

# Fall 2025 Newsletter

### **ECE News**



Dr. Chunting Mi Named Among the World's Top 1% of Highly Cited Researchers for 2025

Distinguished Professor of Electrical and Computer Engineering at San Diego

State University, has been recognized as one of the world's Highly Cited Researchers 2025 by <u>Clarivate's Web of Science</u>, placing him among the top 1% of scientists worldwide for exceptional research influence and citation impact. Click <u>here</u> to read more.



#### Outreach to Community College at International Microelectronics Symposium

Dr. Arif Ege Engin and Dr. Baris Aksanli organized an outreach event in the IMAPS Symposium 2025, in collaboration with Dr. David Marx (PSY)

and Professor Octavio Ortiz (Imperial Valley College). Click <u>here</u> to read more.

#### **New Faces**



Dr. Flavio Ponzina obtained his PhD degree in Electrical and Electronic Engineering from École Polytechnique Fédérale de Lausanne, Switzerland, in 2023. He then joined the SEELab at UC San Diego as a postdoctoral scholar and joined SDSU as an

Assistant Professor. He is offering COMPE 361 Advanced Programming in Fall 2025. His research interests include HW-SW co-optimization for embedded machine learning, unsupervised, ensemble, and distributed learning, energy-efficient systems, and processing in-memory acceleration using emerging memory technologies.



Mr. Denis Nunez joins ECE as a Lecturer. He is offering COMPE 475 Microprocessors in Fall 2025. Mr. Nunez is also the T&E Team Lead (Project: UxS STRATCAP Project), NIWC Pacific



Dr. Quang Bach joins ECE as a Lecturer. He is offering EE 200 Analytical Methods for Electrical Engineers in Fall 2025.



Dr. Umut Can Cabuk joins ECE as a Lecturer. He is offering COMPE 271 Computer Organization and COMPE 560 Computer and Data Networks in Fall 2025. Dr. Cabuk also doing software development and consultancy through his own firm, Calimyrna IT and Consulting.

## Research Highlights



Dr. Amir Alimohammad received a grant of \$497,881 from the National Science Foundation's Division of Computing and Communication Foundations. This project introduces a ubiquitous brain—computer interface (uBCI) framework designed to overcome the limitations of current BCIs, which are often rigid and

application-specific. By analyzing neural signals recorded from multiple brain regions through an energy-efficient digital architecture, the uBCl enables adaptable, real-time decoding of user intent for both cognitive and motor functions. This flexible framework supports a wide range of applications, paving the way for more scalable and user-adaptive neural interfaces.



Dr. Chunting (Chris) Mi received a grant of \$840,000 from Gotion Inc. Battery management systems (BMS) are critical in maintaining the safety and longevity of lithium-ion batteries in electric vehicles and energy storage system. Currently, wired BMS is prevalent. However, wired BMS must connect each battery cell

with the BMS via wires, resulting in bucky wire harnessing, large voltage drops which impact the accuracy of measurement and state calculations. In addition, wired BMS is heavy, costly, and contain more failure points. On the contrary, wireless BMS remove the wiring in the BMS, hence, reduce weight, cost, and failure points; increase measurement accuracy, reliability, and scalability. However, wireless BMS, if not designed properly, will be suspectable to signal interference, latency, and EMI issues. In this project, Dr. Chris Mi and his team will work with Gotion Inc. to develop a novel wireless BMS technology and demonstrate how wireless BMS can help increase reliability and measurement accuracy, and reduce weight and cost.

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