



## Special Interest Group on Design Automation ACM/SIGDA E-NEWSLETTER, Vol. 54, No. 11

### SIGDA - The Resource for EDA Professionals

This newsletter is a free service for current SIGDA members and is added automatically with a new SIGDA membership.  
Circulation: 2,700

Online archive: <https://www.sigda.org/publications/newsletter>

# SIGDA News

#### **1. Alchip Announces Tape-out for 2nm Process**

Alchip Technologies Ltd. (Taipei, Taiwan) has said it has taped out a 2nm test chip and expects to see silicon back in the 1Q25.

#### **2. \$4m for US Neuromorphic AI Centre**

The MATRIX AI Consortium at the University of Texas at San Antonio (UTSA) has received a \$4 million grant to fund the Neuromorphic Commons (THOR) project. The multi-university THOR project offers researchers access to a large-scale neuromorphic computing system that is the first-of-its-kind.

#### **3. US Targets Five Projects for \$100m to Boost AI Semiconductor Materials**

The US government has opened its \$100m competition for up to five projects for sustainable semiconductor materials using AI. Projects will range from \$20 million to \$40 million, indicating that there will be up to 5 such schemes for teams with significant experience in artificial intelligence-powered autonomous experimentation (AI/AE).

#### **4. US Funds \$1bn Centre to Take on ASML in EUV Lithography**

The US government is funding a billion dollar research center for next generation EUV process technology, taking on Dutch technology leader ASML. The \$825m EUV Accelerator will be hosted at the Albany NanoTech Complex as the first CHIPS for America R&D flagship facility with additional funding from users. A key player is expected to be US company Applied Materials which competes directly with ASML, which in June opened a similar lab with IMEC in Belgium.

#### **5. Europe Boosts EIC Innovation and Scale Up Funding**

The European Innovation Council (EIC) is to invest €1.4 billion in deep tech and scaling up strategic technologies in 2025, up by €200m on the original plans. The EIC will support European deep tech research and high-potential start-ups with

# Message from the EiC

Dear Readers,

In the November edition, we bring you the latest news and activities in our community, upcoming conferences, paper deadlines, an insightful article on Hardware-Aware Neural Architecture Search (HW-NAS), and job openings worldwide.

Please do not hesitate to write to us if you want to contribute articles and announcements or share your thoughts and feedback.

*Sandeep Chandran,*  
Editor-in-Chief,  
SIGDA e-Newsletter

more funding and better access to scale-up equity funding and several other improvements. The funds were cut back this year.

#### 6. [IBM Expands Quantum Data Center to Advance Algorithm Discovery](https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD_2024_Program_Final.pdf)

IBM has completed the expansion of its Quantum Data Center in Poughkeepsie, New York, which operates the highest number of available utility-scale quantum computers at a single location in the world. These systems are a part of the more than a dozen quantum computers offered to global clients via the IBM cloud.

## SIGDA Awards

### 1. 2024 Ernest S. Kuh Early Career Award @ ICCAD 2024

[https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD\\_2024\\_Program\\_Final.pdf](https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD_2024_Program_Final.pdf)

*Mahdi Nikdast*

*Colorado State University*

*"for outstanding contributions to design methodologies, optimization, and automation targeting emerging integrated photonic systems-on-chip."*

### 2. 2024 Outstanding Service Recognition Award @ ICCAD 2024

[https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD\\_2024\\_Program\\_Final.pdf](https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD_2024_Program_Final.pdf)

*Evangeline Young*

*The Chinese University of Hong Kong*

*"for outstanding service to the EDA Community as ICCAD General Chair in 2023"*

### 3. William J. McCalla ICCAD Best Paper Award @ ICCAD 2024

[https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD\\_2024\\_Program\\_Final.pdf](https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD_2024_Program_Final.pdf)

#### Front End Category

*An Agile Framework for Efficient LLM Accelerator Development and Model Inference*

Lvcheng Chen<sup>1</sup>, Ying Wu<sup>1</sup>, Chenyi Wen<sup>1</sup>, Shizhang Wang<sup>2</sup>, Li Zhang<sup>2</sup>, Bei Yu<sup>3</sup>,  
QI SUN<sup>1</sup>, Cheng Zhuo<sup>1</sup>

<sup>1</sup> Zhejiang University | <sup>2</sup> Hubei University of Technology | <sup>3</sup> The Chinese University of Hong Kong

## SIGDA E-News Editorial Board

*Sandeep Chandran*, EiC

*Debjit Sinha*, past-EiC

*Kenji Qiu*, past-EiC

*Xiang Chen*, AE for News

*Yanzhi Wang*,

AE for Local chapter news

*Xunzhao Yin*,

AE for Awards

*Xun Jiao*,

AE for What is

*Muhammad Shafique*,

AE for What is

*Rajsaktish Sankaranarayanan*,

AE for Researcher spotlight

*Xin Zhao*,

AE for Paper submission

*Ying Wang*,

AE for Technical activities

*Jiaqi Zhang*,

AE for Technical activities

## Back End Category

**“A Neural-Ordinary-Differential-Equations Based Generic Approach for Process Modeling in DTCO: A Case Study in Chemical-Mechanical Planarization and Copper Plating”**

Yue Qian, Lan Chen

*EDA Center: Institute of Microelectronics: Chinese Academy of Sciences and University of Chinese Academy of Sciences*

### **4. ICCAD Ten Year Retrospective Most Influential Paper Award @ ICCAD 2024**

[https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD\\_2024\\_Program\\_Final.pdf](https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD_2024_Program_Final.pdf)

**“OpenTimer: A high-performance timing analysis tool”**

Tsung-Wei Huang and Martin D.F. Wong

*2015 IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*

### **5. Best Reviewer Award @ ICCAD 2024**

[https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD\\_2024\\_Program\\_Final.pdf](https://confcats-event-sessions.s3.amazonaws.com/iccad24/uploads/ICCAD_2024_Program_Final.pdf)

**Jongeeun Lee**

*Ulsan National Institute of Science and Technology (UNIST)*

**Leslie Hwang**

*Arizona State University*

**Lana Josipovic**

*ETH Zurich*

### **6. TEST OF TIME AWARDS @ ESWEEK 2024**

<https://esweek.org/awards-2024/>

## CASES

**Highly Energy and Performance Efficient Embedded Computing through Approximately Correct Arithmetic: A Mathematical Foundation and Preliminary Experimental Validation**

Lakshmi N.B. Chakrapani<sup>1</sup>, Kirthi Krishna Muntimadugu<sup>1</sup>, Avinash Lingamneni<sup>1</sup>, Jason George<sup>2</sup>, and Krishna V. Palem<sup>1</sup>

<sup>1</sup>Rice University | <sup>2</sup>Georgia Institute of Technology

# Paper Deadlines

## **DAC'25 – Design Automation Conference**

San Francisco, CA

Abstracts due: [Nov. 12, 2024](#)

Research Paper Deadline: Nov. 19, 2024

Engineering Tracks Deadline: Jan. 16, 2025

June 22-25, 2025

<http://www.dac.com/>

## **RTAS'25 - IEEE Real-Time and Embedded Technology and Applications Symposium**

Deadline: [Nov. 14, 2024](#)

May 6-9, 2025

<http://2025.rtas.org>

## **HOST'25 – IEEE Int'l Symposium on Hardware-Oriented Security and Trust**

San Jose

Abstracts due: [Dec. 9, 2024](#)

Deadline (winter submission): Dec. 16, 2024

May 5-8, 2025

<http://www.hostsymposium.org>

## **MDTS'25 – IEEE Microelectronics Design & Test Symposium**

Albany, NY

Deadline: [Dec. 15, 2024](#)

Tentative Date: May 19-21, 2025

<http://natw.ieee.org>

## **FCCM' 25 - IEEE International Symposium On Field-Programmable Custom Computing Machines**

Fayetteville, AR

Abstracts due: [Jan. 10, 2025](#)

Deadline: Jan. 17, 2025

May 4-7, 2025

<https://www.fccm.org/>

## **CODES+ISSS**

### ***Temperature-aware Processor Frequency Assignment for MPSoCs Using Convex Optimization***

Srinivasan Murali<sup>1</sup>, Almir Mutapcic<sup>2</sup>, David Atienza<sup>1,3</sup>, Rajesh Gupta<sup>4</sup>, Stephen Boyd<sup>2</sup> and Giovanni De Micheli<sup>1</sup>

<sup>1</sup>EPFL | <sup>2</sup>Stanford | <sup>3</sup>Complutense University of Madrid | <sup>4</sup>University of California

## **EMSOFT**

### ***Symbolic analysis for improving simulation coverage of Simulink/Stateflow models***

Rajeev Alur<sup>1</sup>, Aditya Kanade<sup>1</sup>, S. Ramesh<sup>2</sup>, K.C. Shashidhar<sup>2</sup>

<sup>1</sup>University of Pennsylvania | <sup>2</sup>GM India Science Lab

## **7. BEST PAPER AWARDS @ ESWEEK 2024**

<https://esweek.org/awards-2024/>

## **CASES**

### ***A Dataflow-aware Network-on-Interposer for CNN Inferencing in the Presence of Defective Chipllets***

Harsh Sharma<sup>1</sup>, Umit Ogras<sup>2</sup>, Ananth Kalyanraman<sup>1</sup>, and Partha Pratim Pande<sup>1</sup>

<sup>1</sup>Washington State University | <sup>2</sup>University of Wisconsin Madison

## **CODES+ISSS**

### ***Reliable, Versatile, and Efficient Data Matching in SSD's NAND Flash Memory Chip for Data Indexing Acceleration***

Yun-Chih Chen<sup>1</sup>, Yuan-Hao Chang<sup>2</sup>, and Tei-Wei Kuo<sup>3</sup>

<sup>1</sup>Technische Universität Dortmund | <sup>2</sup>Institute of Information Science, Academia Sinica | <sup>3</sup>Delta Electronics and National Taiwan University

## **EMSOFT**

### ***Thread Carefully: Preventing Starvation in the ROS 2 Multithreaded Executor***

Harun Teper<sup>1</sup>, Daniel Kuhse<sup>1</sup>, Mario Günzel<sup>1</sup>, Georg von der Brüggen<sup>1</sup>, Falk Howar<sup>1</sup> and Jian-Jia Chen<sup>1,2</sup>

<sup>1</sup>TU Dortmund University | <sup>2</sup>Lamarr Institute

# Upcoming Conferences

## **ICCD'24 – IEEE Int'l Conference on Computer Design**

Milan, Italy

Nov. 18-20, 2024

<http://www.iccd-conf.com>

## **MICRO'24 – IEEE/ACM Int'l Symposium on Microarchitecture**

Austin, Texas

Nov. 2-6, 2024

<http://www.microarch.org/micro57>

## **FPT'24 - Int'l Conference on Field-Programmable Technology**

Sydney

Dec. 10-12, 2024

<http://icfpt.org>

## **iSES'24 – IEEE Int'l Symposium on Smart Electronic Systems**

Ahmedabad, India

Dec. 16-18, 2024

<http://www.ieee-ises.org>

## **HiPC'24 – IEEE Int'l Conference on High Performance Computing, Data, And Analytics**

Bengaluru, India

Dec. 18-21, 2024

<http://www.hipc.org>

## **ISED'24 – Int'l Conference on Intelligent Systems and Embedded Design**

NIT Rourkela, Odisha

Dec. 20-22, 2024

<http://isedconf.org>

## **VLSID'25 – International Conference on VLSI Design & International Conference on Embedded Systems**

Bengaluru, India

Jan. 4 - 8, 2025

<https://vlsid.org/>

## **HiPEAC'25: Int'l Conference on High Performance Embedded Architectures & Compilers**

## 8. OUTSTANDING REVIEWERS AWARD @ ESWEEK 2024

<https://esweek.org/awards-2024/>

### CASES

**Hammond Pearce**

University of New South Wales, AU

**Dolly Sapra**

University of Amsterdam, NL

### CODES+ISSS

**Kuan-Hsun Chen**

University of Twente, NL

**Sudeep Pasricha**

Colorado State University, US

### EMSOFT

**Timothy Bourke**

INRIA Paris, FR

**Geoffrey Nelissen**

Eindhoven University of Technology, NL

## 9. COMPETITIONS @ ESWEEK 2024

<https://esweek.org/awards-2024/>

### ACM SIGBED Student Research Competition (SRC) Awards

Graduate Category

- Champion:

**Mengyu Liu**

University of Notre Dame, US

- Second Place:

**Junyeong Park**

University of Central Florida, US

- Third Place:

**Qiang Zhang,**

Hunan University, CN

Barcelona, Spain

Jan. 20-22, 2025

<https://www.hipeac.net/2025/barcelona>

### **ASP-DAC'25 - Asia and South Pacific Design Automation Conference**

Tokyo Odaiba Miraikan, Japan

Jan. 20-23, 2025

<http://www.aspdac.com>

### **FPGA'25 – ACM/SIGDA Int'l**

#### **Symposium on Field-Programmable Gate Arrays**

Monterey, CA

Feb. 27- Mar 1, 2025

<http://www.isfpga.org>

### **ISSCC'25 – IEEE Int'l Solid-State Circuits Conference**

San Francisco, CA

Feb. 16-20, 2025

<http://isscc.org>

### **ISPD'25 – ACM Int'l Symposium on Physical Design**

Austin, Texas

Mar. 16-19, 2025

<http://www.ispd.cc>

### **DATE'25 - Design Automation and Test in Europe**

Lyon, France

Mar. 31 - April. 2, 2025

<http://www.date-conference.com>

### **ISQED'25 - Int'l Symposium on Quality Electronic Design**

San Francisco, CA

Apr. 9-11, 2025

<http://www.isqed.org>

### **ISCAS'25 – IEEE Int'l Symposium on Circuits and Systems**

London, United Kingdom

May 25-28, 2025

<https://2025.ieee-iscas.org/>

## **Embedded System Software Competition (ESSC)**

### ***SafePilot: Toolbox for Assuring LLM-Enabled Cyber-Physical Systems***

Weizhe Xu, Mengyu Liu, Fanxin Kong

*University of Notre Dame*

### ***POLAR-Express: Efficient and Precise Formal Reachability Analysis of Neural-Network Controlled Systems***

Frank Yang, Sinong Simon Zhan, Yixuan Wang, Chao Huang, Qi Zhu

*Northwestern University, University of Southampton*

### ***HISIM: A Tool for Fast Design Exploration of 2.5D/3D/3.5D Heterogeneous Integration for AI Computing***

Zhenyu Wang, Pragnya Sudershan Nalla, Jingbo Sun, A. Alper Goksoy,  
Sumit K. Mandal, Jae-sun Seo, Vidya Chhabria, Jeff Zhang, Chaitali  
Chakrabarti, Umit Y. Ogras, Yu Cao

*Arizona State University, University of Minnesota Twin Cities, University of Wisconsin-Madison, Indian Institute of Science, Cornell Tech*

# What is

**Contributing author:** Smail Niar <smail.niar@uphf.fr>

**AE:** Muhammad Shafique <muhammad.shafique@nyu.edu>

## **What is Hardware-Aware Neural Architecture Search?**

*Smail Niar,*

*Professor, LAMIH/CNRS, Université Polytechnique Hauts-de-France*

Artificial Intelligence (AI) is becoming a leading force in today's computing systems. Inspired by the human brain, AI has been used in various domains: autonomous transportation systems, drones, natural language processing, healthcare, etc. Recently, it has been deployed in mobile systems and Internet of Things (IoT), giving birth to the EdgeAI domain [Singh2023].

Deploying AI applications on the Edge, i.e. closer to where data is generated, rather than in the cloud, has multiple advantages: It reduces data processing delays, it

does not require the permanent connection network, it increases the level of security and finally it reduces energy consumption.

This approach, however, faces a major barrier due to the limited computing power, memory, and electrical energy available on Edge platforms. Consequently, it is necessary to optimize both the AI algorithms being executed and the hardware architectures used in the deployment.

Another challenge is algorithmic in nature. Conventional Deep Learning (DL) algorithms, such as Convolutional Neural Networks (CNNs) or Transformers, require significant time and design effort. As a result, the design of recent CNN models like ResNet or GPT is time-consuming and disregards the limitations and characteristics of Edge platforms. For instance, neither the number of computational units nor their types are considered in the design of these algorithms. Consequently, the deployed model on the edge is suboptimal and does not efficiently utilize the hardware resources.

Hardware-Aware Neural Architecture Search (HW-NAS) [Benmeziane2021] tries to answer this double challenge. On the one hand it makes the design of the AI model automatic and on the other hand it optimizes the deployment on the edge platform. HW-NAS focuses on optimizing neural network architectures not just for accuracy, but also for hardware efficiency. This involves tailoring the design of neural networks to meet specific constraints like latency, energy consumption, or memory usage on a given hardware platform.

HW-NAS consists of 3 main components:

1. Hardware and software search spaces: DL models are automatically synthesized from an input library of operators and connection schemes between these operators. The HW space contains a set of heterogeneous architectures with different types and numbers of processing elements, such as multi-cores, GPUs, FPGA, and in-memory computing architecture [Benmeziane2023]. It may also include different levels of clock frequencies and voltage.
2. The exploration algorithm corresponds to a heuristic, such as evolutionary algorithms, Bayesian optimization or diffusion algorithm [Mecharbat2024], to quickly converge towards promising solutions in the search spaces. Recent HW-NAS use multi-objective approaches in the co-exploration. The goal here is to optimize not only the DL model accuracy but also the hardware efficiency. Multi-objective search allows obtaining not one DL model and one HW architecture, but several optimal solutions with different trade-offs between Accuracy/Speed/Energy/Memory objectives. These Hardware and Software configurations can be dynamically selected and changed during inference to adapt to different running scenarios.
3. Finally, the method for evaluating the performance of the sampled synthesized DL model on the HW configuration. Several fast evaluation methods, referred to as Surrogates, exist in the literature [Bouzidi2022]. This last step is usually followed by a fine-tuning step, such as reducing memory size through quantization or pruning.

In summary, HW-NAS represents an important evolution in the field of EdgeAI and AI design by integrating hardware considerations into the architecture search process. This approach enables the development of networks that are not only accurate but also efficient in terms of execution time and energy consumption. These features are vital in deploying real-world AI applications with specific hardware constraints such as IoT, drones and smartphones.

## References

- [Benmeziane2021] H. Benmeziane, K.El Maghraoui, H. Ouarnoughi, S. Niar, M.Wistuba, N. Wang, “A Comprehensive Survey on Hardware-Aware Neural Architecture Search”. CoRR abs/2101.09336 (2021).
- [Benmeziane2023] H. Benmeziane, C. Lammie, I. Boybat, M. Rasch, M. Le Gallo, H. Tsai, R. Muralidhar, S. Niar, O. Hamza, V. Narayanan, A. Sebastian, K. El Maghraoui, AnalogNAS: A Neural Network Design Framework for Accurate Inference with Analog In-Memory Computing”, arXiv:2305.10459 (2023).
- [Mecharbat2024] L Mecharbat, H Benmeziane, H Ouarnoughi, S Niar, K El Maghraoui, DFUSENAS: A Diffusion-Based Neural Architecture Search, International Joint Conference on Neural Networks, 2024.
- [Bouzidi2022] H. Bouzidi, H. Ouarnoughi, S. Niar, and A. Ait El Cadi. 2022. Performance Modeling of Computer Vision-based CNN on Edge GPUs. ACM Trans. Embed. Comput. Syst. 21, 5, Article 64 (September 2022)
- [Singh2023] R. Singh and S. S. Gill. Edge AI : a survey. Internet of Things and Cyber- Physical Systems, 2023.

# SIGDA Partner Journal

**ACM Transactions on Design Automation of Electronic Systems, TODAES**, publishes innovative work documenting significant research and development advances on the specification, design, analysis, simulation, testing, and evaluation of electronic systems, emphasizing a computer science/engineering orientation. Design automation for machine learning/AI and machine learning/AI for design automation are very much welcomed.

If you are an active researcher in the design and design automation field and would like to be part of the TODAES review board, please fill out the following [reviewer form](#). TODAES recognizes those reviewers that provide timely and high-quality reviews through the [Distinguished Review Board](#). TODAES also recognizes papers and outstanding junior researchers through [best paper](#) and [rookie of the year](#) award. Authors can send their paper submissions on the [manuscript portal](#).

TODAES welcomes special issue proposals from leading researchers and practitioners. Such proposals should be emailed to Joerg Henkel, Senior Associate Editor, at [joerg.henkel@kit.edu](mailto:joerg.henkel@kit.edu).

## Technical Activities

### 1. [Vicor Power Modules Enable 48V EV Power Systems](#)

Vicor Corp. has released three automotive-grade power modules for 48V electric vehicle (EV) systems, which deliver industry-leading power density and support automotive OEM and tier one production in 2025. The BCM6135, DCM3735 and



PRM3735 use AEC-Q100 certified Vicor-designed ICs and have completed the PPAP process with automotive customers...

## 2. [Samsung's 24Gb GDDR7 DRAM Targeted at Next-Gen AI Computing](#)

Samsung Electronics Co. Ltd has developed the industry's first 24Gb GDDR7 DRAM, making it an optimum solution for next-generation applications. With its high capacity and powerful performance, the 24Gb GDDR7 is expected to be widely utilized in various fields that require high-performance memory solutions, such as data centers and AI workstations, extending beyond the traditional applications of graphics DRAM in graphics cards, gaming consoles, and autonomous driving...

## 3. [Startup Builds Cryptography Chip](#)

Fabric Cryptography, which recently completed a \$33 million series A round of investment, is pioneering a brand-new processing unit for cryptography, which it calls the verifiable processing unit (VPU). In an interview with EE Times, CEO Michael Gao said the company will do for cryptography what Nvidia's GPUs and many other startups' chips are doing for AI...

## 4. [Intel and AMD Collaborate to Form x86 Ecosystem Advisory Group](#)

Intel Corp. and AMD have partnered to create an x86 ecosystem advisory group, bringing together technology leaders to shape the future of the world's most widely used computing architecture. The group will focus on identifying new ways to expand the x86 ecosystem by enabling compatibility across platforms, simplifying software development, and providing developers with a platform to identify architectural needs and features to create innovative and scalable solutions for the future.

# Job Positions

## [University of Queensland, Australia](#)

**Job Title:** Research Fellow in Electrical Engineering

**Description:** We are seeking a Postdoctoral Research Fellow's to join Professor Tim Miller and his team focussing on human-centered decision support using artificial intelligence (AI). The research fellow will collaborate with UQ academics Dr Ida Asadi Someh and Dr Tapani Rinta-Kahila from the UQ Business School. The successful candidate will apply their expertise in human-centered AI on a set of projects to investigate the skill development and skill erosion when using AI decision support. The successful candidates will work with the team and external experts to design, implement, and evaluate decision support tools, and to run large-scale experiments and field studies to evaluate the impact of these tools on skill development and skill erosion. It is expected that the successful candidate will contribute to research, some external engagement, and to teaching part of one course per year or supervise thesis students. This is a valuable opportunity to develop a teaching portfolio and an emerging research portfolio when applying for academic and other research positions in the future. For more information, please refer to <https://facultyvacancies.com/research-fellow-in-electrical-engineering.i40443.html>.

## University of Tübingen, Germany

**Job Title:** Research Assistant in Computer Science

**Description:** The working group of Sensory and Sensorimotor Systems, at the Department of Computer Science at the University of Tübingen and at the Max-Planck-Institute for Biological Cybernetics studies the processing of sensory information (visual, auditory, tactile, olfactory) in the brain and the use of this information for directing body movements and making cognitive decisions. The research is highly interdisciplinary and uses theoretical and experimental approaches in humans. Our methodologies include visual psychophysics, eye tracking, fMRI, EEG, TMS in humans. Our department is interdisciplinary, with research activities including human visual psychophysics, eye tracking, fMRI, EEG, TMS. We are looking for a person with a broad technical knowledge base, who loves working in a scientific environment and who is curious, open-minded, and able to adapt and learn new skills and solve new problems quickly. The set of skills that the individual should either already have or can quickly learn includes: MATLAB/Psychtoolbox, Python/OpenCV, Javascript, graphics and display technologies, EEG data taking techniques and similar, eye tracking, optics, electronics/controllers/sensors, etc. For more information, please refer to <https://facultyvacancies.com/research-assistant-in-computer-science.i40420.html>.

## University of Texas Austin, US

**Job Title:** Tenured or tenure-track faculty position

**Description:** The Oden Institute for Computational Engineering and Sciences and the Department of Neuroscience at The University of Texas at Austin have an opening for a tenured or tenure-track faculty position beginning Fall 2025 in the area of Computational Neuroscience. We are interested in candidates with expertise in the development and use of AI and machine learning approaches to solve questions in fundamental and translational neuroscience. Examples include analysis of large-scale, multimodal neural and behavioral recordings, biophysical modeling of molecular and cellular interactions across time scales, and use of digital twins for real time predictive analytics of behavior, circuit function, and molecular interactions. Expertise in fundamental and applied machine learning and artificial intelligence for gaining insights into neuropsychiatric disease states is of particular interest. This search is being conducted jointly between the Oden Institute and the Department of Neuroscience as one of several faculty lines committed to expanding the development of AI for Science and Scientific Machine Learning at UT Austin. The successful candidate will have half of their teaching duties in the Oden Institute's Computational Science, Engineering and Mathematics graduate program and half in the Department of Neuroscience. This position is open to applicants at all ranks: assistant, associate, and full professor, including the possibility of appointment as a chaired professor for candidates with exceptional qualifications. For more information, please refer to <https://facultyvacancies.com/phd-position-in-computational-engineering.i40405.html>.

## Notice to authors

By submitting your article for distribution in this Special Interest Group publication, you hereby grant to ACM the following non-exclusive, perpetual, worldwide rights: to publish in print on condition of acceptance by the editor; to digitize and post your article in the electronic version of this publication; to include the article in the ACM Digital Library and in any Digital Library related services; and to allow users to make a personal copy of the article for noncommercial, educational or research purposes. However, as a contributing author, you retain copyright to your article and ACM will refer requests for republication directly to you.

This ACM/SIGDA E-NEWSLETTER is being sent to all persons on the ACM/SIGDA mailing list. To unsubscribe, send an email to [listserv@listserv.acm.org](mailto:listserv@listserv.acm.org) with "signoff sigda-announce" (no quotes) in the body of the message. Please make sure to send your request from the same email as the one by which you are subscribed to the list.

To renew your ACM SIGDA membership, please visit <http://www.acm.org/renew> or call between the hours of 8:30am to 4:30pm EST at +1-212-626-0500 (Global), or 1-800-342-6626 (US and Canada). For any questions, contact [acmhelp@acm.org](mailto:acmhelp@acm.org).