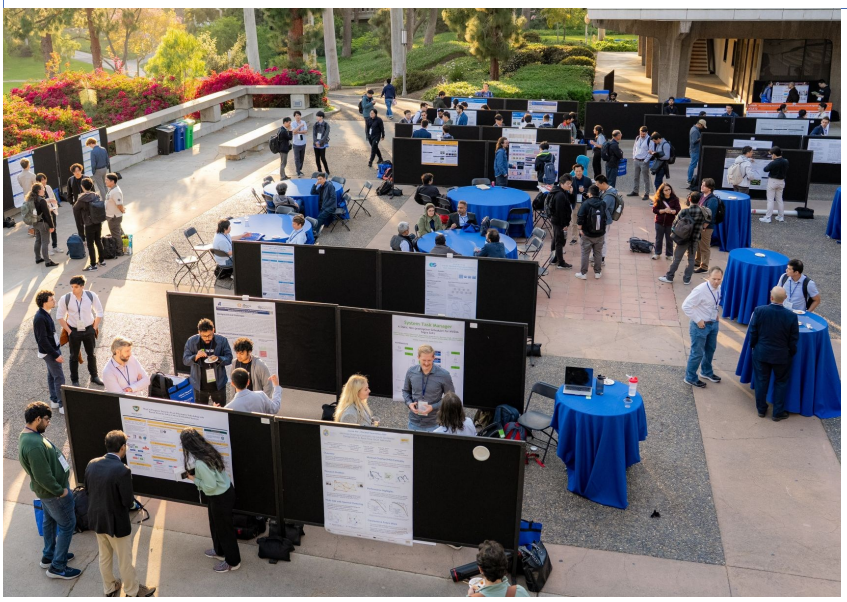
CPS-IoT Week is the premier event on Cyber-Physical Systems and the Internet-of-Things. This year, CECS has the honor to host CPS-IoT Week 2025 at the UC Irvine Student Center!

Over the four days, CECS brought four top conferences (HSCC, ICCPS, SenSys, and RTAS), multiple workshops, tutorials, and competition to more than 500 attendees from all over the world. In addition, participants experienced a Welcome Reception featuring E-SONIC, UCI Samueli School of Engineering's own faculty band, a heated inaugural debate, and an elegant banquet by Balboa Bay.

We want to acknowledge the incredible work and efforts of General Co-Chairs Prof. Mohammad Al Faruque and Prof. Yasser Shoukry, Local Arrangement Chairs Prof. Fadi Kurdahi and Halle Gonzales, Workshop/Tutorial Chair Prof. Salma Elmalaki, and many more CECS staff, volunteers, and sponsors for making CPS IoT Week 2025 an unforgettable week!

See next page for more.

CECS Hosts CPS IoT Week 2025













Dang to Travel to Vietnam as Fulbright Scholar



Next year, CECS affiliated Associate Professor of EECS Quoc-Viet Dang will travel to Vietnam as a Fulbright Scholar to collaborate with Vietnam National University in Hanoi at the University of Engineering and Technology school (VNU-UET). Prof. Dang is one of the four UCI faculties to become a US Fulbright Scholar for the 2025-26 school year. AT VNU-UET, Prof. Dang will work with administrators, teach courses in system software or embedded systems, and conduct joint research projects.

Kurdahi Receives Engineering Faculty Service Award



On June 6, CECS Director and Professor of CS and EECS Fadi Kurdahi received the Faculty Service Award at the 2025 Spring Faculty Awards. As director of CECS and founder of our Master of Embedded & Cyber-Physical Systems (MECPS) program, Prof. Kurdahi made outstanding service contributions to the department of school and to advance our mission of education, research, and outreach. Prof. Kurdahi also partake in many activities aimed at promoting participation and opportunity from under-represented minorities in IoT.

Xu Joins DAC25 Young Fellow Program



PhD student Jinyao Xu, who's under the guidance of CECS affiliated Professor of CS Ian Harris, has been awarded to attend the Design Automation Conference (DAC) 2025 in San Francisco this June as its Young Fellow. Along with sponsored conference registration, the Young Fellow Program provided Jinyao with a travel grant and exclusive sessions for poster presentation, special program, and labs.

Gajski Ranked Top Scholar



CECS Founder Professor Emeritus of EECS Daniel Gajski is a leader in the areas of embedded systems, design, and specification languages. He became an IEEE fellow in 1994 for his work in VLSD, CAD tools, and system level design methodology. In 2010, Prof. Gajski received the European Design and Automation Association Lifetime Achievement Award, recognizing his outstanding contributions to the state of the art in electronics design and automation. In 2024, Prof. Gajski was ranked top 0.5% of all scholars worldwide and top 20 scholar in the area of systems design. We are proud to see that Prof. Gajski's research continue to guide the community year after year!

Yicheng Zhang - "Security in Heterogeneous Systems"



Title: Security in Heterogeneous Systems

Speaker: Yicheng Zhang

Date and Time: Monday, April 21, 11:a.m.

Location: EH 2430

Hosted By: Prof. Zhou Li

Ziqi Zhang - "TEE-Shielded LLM Partition – Efficiently Protect Model Security on User Devices"



Title: TEE-Shielded LLM Partition – Efficiently Protect Model Security on User Devices

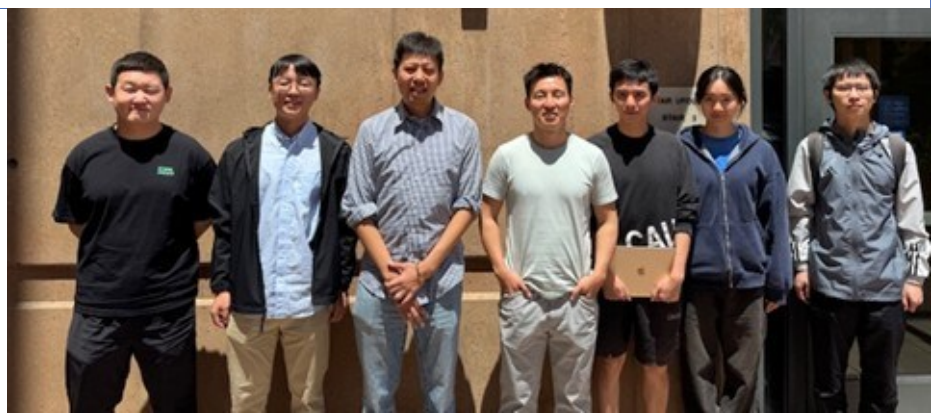
Speaker: Ziqi Zhang

Date and Time: Monday, May 19, 11:a.m.

Location: EH 2430

Hosted By: Prof. Zhou Li

Shaofei Li - "Efficient and Robust Defense against Query-based Black-box Attacks"



Title: Efficient and Robust Defense against Query-based Black-box Attacks

Speaker: Shaofei Li

Date and Time: Monday, May 19, 11:a.m.

Location: EH 2430

Hosted By: Prof. Zhou Li

Mengyuan Li - "Confidential Computing and Trusted Execution Environment: Challenges, Opportunities, and the Future "



Title: Confidential Computing and Trusted Execution Environment: Challenges, Opportunities, and the Future

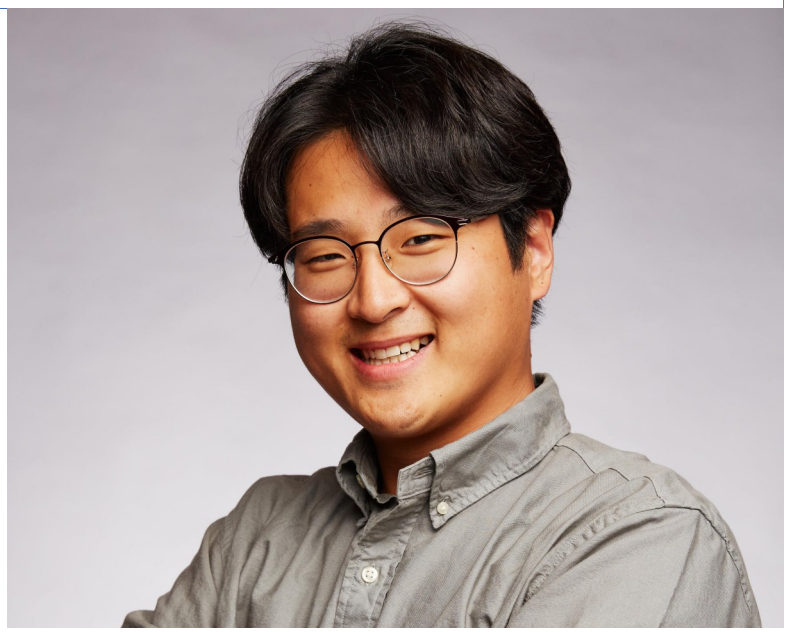
Speaker: Prof. Mengyuan Li

Date and Time: Monday, June 9, 11:a.m.

Location: EH 2430

Hosted By: Prof. Zhou Li

Student Profile: Dongjoo Seo



Dongjoo Seo is a fourth-year Ph.D. candidate in the Department of Computer Science at the University of California, Irvine, advised by Professor Nikil Dutt. His research focuses on operating systems, memory/ storage systems, and real-time resource management for autonomous and edge computing platforms.

Dongjoo's work explores how to improve system predictability and efficiency by bridging the gap between low-level operating system kernel mechanisms and high-level application demands. He has designed tiered memory management systems for autonomous vehicles, optimized I/O subsystems with emerging storage technologies like Flexible Data Placement (FDP), and proposed reinforcement learning-based scheduling frameworks for robotic middleware. His recent paper, "SCHED: Safe CPU Scheduling Framework with Reinforcement Learning and Decision Trees for Autonomous Vehicles," was accepted at IEEE ISQED 2025, showcasing novel OS-level scheduling decisions tailored for AV workloads.

Prior to joining UCI, Dongjoo earned his master's degree from Kookmin University, where he also spent time as a research scholar in the U.S.

Outside of research, Dongjoo enjoys spending time with his family and exploring the intersections of technology and real-world systems. He is passionate about building practical systems that are not only performant but also reliable and sustainable.

Visitor Profile: Jiwon Kim



Jiwon Kim is a Master's student in Computer Science at Kookmin University, South Korea, passionate about building intelligent embodied systems that can perceive, understand, and interact with the physical world. Her research focuses on AI-driven robotic manipulation, with particular interest in multimodal learning, 3D perception and reinforcement learning.

During her Bachelor's studies at Kookmin University, Jiwon participated in the AI-based missing person search system project, where she was responsible for image detection and image similarity search. This project was recognized with the Grand Prize at the Kookmin University Capstone Design Conference and a sponsor award from Netmarble at an external university competition. She also worked as an undergraduate student researcher at the Machine Intelligence Lab, where she continues her research as a Master's student.

As a visiting scholar at UCI, Jiwon collaborates with Prof. Nikil Dutt (DRG, UCI). She is actively engaging with the group to explore new research directions and potential collaborations that can create meaningful synergy. Outside of her academic and research activities, she enjoys watching baseball and swimming, and has a deep love for reading.

Visitor Profile: Soye Kwon



Soye Kwon is a Master's student in Computer Science at Kookmin University, South Korea, passionate about developing intelligent multimodal AI systems for fashion and virtual try-on. Her research focuses on generative models, 3D perception, and multimodal learning, with particular interest in disentangled representation learning and controllable human image generation.

During Kwon's Bachelor's studies at Kookmin University, she participated in AI-driven fashion design projects, where Kwon worked on multimodal dataset construction and image-text alignment for virtual try-on systems. Kwon received recognition for her work, including the Grand Prize at the Kookmin University Capstone Design Conference. She also gained research experience as an undergraduate student researcher at the Machine Intelligence Lab, where Kwon continue her research as a Master's student.

Currently, Kwon is working as a visiting scholar at UCI, collaborating with Prof. Nikil Dutt (DRG, UCI) to explore new approaches for enhancing controllability and realism in generative AI, particularly for human-centered applications. Outside of her academic activities, Kwon enjoy watching baseball, swimming, and reading.

Visitor Profile: Taejin Park



Taejin Park is a Master's student in Computer Science at Kookmin University, South Korea, with a strong interest in robotics, imitation learning, and reinforcement learning. He is passionate about Vision-Language-Action (VLA) models that predict actions from various modalities such as RGB images and text instructions.

During his Bachelor's studies at Kookmin University, Taejin acquired foundational knowledge of AI as an undergraduate researcher at Machine Intelligence Lab (MILAB), where he contributed to a drone-based project for detecting contaminants on solar panels. He is now continuing as a Master's student at Kookmin University.

As a visiting scholar at UCI, Taejin collaborates with Prof. Nikil Dutt and the Dutt Research Group (DRG) at UCI. He is working to engage with DRG to explore VLA model architectures and methods for their efficient application to embodied systems. Outside of his academic and research activities, he is interested in watching and playing basketball, soccer and bowling.

Visitor Profile: Junghyeon Seo



Junghyeon Seo is a master's student in Computer Science at Kookmin University, advised by Prof. Jaekoo Lee. His research centers on deep learning for visual perception, multi-modal and 3D computer vision, large language models, and parameter-efficient fine-tuning techniques.

During his studies he has worked as an undergraduate researcher at both Kookmin University and Korea University, contributed publications on continual test-time adaptation for semantic segmentation and super-resolution–aided object detection, and earned distinctions such as the Grand Prize in the 2024 VAIV × KIISE Generative AI Contest and a Best Paper Encouragement Prize at IPIU 2025. He has also served as a teaching assistant for several programming courses and as a reviewer for top-tier venues including CVPR, BMVC, and ICPR.

As a visiting scholar at UCI, Junghyeon collaborates with Prof. Nikil Dutt on large multimodal models and on-device AI systems for healthcare, building on experience gained in Hyundai's H-Mobility Class where he implemented LiDAR- and camera-based perception pipelines for autonomous driving.

Publications

The following papers were published by CECS affiliates from April 2025 through June 2025 (and unreported papers from previous eNews).

Author, Title, Publication **Conference Proceedings**

Leming Cheng, Hsin-Yu Ting, Sing-Yao Wu, Eli Bozorgzadeh: **Exploiting and Extracting Workload Patterns for Efficient IoT Processing**. MECO 2025: 1-7, June 10-14, 2025, Budva, Montenegro

Bayrem Zarai, Leïla Nasraoui, Marco Levorato, Leïla Saïdane: **POSTER: ACOFAD: 6G-enabled ASIL-Centric Offloading Framework for Autonomous Driving**. WoWMoM 2025: 157-159, May 27-30, 2025, Fort Worth, TX, USA

Walaa Amer, Sani Nassif, Fadi J. Kurdahi: **GDS2SEM: Diffusion-based Layout-to-SEM Post-Fabrication Emulation for IC Validation**. ISCAS 2025: 1-5, May 25-28, 2025, London, United Kingdom

Olga Krestinskaya, Mohammed E. Fouda, Ahmed M. Eltawil, Khaled N. Salama: **Towards Efficient IMC Accelerator Design Through Joint Hardware-Workload Co-optimization**. ISCAS 2025: 1-5, May 25-28, 2025, London, United Kingdom

Jinane Bazzi, Mohammed E. Fouda, Ahmed M. Eltawil: **Reconfigurable Precision INT4-8/FP8 Digital Compute-in-Memory Macro for AI Acceleration**. ISCAS 2025: 1-5, May 25-28, 2025, London, United Kingdom

Matheus Isquierdo, Felipe Sampaio, Bruno Zatt, Nikil D. Dutt, Daniel Palomino: **Exploiting Approximate SRAM for Energy-Efficient Integer Motion Estimation on VVC Encoders**. ISCAS 2025: 1-5, May 25-28, 2025, London, United Kingdom

Diana Romero, Fatima M. Anwar, Salma Elmalaki: **MoCoMR: A Collaborative MR Simulator with Individual Behavior Modeling**. HumanSys@SenSys 2025: 114-119, May 6-9, 2025, Irvine, CA, USA

Mahmoud Srewa, Tianyu Zhao, Salma Elmalaki: **PluralLLM: Pluralistic Alignment in LLMs via Federated Learning**. HumanSys@SenSys 2025: 64-69, May 6-9, 2025, Irvine, CA, USA

Hongzheng Tian, Alok Mishra, Zhiheng Chen, Rolando P. Hong Enriquez, Dejan S. Milojicic, Eitan Frachtenberg, Sitao Huang**: HeteroBench: Multi-kernel Benchmarks for Heterogeneous Systems**. ICPE 2025: 320-333, May 5-9, 2025, Toronto, Canada

Hyun Woo Oh, Hanning Chen, Sanggeon Yun, Yang Ni, Behnam Khaleghi, Fei Wen, Mohsen Imani: **A Multimodal AI Acceleration with Dynamic Pruning and Run-Time Configuration**. FCCM 2025: 293, May 4-7, 2025, Fayetteville, AR, USA

Alexandra Zhang Jiang, Jonathan Ta, Yuqiao Li, Zhou Li, Nalini Venkatasubramanian, Monica D. Kohler, Sang-Woo Jun: **IceSpy: Reconfigurable Edge Accelerator for Scalable and Private Structural Health Monitoring**. FCCM 2025: 198-207, May 4-7, 2025, Fayetteville, AR, USA

Yezi Liu, Wenjun Huang, Yang Ni, Hanning Chen, Mohsen Imani: **White Admitted by Stanford, Black Got Rejections: Exploring Racial Stereotypes in Text-to-Image Generation from a College Admissions Lens**. WWW (Companion Volume) 2025: 1138-1142, April 28-May 2, 2025, Sydney, Australia

Publications

The following papers were published by CECS affiliates from April 2025 through June 2025 (and unreported papers from previous eNews).

Author, Title, Publication **Conference Proceedings**

Xiafa Wu, Brian Demsky: **GenC2Rust: Towards Generating Generic Rust Code from C**. ICSE 2025: 90-102, April 26-May 6, 2025, Ottawa, Canada

Ruochen Jiao, Shaoyuan Xie, Justin Yue, Takami Sato, Lixu Wang, Yixuan Wang, Qi Alfred Chen, Qi Zhu: **Can We Trust Embodied Agents? Exploring Backdoor Attacks against Embodied LLM-Based Decision-Making Systems**. ICLR 2025, April 24-28, 2025, Singapore, Singapore

Mira Hout, Rouwaida Kanj, Ahmed M. Eltawil, Mohammed E. Fouda: **Ternary-Valued Associative Processor Design**. ISQED 2025: 1-10, April 23-25, 2025, San Francisco, CA, USA

Dongjoo Seo, Changhoon Sung, Junseok Park, Ping-Xiang Chen, Bryan Donyanavard, Nikil D. Dutt**: SPEED: Scalable and Predictable EnhancEments for Data Handling in Autonomous Systems**. ISQED 2025: 1-7, April 23-25, 2025, San Francisco, CA, USA

Junyao Wang, Mohammad Abdullah Al Faruque: **Transformer-Based Contrastive Meta-Learning For Low-Resource Generalizable Activity Recognition**. ICASSP 2025: 1-5, April 6-11, 2025, Hyderabad, India

Sanggeon Yun, Ryozo Masukawa, William Youngwoo Chung, Minhyoung Na, Nathaniel D. Bastian, Mohsen Imani: **Continuous GNN-Based Anomaly Detection on Edge Using Efficient Adaptive Knowledge Graph Learning**. DATE 2025: 1-7, March 31-April 2, 2025, Lyon, France

Sungheon Jeong, Hamza Errahmouni Barkam, Sanggeon Yun, Yeseong Kim, Shaahin Angizi, Mohsen Imani: **Exploiting Boosting in Hyperdimensional Computing for Enhanced Reliability in Healthcare**. DATE 2025: 1-7, March 31-April 2, 2025, Lyon, France

Jiseung Kim, Hyunsei Lee, Tajana Rosing, Mohsen Imani, Yeseong Kim: **Late Breaking Results: Hyperdimensional Regression with Fine-Grained and Scalable Confidence-Based Learning**. DATE 2025: 1-2, March 31-April 2, 2025, Lyon, France

Mariam Rakka, Jinhao Li, Guohao Dai, Ahmed M. Eltawil, Mohammed E. Fouda, Fadi J. Kurdahi**: SoftmAP: Software-Hardware Co-Design for Integer-Only Softmax on Associative Processors**. DATE 2025: 1-7, March 31-April 2, 2025, Lyon, France

Mohanad Odema, Luke Chen, Hyoukjun Kwon, Mohammad Abdullah Al Faruque: **Performance Implications of Multi-Chiplet Neural Processing Units on Autonomous Driving Perception**. DATE 2025: 1-7, March 31-April 2, 2025, Lyon, France

Francesco Malandrino, Giuseppe Di Giacomo, Marco Levorato, Carla-Fabiana Chiasserini: **Dependable Distributed Training of Compressed Machine Learning Models**. WoWMoM 2025: 147-156, June 4-7, 2024, Perth, Australia

Publications

The following papers were published by CECS affiliates from April 2025 through June 2025 (and unreported papers from previous eNews).

Author, Title, Publication **Journal Articles**

Deepan Muthirayan, Dileep Kalathil, Pramod P. Khargonekar: **Meta-Learning Online Control for Linear Dynamical Systems**. IEEE Trans. Autom. Control. 70(6): 4163-4169, June, 2025

Sanggeon Yun, Ryozo Masukawa, Hyunwoo Oh, Nathaniel D. Bastian, Mohsen Imani: **A Few Large Shifts: Layer-Inconsistency Based Minimal Overhead Adversarial Example Detection**. CoRR abs/2505.12586, June, 2025

Yousef Awad, Abdulkadir Celik, Ahmed M. Eltawil: **SSB-Based Multi-Target Detection and Joint Velocity, Angle, and Range Estimation in 5G-NR**. IEEE Commun. Lett. 29(6): 1340-1344, June, 2025

Luke Chen, Mohanad Odema, Mohammad Abdullah Al Faruque: **DisCovHAR: Contrastive Attention for Human Activity Recognition Under Distribution Shifts**. IEEE Internet Things J. 12(12): 21973-21983, June, 2025

Yezi Liu, Prathyush Poduval, Wenjun Huang, Yang Ni, Hanning Chen, Mohsen Imani: **Enabling Group Fairness in Graph Unlearning via Bi-level Debiasing**. CoRR abs/2505.09702, May, 2025

Sungheon Jeon, Jihong Park, Mohsen Imani: **Uncertainty-Weighted Image-Event Multimodal Fusion for Video Anomaly Detection**. CoRR abs/2505.02393, May, 2025

Xunzhao Yin, Qingrong Huang, Hamza Errahmouni Barkam, Franz Müller, Shan Deng, Alptekin Vardar, Sourav De, Zhouhang Jiang, Mohsen Imani, Ulf Schlichtmann, Xiaobo Sharon Hu, Cheng Zhuo, Thomas Kämpfe, Kai Ni: **A Homogeneous FeFET-Based Time-Domain Compute-in-Memory Fabric for Matrix-Vector Multiplication and Associative Search**. IEEE Trans. Comput. Aided Des. Integr. Circuits Syst. 44(5): 1856-1868, May, 2025

Jiahao Cai, Hamza Errahmouni Barkam, Mohsen Imani, Kai Ni, Grace Li Zhang, Bing Li, Ulf Schlichtmann, Cheng Zhuo, Xunzhao Yin: **A Scalable 2T-1FeFET-Based Content Addressable Memory Design for Energy Efficient Data Search**. IEEE Trans. Comput. Aided Des. Integr. Circuits Syst. 44(5): 1760-1773, May, 2025

Fardin Jalil Piran, Prathyush Poduval, Hamza Errahmouni Barkam, Mohsen Imani, Farhad Imani**: Explainable Differential Privacy-Hyperdimensional Computing for Balancing Privacy and Transparency in Additive Manufacturing Monitoring**. Eng. Appl. Artif. Intell. 147: 110282, May, 2025

Asmaa Abdallah, Abdulkadir Celik, Mohammad M. Mansour, Ahmed M. Eltawil: **Multi-Agent DRL for Distributed Codebook Design in RIS-Aided Cell-Free Massive MIMO Networks**. IEEE Trans. Commun. 73(5): 3283-3297, May, 2025

Jiayu Zhou, Manas Gaur, Amir M. Rahmani, Sharath Chandra Guntuku, Xiaofan Fred Jiang, Tristan Naumann: **Introduction to the Special Issue on Large Language Models, Conversational Systems, and Generative AI in Health - Part 1**. ACM Trans. Comput. Heal. 6(2): 19:1-19:3, April, 2025

Mohammad Feli, Kianoosh Kazemi, Iman Azimi, Pasi Liljeberg, Amir M. Rahmani: **Multitask learning approach for PPG applications: Case studies on signal quality assessment and physiological parameters estimation**. Comput. Biol. Medicine 188: 109798, April, 2025

Publications

The following papers were published by CECS affiliates from April 2025 through June 2025 (and unreported papers from previous eNews).

Author, Title, Publication

Journal Articles

Hanning Chen, Yang Ni, Wenjun Huang, Hyunwoo Oh, Yezi Liu, Tamoghno Das, Mohsen Imani: **LVLM_CSP: Accelerating Large Vision Language Models via Clustering, Scattering, and Pruning for Reasoning Segmentation**. CoRR abs/2504.10854, April, 2025

Zhuowen Zou, Yang Ni, SungHeon Jeong, Satish Ravindran, Binbin Shi, Phil Chen, Mohsen Imani: **DynHD: Hyperdimensional Computing Approach for Efficient Radar Spectrum Classification**. IEEE Embed. Syst. Lett. 17(2): 95-98, April, 2025

Fardin Jalil Piran, Zhiling Chen, Mohsen Imani, Farhad Imani: **Privacy-Preserving Federated Learning with Differentially Private Hyperdimensional Computing**. Comput. Electr. Eng. 123: 110261, April, 2025

Hamidreza Alikhani, Anil Kanduri, Emad Kasaeyan Naeini, Sina Shahhosseini, Pasi Liljeberg, Amir M. Rahmani, Nikil D. Dutt**: ISCA: Intelligent Sense-Compute Adaptive Co-Optimization of Multimodal Machine Learning Kernels for Resilient mHealth Services on Wearables**. IEEE Des. Test 42(2): 25-34, April, 2025

Efrain Mendez-Flores, Diana Morales, Magnus Egerstedt: **V-Model Based Integration of Mechatronics and Power Electronics for a Solar-Powered Wire-Traversing Robot**. IEEE Access 13: 73261-73284, April 2025

Usman Ali, Magnus Egerstedt: **Optimal Control of Switched Dynamical Systems Under Dwell Time Constraints - Theory and Computation**. IEEE Trans. Autom. Control. 70(4): 2362-2373, April, 2025

Ahmet Enes Duranay, Xhelja Kodheli, Amr M. Abdelhady, Abdulkadir Celik, Ahmed M. Eltawil, Hüseyin Arslan: **Post-Earthquake Network Restoration: Statistical Seismic Road Closure Prediction and Efficient MDRU Routing**. IEEE Open J. Commun. Soc. 6: 671-689, 2025

Other Publications

Shuaike Dong, Siyu Shen, Zhou Li, Kehuan Zhang: **Hunting the Ghost: Towards Automatic Mining of IoT Hidden Services**. CoRR abs/2505.06822, May, 2025

Ziqin Chen, Magnus Egerstedt, Yongqiang Wang: **Ensuring Truthfulness in Distributed Aggregative Optimization**. CoRR abs/2501.08512, May, 2025

Riwa Karam, Ruoyu Lin, Brooks A. Butler, Magnus Egerstedt: **Resource Allocation with Multi-Team Collaboration Based on Hamilton's Rule**. CoRR abs/2505.09016, May, 2025

Brooks A. Butler, Magnus Egerstedt: **Hamilton's Rule for Enabling Altruism in Multi-Agent Systems**. CoRR abs/2505.09841, May, 2025

Zhongqi Yang, Amir M. Rahmani: **Personalized Causal Graph Reasoning for LLMs: A Case Study on Dietary Recommendations**. CoRR abs/2503.00134, May, 2025

Publications

The following papers were published by CECS affiliates from
April 2025 through June 2025 (and unreported papers from previous eNews).

Author, Title, Publication **Other Publications**

Elahe Khatibi, Ziyu Wang, Amir M. Rahmani: **CDF-RAG: Causal Dynamic Feedback for Adaptive Retrieval-Augmented Generation**. CoRR abs/2504.12560, April, 2025

Mohammad Feli, Iman Azimi, Pasi Liljeberg, Amir M. Rahmani: **An LLM-Powered Agent for Physiological Data Analysis: A Case Study on PPG-based Heart Rate Estimation**. CoRR abs/2502.12836, April, 2025

Ye Qiao, Zhiheng Chen, Yian Wang, Yifan Zhang, Yunzhe Deng, Sitao Huang: **COBRA: Algorithm-Architecture Co-optimized Binary Transformer Accelerator for Edge Inference**. CoRR abs/2504.16269, April, 2025

Ye Qiao, Zhiheng Chen, Yifan Zhang, Yian Wang, Sitao Huang: **TeLLMe: An Energy-Efficient Ternary LLM Accelerator for Prefilling and Decoding on Edge FPGAs**. CoRR abs/2504.16266, April, 2025

Yasra Chandio, Diana Romero, Salma Elmalaki, Fatima M. Anwar: **What Sensors See, What People Feel: Exploring Subjective Collaboration Perception in Mixed Reality**. CoRR abs/2504.16373, April, 2025

Jeffrey Lim, Po T. Wang, Won Joon Sohn, Derrick Lin, Shravan Thaploo, Luke Bashford, David Bjanes, Angelica Nguyen, Hui Gong, Michelle Armacost, Susan J. Shaw, Spencer S. Kellis, Brian J. Lee, Darrin Lee, Payam Heydari, Richard A. Andersen, Zoran Nenadic, Charles Y. Liu, An H. Do: **Real-Time Brain-Computer Interface Control of Walking Exoskeleton with Bilateral Sensory Feedback**. CoRR abs/2505.00219, April, 2025

CECS—*promoting creativity and pursuing discovery!*

Center for Embedded and Cyber-Physical Systems, University of California, Irvine

***CECS** Mission Statement:*

To conduct leading-edge interdisciplinary research in embedded systems emphasizing automotive, communications, and medical applications, and to promote technology and knowledge transfer for the benefit of the individual and society.







CECS eNews
Center for Embedded and Cyber-Physical Systems
3211 Engineering Hall
University of California, Irvine

CECS Research Advisory Board
Dr. Sanjiv Narayan, Technical Lead Manager, Google Corp. Sunnyvale, CA

Dr. Dinesh Ramanathan, President and CEO, Avogy Inc. San Jose, CA

Dr. Yervant Zorian, Chief Architect and Fellow at Synopsys, President of Synopsys Armenia