



## Table of Contents

DOI: 10.1145/3795125.3795126

Letter from the Editor.....	3
SIGAI Annual Report.....	4
Sanmay Das, Louise Dennis, Matt Luckcuck, Nick Mattei, and Alan Tsang	
Interviews with 2019 AAI/ACM SIGAI Doctoral Dissertation Awardees	
2019 AAI/ACM SIGAI Dissertation Award Winner - Jiajun Wu.....	11
Dissertation Title: "Learning to See the Physical World"	
2019 AAI/ACM SIGAI Dissertation Honorable Mention - Aishwarya Agrawal.....	14
Dissertation Title: "Visual Question Answering and Beyond"	
AI Ethics & Policy Feature: Top AI Ethics and Policy Issues of 2025 and What to Expect in 2026.....	18
Larry R. Medsker	
Conference Reports.....	30
Compiled by Ella Scallan	

## Links

SIGAI website: <http://sigai.acm.org/>

Newsletter: <https://sigai.acm.org/main/aimatters/>

Blog: <https://sigai.acm.org/main/blog/>

X: [https://x.com/acm\\_sigai](https://x.com/acm_sigai)

Edition DOI: 10.1145/3774399

## Join SIGAI

Students \$11, others \$25

For details, see <http://sigai.acm.org/>

Benefits: regular, student

Also consider joining ACM. Our mailing list is open to all.

# Letter from the Editor

DOI: 10.1145/3795125.3795127

Dear Members,

Happy New Year, and welcome to this issue of AI Matters for 2026.

In this edition, we open with the ACM SIGAI Annual Report, which reviews our activities over the past year, celebrates the recipients of our three major awards, and outlines priorities for the next two to three years. We then catch up with the 2019 recipients of the AAI/ACM SIGAI Doctoral Dissertation Award. Jiajun Wu, the award winner, talks us through the world of physical scene understanding, while Aishwarya Agrawal, who received an honourable mention, shares her contributions to evaluating computer vision models and offers thoughtful career advice for students and early-career researchers.

We are also delighted to relaunch AI Ethics & Policy regular feature, authored by Prof. Larry Medsker, Co-Editor-in-Chief of the Springer journal AI and Ethics and editor of the forthcoming AI and Ethics Handbook. In this inaugural column, he reflects on key developments in AI policy over the past year and considers what may lie ahead in 2026.

Finally, this issue includes reports and statistics from SIGAI-sponsored conferences held between February and August 2025. If you have attended any SIGAI-affiliated conferences since then and would like to share reflections or observations, please feel free to contact us at [aimatters@sigai.acm](mailto:aimatters@sigai.acm). We may feature selected contributions in a future issue.

Warm regards,

Ella Scallan  
*Editor-in-Chief, AI Matters*

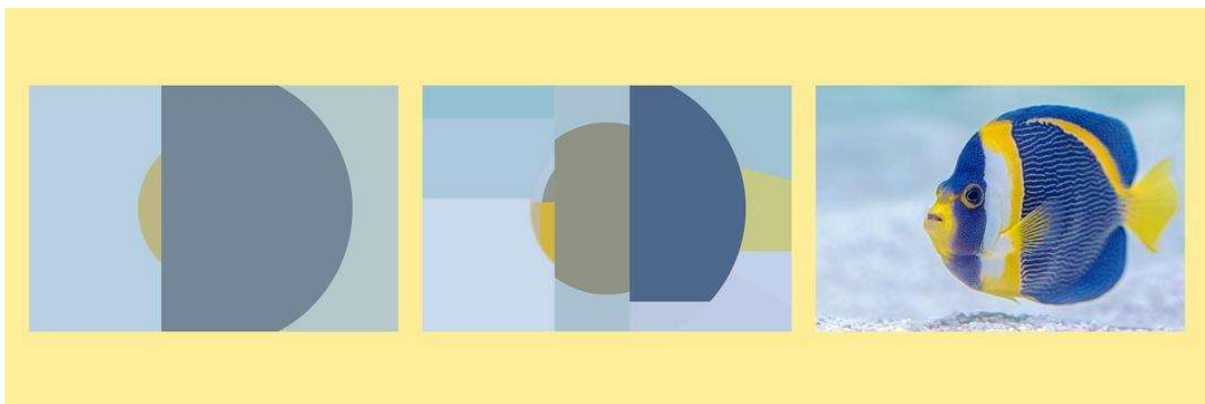


Image credits: Fish - Rens Dimmendaal & David Clode / <https://betterimagesofai.org> / <https://creativecommons.org/licenses/by/4.0/>

## SIGAI Annual Report (July 2024-June 2025)

Sanmay Das, Louise Dennis, Matt Luckcuck, Nick Mattei, and Alan Tsang

DOI: 10.1145/3795125.3795128

### Introduction

ACM SIGAI continues to further the mission of promoting and supporting the growth and application of artificial intelligence (AI) principles and techniques throughout computing research. Each year, we submit a report on SIGAI's activities to the ACM. We like to share this with our membership so you can stay in the loop on the many activities we engage in. In this report, we summarise and highlight SIGAI's activities over 2024/25.

### Executive Summary

SIGAI sponsored 7 AI conferences in 2024/25, will sponsor 7 more in 2026, and supported 23 cooperatively organised conferences. We continue to recognise outstanding AI research with our 3 major awards, as well as best paper awards at our conferences. Furthermore, we participate in broader efforts to help the wider AI community thrive, such as sponsorship of AIHub, and coordinating with major AI organisations via a seat on the Artificial Intelligence Scientific Organizations Coordinating Council.

### Health and viability of SIGAI

SIGAI sponsors and co-sponsors several conferences that are important in their communities and thriving (we note especially that AIES grew remarkably this year, with the number of submissions more than doubling). SIGAI plays an important role as a “connector” between the AI community (including organizations like AAAI and IJCAI) and many other ACM SIGs – several of our conferences are co-sponsored with other SIGs as well as other professional societies. We support the community through grants for special activities, sponsorship of AIHub, and, especially, generous student support for conference attendance.

### Efforts related to diversity, equity, and inclusion

We often fund special projects that support inclusivity in the community. For example, we provide funding for those working in AI Education, which tends to be a less well-funded area, to attend EAAI. We are particularly conscious of trying to broaden participation in our travel award scheme. In the last year, we subsidised the travel expenses and registration of 41 students and one post-doctoral researcher to a variety of conferences. 9 of the students came from institutions in the Global South. Of those whose gender is recorded, 25% identified as female.

## Awards and recipients

SIGAI presents three 3 major awards annually. Complete details and nomination procedures for all awards are available at the SIGAI awards page: <https://sigai.acm.org/main/sigai-awards/>

### ACM SIGAI Autonomous Agents Research Award

This award is presented for excellence in research in the area of autonomous agents. The recipient is invited to give a talk at the International Conference on Autonomous Agents and Multiagent Systems (AAMAS).

The **2025 ACM SIGAI Autonomous Agents Research Award** was presented at AAMAS 2025 in Detroit, Michigan, USA to Professor Shlomo Zilberstein, professor of Computer Science and former Associate Dean of Research at the University of Massachusetts Amherst. His work established the field of decentralized Markov Decision Processes (DEC-MDPs), laying the groundwork for decision-theoretic planning in multi-agent systems and multi-agent reinforcement learning (MARL). These contributions have become a cornerstone of multi-agent decision-making, influencing researchers and practitioners alike. A Fellow of AAAI and the ACM, Professor Zilberstein has received numerous awards, including the UMass Chancellor's Medal, the IFAAMAS Influential Paper Award, and the AAAI Distinguished Service Award.

### ACM SIGAI Industry Award for Excellence in AI

ACM SIGAI also sponsors the ACM SIGAI Industry Award for Excellence in AI, an annual award which is given to an individual or team in industry who has created a fielded AI application that demonstrates the power of AI techniques, via a combination of the following features: novelty of application area, novelty and technical excellence of the approach, importance of AI techniques for the approach and actual and predicted societal impact of the application. The award was not presented in 2025 and we are currently searching for a new lead for this award.

### AAAI/ACM SIGAI Doctoral Dissertation Award

Finally, we also sponsor, jointly with AAAI, the AAAI/ACM SIGAI Doctoral Dissertation Award to recognize and encourage superior research and writing by doctoral candidates in AI. This annual award is presented at the AAAI Conference on AI in the form of a certificate. The awards for 2022-2024 were announced in early Fall of 2025.

The **2024 AAAI/ACM SIGAI Dissertation Award** goes to Shunyu Yao (Ph.D. from Princeton University), whose dissertation "Language Agents: From Next-Token Prediction to Digital

Automation” is recognized for foundational contributions to the study and design of autonomous intelligent agents incorporating large language models.

The committee also awarded Honorable Mentions to Frederik Kunstner (Ph.D. from the University of British Columbia), and Sewon Min (Ph.D. from the University of Washington)

- Frederik Kunstner’s dissertation “Why Do Machine Learning Optimizers That Work, Work?” is recognized for resolving a long-standing open question on the complexity of EM, one of the most widely used AI algorithms, and for theoretical explanations of the behavior of popular neural network optimization routines..
- Sewon Min’s dissertation “Rethinking Data Use in Large Language Models” is recognized for pioneering work on the science and engineering of language models, including better understanding in-context learning and designing nonparametric models for improved retrieval capabilities.

The **2023 award** is shared by Gabriele Farina (Ph.D. from Carnegie Mellon University) and Jonathan Frankle (Ph.D. from Massachusetts Institute of Technology).

- Gabriele Farina’s dissertation “Game-Theoretic Decision Making in Imperfect-Information Games” is recognized for fundamental contributions, in both theory and practice, to learning and equilibrium computation in imperfect-information games.
- Jonathan Frankle’s dissertation “The Lottery Ticket Hypothesis: On Sparse, Trainable Neural Networks” is recognized for significantly advancing our understanding of neural network sparsity, pruning, and training dynamics, including the formulation of the lottery ticket hypothesis.

The committee also awarded an Honorable Mention to Ulrike Schmidt-Kraepelin (Ph.D. from Technische Universität Berlin), whose dissertation “Models and Algorithms for Scalable Collective Decision Making” is recognized for significant contributions to problems of scaling in computational social choice.

The **2022 award** is shared by Alane Suhr (Ph.D. from Cornell University) and Erik Wijmans (Ph.D. from Georgia Tech).

- Alane Suhr’s dissertation “Reasoning and Learning in Interactive Natural Language Systems” is recognized for developing foundational algorithms for continual natural language learning through interaction.
- Erik Wijmans’ dissertation “Emergence of Intelligent Navigation Behavior in Embodied Agents from Massive-Scale Simulation” is recognized for pioneering advances in reinforcement learning for robotics from ultra-large scale simulations.

List of significant papers on new areas from SIGAI conferences

To illustrate the excellent work published in SIGAI sponsored conferences, we list here a selection of the award winning papers from conferences proceedings in 2024-25.

*A Simple, Statistically Robust Test of Discrimination*

Johann Gaebler and Sharad Goel

**Best Paper EAAMO 2024**

*Automating Food Drop: The Power of Two Choices for Dynamic and Fair Food*

Marios Mertzanas Alexandros Psomas, and Paritosh Verma

**Best Student Paper EAAMO 2024**

*Red-Teaming for Generative AI: Silver Bullet or Security Theater?*

Michael Feffer, Anusha Sinha, Wesley H. Deng, Zachary C Lipton, Hoda Heidari

**Best Paper AIES 2024**

*Automate or Assist? The Role of Computational Models in Identifying Gendered Discourse in US Capital Trial Transcripts*

Andrea W Wen-Yi, Kathryn Adamson, Nathalie Greenfield, Rachel Goldberg, Sandra Babcock, David Mimno, Allison Koenecke

**Best Student Paper AIES 2024**

*Text-to-Image Generation for Vocabulary Learning Using the Keyword Method*, Nuwan T. Attygalle, Matjaž Kljun, Aaron Quigley, Klen Čopič Pucihar, Jens Grubert, Verena Biener, Luis A. Leiva, Juri Yoneyama, Alice Toniolo, Angela Miguel, Hirokazu Kato, Maheshya Weerasinghe, **Best Paper IUI 2025**

*A picture is worth a thousand words? Investigating the Impact of Image Aids in AR on Memory Recall for Everyday Tasks*, Elizaveta Lukianova, Jae-Yeop Jeong, Jin-Woo Jeong, **Best Paper IUI 2025**

## Conference activity

Every year, ACM SIGAI sponsors and supports numerous conferences, covering a wide thematic and geographical range across the international AI community. In 2024/2025, ACM SIGAI sponsored the following 7 conferences:

- International Conference on Intelligent Virtual Agents ([IVA 2024](#))
- IEEE/ACM International Conference on Automated Software Engineering ([ASE 2024](#))
- AAAI/ACM Conference on AI, Ethics, and Society ([AIES 2024](#))
- ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization ([EAAMO 2024](#))
- ACM/IEEE International Conference on Human-Robot Interaction ([HRI 2025](#))
- ACM International Conference on Intelligent User Interfaces ([IUI 2025](#))
- ACM International Conference on Neuromorphic Systems ([ICONS 2025](#))

ACM SIGAI supported the following 23 conferences:

- AI & the Future of Education ([AIFE 2024](#))
- International Conference on Mathematics & Machine Learning ([ICMML 2024](#))
- International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management ([IC3K 2024](#))
- International Conference on Informatics in Control, Automation and Robotics ([ICINCO 2024](#))
- International Joint Conference on Computational Intelligence ([IJCCI 2024](#))
- International Conference on Explainable AI for Neural and Symbolic Methods ([EXPLAINS 2024](#))
- International Conference on Information Education and Artificial Intelligence ([ICIEAI](#))
- IEEE Conference on AI and Extended & Virtual Reality ([AIXVR 2025](#))
- International Joint Conference on Biomedical Engineering Systems and Technologies ([BIOSTEC 2025](#))
- International Conference on Agents and Artificial Intelligence ([ICAART 2025](#))
- International Conference on Pattern Recognition Applications and Methods ([ICPRAM 2025](#))
- International Conference on Robotics, Computer Vision and Intelligent Systems ([ROBOVIS 2025](#))
- International Conference on Applied Mathematics, Modeling, and Intelligent Computing ([CAMMIC 2025](#))
- International Conference on Enterprise Information Systems ([ICEIS 2025](#))
- International Conference on Image Processing and Vision Engineering ([IMPROVE 2025](#))
- International Conference on the Foundations of Digital Games ([FDG 2025](#))
- International Conference on Autonomous Agents and Multiagent Systems ([AAMAS 2025](#))
- International Conference on Data Science, Technology and Applications ([DATA 2025](#))
- International Conference on Simulation and Modeling Methodologies, Technologies and Applications ([SIMULTECH 2025](#))
- International Conference on Deep Learning Theory and Applications ([DeLTA 2025](#))
- International Conference on Artificial Intelligence and Law ([ICAAIL 2025](#))
- International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems ([IEA/AIE 2025](#))
- International Conference on Quantum AI and NLP ([QNLP.AI 2025](#))

In 2025/2026, ACM SIGAI will sponsor the following 7 conferences:

- International Conference on Intelligent Virtual Agents ([IVA 2025](#))
- AAAI/ACM Conference on AI, Ethics, and Society ([AIES 2025](#))
- ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization ([EAAMO 2025](#))
- IEEE/ACM International Conference on Automated Software Engineering ([ASE 2025](#))
- International Conference on Knowledge Capture ([K-CAP 2025](#))
- ACM/IEEE International Conference on Human-Robot Interaction ([HRI 2026](#))
- ACM International Conference on Intelligent User Interfaces ([IUI 2026](#))

## Special projects and non-conference programs

We engage in several special projects to support the wider AI community, and list some examples below.

In 2024-25 we continued to sponsor **Alhub**, a non-profit whose mission is to provide free, high-quality information about AI and support responsible communication in the field. Their content is aimed at curious technology enthusiasts and the AI community.

In 2025, SIGAI funds were used to support the **AAAI/ACM SIGAI Innovative AI Education Awards** at the 15th Symposium on Educational Advances in Artificial Intelligence (EAAI-25) in Philadelphia PA. The program provided five \$1,000 travel awards to educators and researchers advancing novel approaches to AI education. The awardees were one faculty member, one postdoctoral researcher, and three graduate students. These awardees presented their “blue sky” ideas during the symposium and contributed to the symposium by chairing paper sessions or facilitating Birds-of-a-Feather discussions. Most of the awardees are currently part of the EAAI 2026 Program Committee and EAAI hopes to use the Innovative AI Education program to identify and recruit faculty, postdoctoral researchers, and students to the EAAI community.

ACM SIGAI also participates in the **Artificial Intelligence Scientific Organizations Coordinating Council (AISOCC)** where we maintain a seat on the board directing coordination between the major AI agencies, including SIGKDD, AAI, IJCAI, NeurIPS, and many others. In the last year Nicholas Mattei represented SIGAI at these meetings and is working on developing a framework for SIGAI to contribute to the coordination between these societies.

## Key issues that SIG membership will have to deal with in the next 2-3 years

Last year, we noted that the way in which AI has become pervasive across the broader discipline of computing would necessitate greater integration and interaction between SIGAI and other SIGs, as well as ACM as a whole. We continue to feel that this is incredibly important in the rapidly evolving landscape, as AI becomes more and more embedded in society. While there is a tremendous opportunity, it may also be a challenge to maintain visibility. We hope that ACM and SIGAI can work synergistically to leverage SIGAI’s reputation as a good partner to many other organizations that have substantial footprints in the AI space. We also continue to monitor the impact of the changes to Open Access and the DL revenue model.

## Plans for 2025-2026

In the coming year SIGAI will continue to sponsor a large number of conferences, as well as student travel to a broad set of AI conferences. We are welcoming new members to the board, including Lirong Xia as our conference coordinator.

SIGAI will be running our awards and are always looking for highly qualified nominations. There is a revamp of the Industry Award planned for the coming year, as well as an expansion of other programs, including the SIGAI Job Fair and other activities. As always, if members of our community want to volunteer their time and efforts to build new programs and support existing ones, please reach out! You can reach us at [officers\\_sigai@acm.org](mailto:officers_sigai@acm.org).

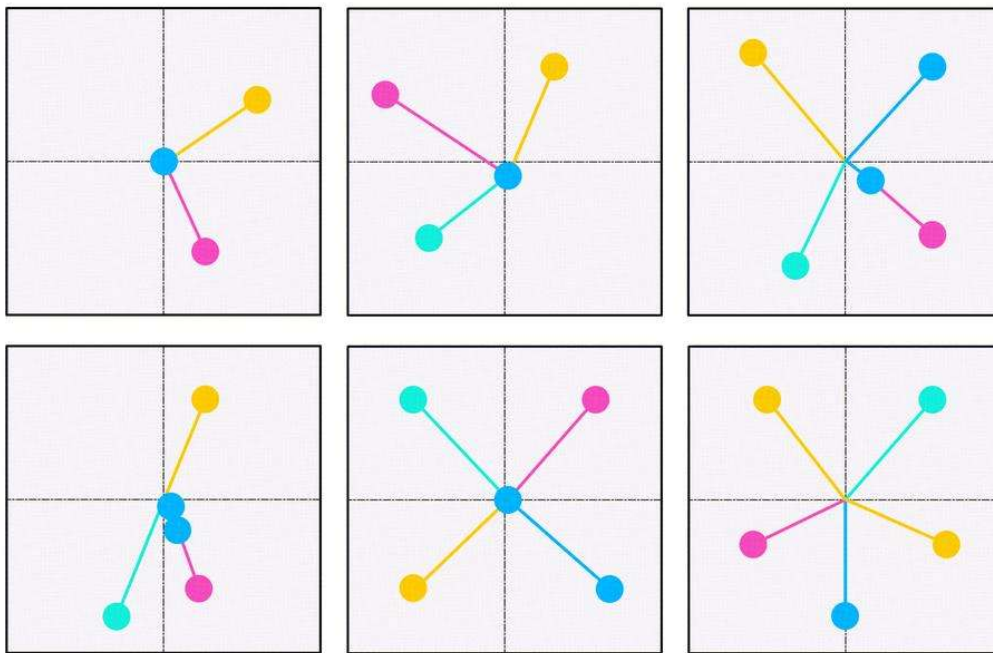


Image credits: Toy Models - Elise Racine / <https://betterimagesofai.org> / <https://creativecommons.org/licenses/by/4.0/>

# Interviews with 2019 AAI/ACM SIGAI Doctoral Dissertation Awardees

DOI: 10.1145/3795125.3795129

The Joint AAI/ACM SIGAI Doctoral Dissertation Award recognizes and encourages superior research and writing by doctoral candidates in artificial intelligence. The award is presented annually at the AAI Conference on Artificial Intelligence, and the winner is invited to present a talk at the conference. Before diving into the winners of the 2025 Award, we thought we'd catch up with some former awardees.

In 2019, Jiajun Wu won the award for his work “Learning to See the Physical World”, while Aishwarya Agrawal achieved an honourable mention for her dissertation entitled “Visual Question Answering and Beyond”. We interviewed them both to learn about where their research has taken them since then, and what future avenues they are looking to in the field of computer vision.

## 2019 AAI/ACM SIGAI Dissertation Award Winner - Jiajun Wu

Massachusetts Institute of Technology, Dissertation Title: “Learning to See the Physical World”

DOI: 10.1145/3795125.3795130



Jiajun Wu is an Assistant Professor of Computer Science and, by courtesy, of Psychology at Stanford University, working on computer vision, machine learning, robotics, and computational cognitive science. He received his PhD in EECS from MIT. Wu's research has been recognized through the Young Investigator Programs (YIP) by ONR and by AFOSR, the NSF CAREER award, the Okawa research grant, the AI's 10 to Watch by IEEE Intelligent Systems, paper awards and finalists at ICCV, CVPR, SIGGRAPH Asia, ICRA, CoRL, and IROS, dissertation awards from ACM, AAI, and MIT, and the 2020 Samsung AI Researcher of the Year.

**Q:                   What                   is                   your                   research                   area?**

My research topic, at a high level, hasn't changed much since my dissertation. It has always been the problem of physical scene understanding---building machines that see, reason about, and interact with the physical world. Besides learning algorithms, what are the levels of abstraction needed by AI systems in their representations, and where do they come from? I aim to answer these fundamental questions, drawing inspiration from nature, i.e., the physical

world itself, and from human cognition.

**Q: What is the context of your work?**

Building machines with visual, physical intelligence has been a north star for AI for decades. Despite progress, physical scene understanding remains unsolved, as it requires holistic interpretation of geometry, physics, and functionality---beyond the scope of any single discipline. Data for these domains remain scarce; simply scaling models up is thus infeasible. We need proper representations and learning paradigms that enable data-efficient, flexible, generalizable physical scene understanding.

**Q: What is your methodology?**

My approach to constructing representations of the physical world is to integrate bottom-up recognition models and efficient inference algorithms with top-down graphical models, generative models, and neural, analytical (often differentiable), and hybrid simulation engines. My research develops these techniques (e.g., proposing new deep networks and hybrid physical simulators); we also further explore innovative ways to combine them, building on cross-disciplinary studies.

**Q: How is your research developing now?**

In our research, we always aim to infer, represent, and use physical world structure from raw visual data, without compromising the expressiveness of neural networks. Recently, with the rapid development of visual AI models, we have continued to investigate what role such structural information plays, or whether we still need it at all. Our recent efforts in this direction can be categorized into two technical paths: leveraging physical world structure as powerful inductive biases, or grounding pre-trained vision or multi-modal foundation models onto the physical world. We can now build visual intelligence that infers object shape, texture, material, and physics, as well as scene context, with applications in controllable, action-conditioned 4D visual world reconstruction, generation, and interaction.

**Q: What are the main applications of your research?**

The main use of computer vision is of course for robotics, but we can also use it for entertainment (movies, games), design, and creativity. For example, one of our recent papers attracted a lot of interest from game designers: <https://kyleleey.github.io/WonderPlay/>

**Q: How have you seen your field evolve in recent years?**

AI advances, or “hype,” have sparked many discussions about the “identity crisis” of academia—industry jobs have become much more attractive to fresh PhDs; some people are questioning the role of academic research given the extreme imbalance in resources across many dimensions. We as academic researchers have to rethink the value, focus areas, and perspectives of academic research that are still worth exploring (which I believe remain many) so that fundamental, long-term research will continue to shine.

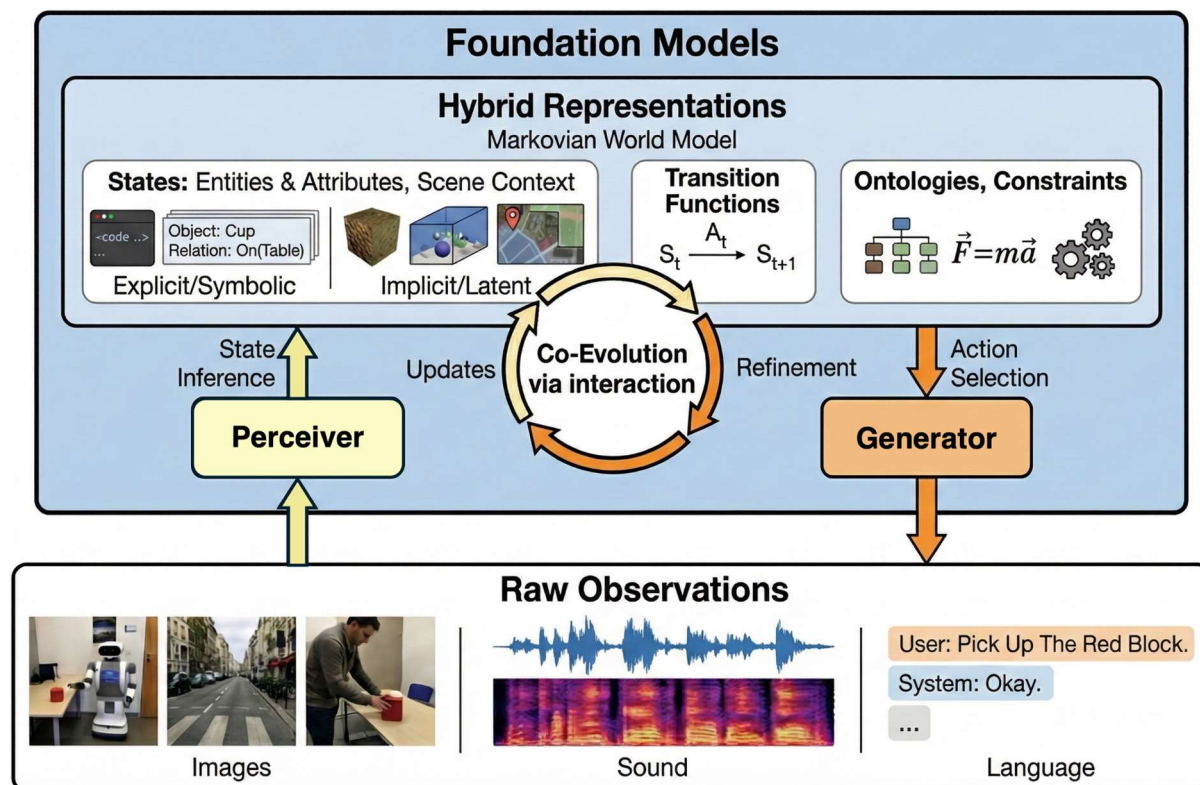


Image Credits: Jiajun Wu, Yunzhi Zhang, Hong-Xing Yu, Joy Hsu, Jiayuan Mao. *Discovering Hybrid World Representations with Co-Evolving Foundation Models*. In *Proceedings of the Annual AAAI Conference on Artificial Intelligence, Emerging Trends in AI (ETA) Track*, 2026.

**Q: Which future directions or open questions excite you the most?**

In light of the exciting advances in foundation models, we have been exploring how to adapt them for physical world modeling. Beyond the two paradigms I mentioned above, we may benefit from continual learning to refine the discovered physical worlds and, possibly, the foundation models themselves through interactions with the real world. The continual learning paradigm, including an iterative cycle of perception, interaction, and symbolic abstraction, will better leverage the commonsense knowledge from foundation models.

Such interactive learning is mutually beneficial. The discovered physical world model continues to improve through the interpretation of interaction results by foundation models; at the same time, new knowledge gained from interactions is fed back into foundation models, enabling their continued pre-training for better compression, summarization, and future reasoning. This establishes a co-evolving loop in which both world models and foundation models become more capable.

## 2019 AAI/ACM SIGAI Dissertation Honorable Mention - Aishwarya Agrawal

Georgia Institute of Technology, Dissertation Title: “Visual Question Answering and Beyond”

DOI: 10.1145/3795125.3795131



Aishwarya Agrawal is an Assistant Professor in the Department of Computer Science and Operations Research at the University of Montreal. She is a Canada CIFAR AI Chair and a core academic member of Mila -- Quebec AI Institute, and spends one day a week as a Research Scientist at Google DeepMind. Aishwarya's research focus is on Multimodal AI research, specifically Vision-Language research. Aishwarya is a recipient of the 2025 Mark Everingham Prize, a Canada CIFAR AI Chair Award, a Young Alumni Excellence Award

from IIT Gandhinagar, a Georgia Tech Sigma Xi Best Ph.D. Thesis Award, a Georgia Tech College of Computing Dissertation Award, a Google Fellowship (declined), a Facebook Fellowship (declined) and an NVIDIA Graduate Fellowship.

**Q: You were awarded an Honourable Mention for the 2019 AAI Doctoral Dissertation Award. What was the topic of your dissertation research, and what were the main contributions or findings?**

My PhD dissertation was on the topic of Visual Question Answering, called VQA. We proposed the task of open-ended and free-form VQA – a new way to benchmark computer vision models by asking them questions about images. We curated a large-scale dataset for researchers to train and test their models on this task. In this task, we show the models images from the dataset, and we test the understanding of these models by asking them questions - just like how you would test a child's understanding of a particular subject.

This task was quite new 10 years ago. In computer vision in 2015, people were evaluating models using bucketed recognition tasks like image classification. You would train the model on a limited set of categories and ask it to classify dogs, cats and things like that. We were not quite happy with that kind of model evaluation, because in that setup, the model can only learn the categories you specify. We felt this wasn't suitable for the medium of interaction. Let's say, if I am blind and need visual assistance, my interactions would not be limited to a few categories - I would want to be able to interact with these systems in free-form natural language. This led to us proposing the VQA dataset to train computer vision models.

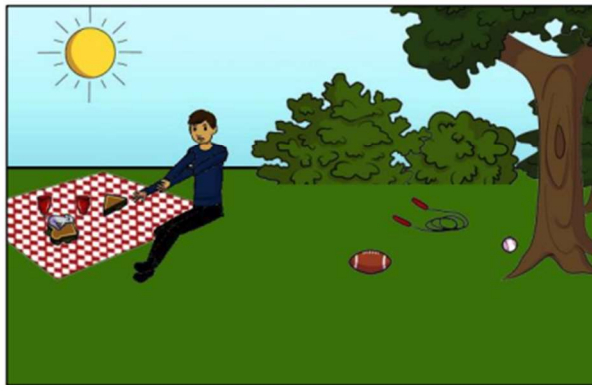
After we published this dataset, many people in the computer vision community started using it to build models. We knew that they were performing similarly in terms of their average



What color are her eyes?  
What is the mustache made of?



How many slices of pizza are there?  
Is this a vegetarian pizza?



Is this person expecting company?  
What is just under the tree?



Does it appear to be rainy?  
Does this person have 20/20 vision?

Examples from the VQA dataset. Image credits: *Agrawal, A., 2019. Visual question answering and beyond. PhD Dissertation. Georgia Institute of Technology.*

performance, but I was curious to understand them better. I wrote a paper where we proposed a few methods to characterize the behavior of these models, to try and understand where they are failing, what their weaknesses and strengths are, and so on. Later on, I contributed some methodological changes to improve the models on a particular weakness which was quite prevalent at that time: they wouldn't pay attention to the content of the image, and they would make predictions biased by language biases in the dataset. I proposed novel architectures, objective functions, and evaluation protocols to try to help tackle that problem.

**Q: Interesting, it sounds like you covered a lot of ground. How has your research developed since then?**

It's been 10 years, and I still work on vision and language. I've expanded the scope of my research beyond the specific problem of VQA to cover other vision and language problems.

Over the last 10 years, there has been a lot of progress in the community in terms of the capabilities of these models - they are much stronger these days compared to how they used to be. I've seen this quantitatively - during my PhD, we used to organize annual VQA workshops at CVPR, which is a premium Computer Vision Conference. As part of that, we

would organize annual competitions where we would evaluate state-of-the-art models on the VQA dataset, and the performance on that task has improved quite significantly - by ~25% over the last 10 years. This is very concrete evidence of how much progress we have made in the community since then. Many of the low hanging problems that used to exist 5/10 years ago are now solved, but now there are new questions, questions that we wouldn't have even thought of 10 years ago when the models were not good at basic perception skills.

Now that these skills have been mastered, we are thinking about bigger questions. For example, how do we make these models work across cultures? How do we align these models with diverse cultural expectations? The success of the latest models depends heavily on the size of the training data – millions and billions – which makes it difficult for us in academia to develop such models. Can we make them more data efficient, and if so, how can we smartly select the most effective data points to train these models on? There are also some very fundamental questions. How do we learn visual representations that are compatible with language, given that vision and language are two very different modalities. So these are some open research questions in vision language. I'm working on those, but I'm also expanding my horizons to embodied AI, multi-agent settings etc.

**Q: Which future directions or open questions excite you most?**

Great question. Currently, there are a few different directions that are quite exciting. One direction is related to the recent developments that are happening in image generative models. We are developing diffusion based models which can generate very high quality images and can represent diverse concepts. However, one intriguing thing that people have found recently is that if you probe the visual representations that are learned by these models, they actually do not do very well on tasks like image classification. It's quite interesting that, on one hand, these models are able to generate all these very nice looking images, but on the other hand, the information content in their visual representations is not good enough to do simple tasks like image classification. So I am interested in studying what are the systematic differences in the representations that are learned by image generative tasks versus image discriminative tasks? And how can we bridge this gap in the representations that are learned by two models. If we are able to do this, it will be quite impactful, because it will help us to create unified models that can do both understanding and generation without using different image encoders for each.

I'm also interested in embodied AI. In particular, how can we use the knowledge that exists in large models, like large language models or large vision language models (VLMs), for teaching low level control tasks to the embodied agents? So for example, if I want to teach my robot how to make an omelette, my LLM can tell me what the high-level steps are: break an egg, whisk it, put it on a pan, and things like that. But, if you talk to robotics people, they will say that that is not the difficult part. The difficult part is, how do you teach a robot how to break an egg? It has to hold the egg in a particular way and apply a particular amount of force. VLMs haven't yet proven to be useful in this regard. But my hope is that they might still have some sort of knowledge stored inside them from all the internet data they have been trained on, such as how many Newtons of force needs to be applied to break an egg. The research question is how to extract that knowledge from VLMs and LLMs for these kinds of low level robot control tasks.

**Q: Were you always set on being a researcher?**

I didn't always have the clarity that I would be a researcher or a professor, and I would be leading a lab and guiding students. But one aspect of my personality - which is probably the reason why I am in this field - is just curiosity. I've always been the kind of student who would ask a lot of questions. And even after my undergrad, instead of taking a job right away, I wanted to go for a PhD merely because I wanted to understand things more. I felt like I hadn't gotten an in-depth knowledge of any particular field. So it was just that curiosity of trying to understand things that drives me behind whatever I do. Even in my lab today, with my students, what drives me to do research is trying to understand how things work. And in our experiments, I encourage my students not just to build new models, but also to understand how the current models are working, so that you can get better insights into what to work on next. So it's curiosity and trying to understand things that has always led me throughout my research career.

**Q: That's a great driver. So my final question is - do you have any advice for any early career researchers in your field who might be setting out on a similar path to you?**

I think my advice here is specifically targeted towards PhD students, Masters students, or even early career faculty. I'm sure a lot of them are going through this same questioning phase that I went through: how should I position my research? What is that I should work on? What problem should I work on? In the current landscape, where it can feel like a lot of the problems are already solved, it's easy to ask yourself if there is a point to being in this research business.

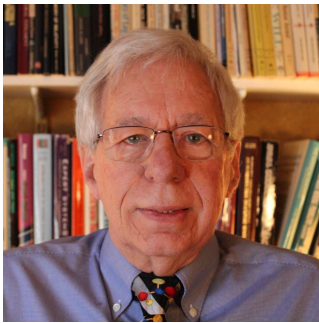
The first piece of advice I would like to give is that what you work on specifically is not so important for helping you to achieve a great career ahead. What is more important is how you do the research. You could be working on a very hot shot problem, but if your execution is not well done or the findings are not insightful, then it is not going to be as impactful as if you were working on something which less people care about, but you contributed a new angle or new insights to that research. So I would advise students and early career researchers to think about doing things rigorously and well, and aim to contribute new insights and new angles. And I think that if you're enjoying doing that and doing it well, you should be fine.

The second piece of advice is again, more for students. There isn't a lot of emphasis on improving communication or presentation skills during PhD programs - most of the focus is on writing papers and contributing new research. But, as a researcher, having good presentation and communication skills matters quite a bit, and it matters more and more as you advance in your career. You have to write grant proposals, where you have to pitch your ideas in layman's terms, and you have to convince someone who is not from your field to invest in your idea. You have to give presentations, talks, and again, convince a broader audience to take an interest, not just the audience who is working in your field. Investing time in improving your communication and presentation skills is very important. So are your written presentation skills - writing good papers that are easy to read and understand is very important.

## AI Ethics & Policy Column

### Top AI Ethics and Policy Issues of 2025 and What to Expect in 2026

DOI: 10.1145/3795125.3795132



Larry R. Medsker is Co-Editor-in-Chief of the Springer journal *AI and Ethics* and editor of the forthcoming *AI and Ethics Handbook*. His work bridges AI research and technology policy, informed by leadership roles within the ACM, including as Chair of the ACM U.S. Technology Policy Committee and as Policy Officer for SIGAI. He is a Research Professor at the University of Vermont and Director of the Science & Technology Ethics Policy (STEP) Collaborative and Affiliate Faculty member at George Mason University.

#### Abstract

2025 marked a pivotal shift in AI - from testing to deployment. This happened as generative and agentic systems became essential in key sectors worldwide. This feature highlights the major AI ethics and policy developments of 2025, and concludes with a forward-looking perspective on the ethical and policy challenges likely to shape 2026.

#### Global AI Regulation Enters Its Enforcement Phase

One significant change in 2025 was the enforcement of AI principles and regulations laid out over the past few years. In the US, Trump overturned Biden's 2023 Executive Order on Safe, Secure, and Trustworthy AI, which originally expanded safety requirements for models and increased reporting duties for developers. This is a real shift in attitude towards AI, as the US prioritises deregulation and fast innovation over responsible AI. (Squire Patton Boggs, 2025)

This may lead to friction with the EU, which is taking a more stringent approach. In June, the EU AI Act began requiring organizations to categorize systems by risk level, prepare oversight plans, conduct red-team tests, and publish transparency information (European Commission, 2024). High-risk systems, such as those used in employment, credit, education, and public services, now face strict conformity assessments and ongoing post-market monitoring.

The ACM U.S. Technology Policy Committee (ACM USTPC, 2025) issued several official recommendations advocating for clear documentation practices, rigorous evaluation standards, and effective oversight to ensure public accountability.



Image credits: Pink Office - Jamillah Knowles & Digit / <https://betterimagesofai.org/> / <https://creativecommons.org/licenses/by/4.0/>

## AI Safety, Alignment, and Evaluation Standards Mature

In 2025, AI safety infrastructure experienced rapid growth. Safety - once primarily discussed in conceptual terms - has evolved into a structured engineering discipline. The rise of third-party evaluation centers and independent auditing processes highlights a growing understanding that safety assessments need to go beyond static benchmarks. In this vein, the UK has proposed the AI Growth Lab. This will be a sandbox where new AI models can be tested in real-world conditions, with temporary regulatory modifications to enable effective research. (DSIT, 2025) Benchmarks for assessing deception, persuasion, and long-term planning were widely adopted by leading laboratories, such as OpenAI, Google, Anthropic, Moonshot AI, and AliBaba (Stanford CRFM, 2025).

The ACM USTPC emphasized explainability as essential for fairness, arguing that black-box systems undermine both scientific integrity and democratic oversight. Their guidance influenced policy discussions across healthcare, finance, and critical infrastructure, where transparency became a necessary condition for deployment. These developments reflect themes from the upcoming AI and Ethics Handbook (Medsker 2026), which argues that safety must consider the socio-technical context, not just model-level testing.

## Backlash

One of the most notable changes in 2025 is the growing recognition that refusing to deploy GenAI can be ethically justified. Ethical deployment is now seen as relying not only on regulations but also on essential AI literacy: understanding system limits, social context, and human judgment. This perspective places the primary responsibility on institutions, not

individual users, to establish clear governance, provide proper oversight, and determine when AI should not be used at all. This view challenges ideas of technological inevitability and highlights the importance of human judgment in AI-driven systems. (Duarte et al., 2026).

### Agentic AI and Autonomous Decision Systems

Agentic AI systems achieved significant advances in 2025. For example, Cognitive Automation Agent is a new platform that independently manages clinical workflows in the US. This is one of the first of its kind, as it can initiate actions independently of clinicians. (Epic, 2025)

The increasing capabilities of agentic AI raise critical questions about oversight, predictability, and moral responsibility. Its deployment means that AI ethics evaluations will focus on the actions of such systems, rather than their predictions. To address these concerns, the USTPC emphasized the importance of clear responsibility, strong monitoring systems, and transparent governance structures (ACM USTPC, 2025).

### Vibe Coding

A look back at 2025 wouldn't be complete without discussing the new practice of "vibe coding", where developers generate, refine, and debug code through iterative interaction with LLMs. While often framed as a productivity boost, this approach effectively delegates significant design and implementation decisions to AI agents, raising familiar questions about accountability, security, and oversight in automated decision-making. These unanswered questions haven't halted its popularity, and it has become so ubiquitous that Collins Dictionary named it Word of the Year for 2025.

### Misinformation, Deepfakes, and Digital Trust

The global election cycles of 2024–2025 have created significant pressure on information ecosystems. Highly convincing deepfakes, synthetic news, fraudulent political ads, and automated persuasion tools are spreading widely, with AI-based scams on the rise.

For example, in July, an unknown actor used Marco Rubio's voice and writing style to contact 5 senior US government officials. (Gedeon, 2025). And AI impersonations of pop stars have reportedly scammed fans out of \$5.3bn for concert tickets and VIP experiences that do not exist. (Dilts Marshall, 2025). These incidents have sparked widespread calls for regulation and mark a decline in digital trust.

Governments, platforms, and researchers have adopted provenance metadata, watermarking, and digital signature technologies to verify content (C2PA, 2024). However, the effectiveness of these protections varies by platform and situation, as watermarks can be altered. The World Economic Forum is calling for robust security protocols to combat deepfakes. (Colman, 2025).

## Children and AI

A significant digital trust challenge emerging around 2025 involves the intersection of children's rights and democratic integrity, as generative AI chatbots increasingly mediate social, educational, and political information for young users. The USTPC warned about the manipulative potential of chatbots interacting with minors and highlighted broader democratic risks posed by generative misinformation, given that chatbots can facilitate manipulative tactics and misinformation at scale (ACM USTPC 2025). UNICEF shares this concern, emphasizing that AI systems impacting children must be designed with explicit safeguards, transparency, and accountability to prevent exploitation and undue influence. (ACM USTPC, 2025; UNICE, 2024).

## Data Rights and Training Data Governance

In 2025, debates over the ethics and legality of AI training data grew more intense. We saw many more lawsuits related to large-scale web scraping, unauthorized use of copyrighted materials, and biometric data collection. In June, Reddit and the BBC took legal action against Perplexity AI. (McMahon, 2025). (Reuters, 2025). Several governments moved to require greater transparency about the sources, composition, and legal basis of training datasets. Courts and regulators made uneven but necessary progress on whether training generative AI models on copyrighted works qualifies as fair use. Late-year disputes between major publishers and AI developers highlighted unresolved questions about who is entitled to compensation. (Nawotka, E. 2025).

Depending on the outcome of these cases, we may see the only legal generative AI systems in the U.S. being those trained on public-domain works or under licenses. (Samuelson, 2024). Meanwhile, the EU and the UK have moved toward obligations for developers to document training data sources and justify the inclusion of copyrighted or sensitive material (UK IPO, 2024), with these requirements expected to expand significantly during 2026–2027.

## Systemic Risk and Critical Infrastructure

AI has become more deeply integrated into critical infrastructure, but the systems in place are fragile. An AWS service disruption acted as a reminder of this. On October 20th, millions of services that people rely on were shut down, from payment platforms like PayPal to consumer technology like smart beds (Newman, 2025). This highlighted the fragility of a system controlled by only a few actors. (Gkritsi & Haeck, 2025)

## Workforce Transformation

Copilots and agentic assistants altered workflows in administrative work, accounting, journalism, law, and STEM research. Productivity increased rapidly but unevenly. Some industries experienced major gains, while others faced risks of displacement or widening skill

gaps. For example, in March, JP Morgan rolled out its own coding assistant for its software engineers, increasing their productivity by 10-20%. (Reuters 2025) Meanwhile, the jobs market remains uncertain, with workers scrambling to remain employable as they now need to work with, or compete with, AI amid over 200K layoffs in the global tech sector (Mzekandaba, 2026). The USTPC's recommendations on AI literacy, reskilling, and fair workforce development emphasize that increased national investment in education and training is vital for reducing disparities (ACM USTPC, 2025).

### Environmental Impact and the Ethics of Scale

Google released a report on the energy use of its Gemini model, estimating that a single prompt emits 0.03g of carbon dioxide, consumes 0.26 ml (5 drops) of water, and has an energy impact equivalent to watching TV for 9 seconds. (Vahdat & Dean, 2025). These numbers scale up fast, given that Gemini powered the 5.9 trillion Google searches in 2025. (Kumar, 2025) However, this is supposedly a 44-fold decrease in carbon footprint per prompt, due to efficiency increases at data centers.

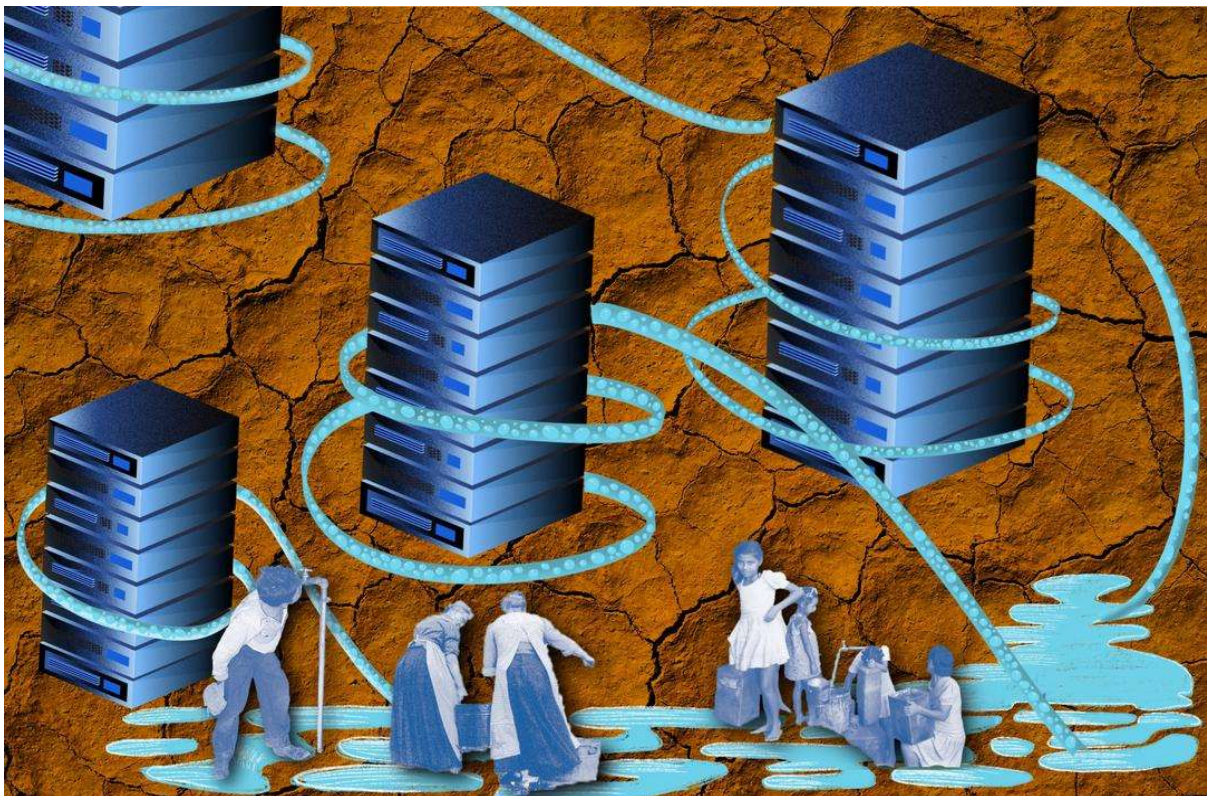


Image Credits: The Environmental Impact of Data Centers in Vulnerable Ecosystems - Gloria Mendoza / <https://betterimagesofai.org> / <https://creativecommons.org/licenses/by/4.0/>

Data centers currently account for 4.4% of the USA's energy demand, but projections estimate that this will triple by 2028. (O'Donnell & Crownhart, 2025). Other studies documented significant energy and water use associated with training and running large-scale models (Morrison et al., 2025), and policymakers and industry leaders responded by calling for sustainable AI practices, increased efficiency incentives, and broader environmental disclosure requirements (Conference Board, 2025).

### Bias, Fairness, and Non-Discrimination

Despite advances in dataset auditing and fairness tools, algorithmic discrimination remained a significant challenge in 2025. Models used for hiring, credit, public benefits, and education continue to mirror historical inequalities (Buolamwini and Gebru, 2018; Barocas, Hardt, and Narayanan, 2019). The USTPC reaffirmed its long-standing stance, calling for a pause on facial recognition deployments in high-risk settings where civil rights impacts are foreseeable (ACM USTPC, 2025). Policymakers are increasingly adopting risk-based frameworks that combine socio-technical analysis with technical audits.

### Looking Ahead to 2026

If 2025 marked the year AI regulation became operational, 2026 could be when autonomy, sovereignty, and sustainability take center stage. Three pressures are likely to dominate: governing increasingly automated systems, managing economic and workforce disruption, and confronting the environmental and infrastructural limits of large-scale AI. As AI becomes deeply integrated into economic and social systems, collaboration among governments, research institutions, civil society, and organizations such as ACM USTPC and SIGAI will be essential to developing trustworthy and fair systems.

Economic concerns are increasingly prominent in public discourse and policy-making, with widespread changes taking place as AI displaces many white-collar tasks. Growing questions about whether expectations for AI have peaked or whether parts of the sector are experiencing a speculative bubble have raised the possibility of a market correction with broader economic consequences (Georgieva, 2025; International Monetary Fund, 2025). Such a shift could affect not only the AI technology sector itself, but also investment patterns, labor markets, and innovation strategies across the wider economy.

The ethics landscape is also evolving. By 2026, "AI-generated" labels may give way to verifiable provenance signals that can be shared across platforms (Hancock and Bailenson 2024). Regulators could strengthen enforceable duties around verification, rapid takedown, and auditing - especially as deepfakes increasingly affect high-stakes domains such as health, finance, and education. Agentic systems, automated decision-making tools, and practices such as AI-assisted "vibe coding" are likely to become more prominent as organizations move quickly from pilot projects to real-world deployment. Data from this rapid adoption of agentic AI and automated development workflows may spur debates on accountability, security, and testing practices, particularly in high-risk environments where iterative human oversight is vital

but inconsistently applied. International action on likeness and consent rights may accelerate, making unauthorized use of synthetic identities a distinct civil offense.

We might see 2026 be the year when restraint becomes a strategic necessity rather than just a moral choice. Over the past year, AI capabilities have advanced faster than institutions, labor markets, and governance frameworks could adapt, exposing a growing gap between reassuring narratives and real-world results. While many providers emphasized responsibility through process and compliance, only a few leaders publicly acknowledged systemic risks, from workforce disruption to misuse at scale, and called for explicit limits on deployment. Among the most notable was Dario Amodei, whose call for clear rules and responsible scaling framed ethics as a core engineering constraint rather than an after-the-fact safeguard (Amodei 2024). His contribution has shaped subsequent discourse.

Major questions include when and where generative AI should be used, who benefits from its use, and under which conditions it should be restricted. A widely articulated perspective emphasizes that GenAI should assist, not replace, human judgment, with accountability firmly placed on institutions rather than automated systems. Concerns remain that generative AI can reinforce biases, exacerbate epistemic injustice, and centralize power, underscoring the need for transparency, contestability, and data rights. Ongoing debates about training data reveal unresolved issues related to consent, labor, and compensation. Furthermore, environmental impacts and dual-use risks such as misinformation, surveillance, and security threats have become key ethical challenges. (Radanliev, 2025; Janssen, 2025).

Societal responses to these questions are becoming more visible. Communities may express a “digital backlash” against algorithmic technologies, as seen in protests over data center projects, student-led petitions, app deletions, industry open letters, and academic position papers (Guest et al. 2025). Educators, technologists, policymakers, artists, labor unions, and community groups are increasingly opposing AI systems perceived as harmful, exploitative, flawed in education, environmentally damaging, or socially unjust. Supporting resistance, refusal, reclamation, and reimagining AI remains an essential ethical goal, even as some “responsible” AI narratives suggest opposition is futile (Duarte et al., 2025).

The coming year will test whether global AI governance can keep pace with innovation while protecting democratic values, social trust, and human well-being. Ultimately, 2026 should reveal whether adherence to emerging frontier and general-purpose AI standards effectively influences real-world behavior or if it merely becomes a box-checking exercise (Clark, 2024). We will also observe whether trust frameworks are unified globally or divided into regional systems with incompatible rules and technologies. Addressing these challenges will require active participation from the AI community through groups like ACM USTPC and SIGAI, as well as engagement from the broader research ecosystem in venues such as *AI and Ethics* and *AI Matters*. Together, these efforts are essential for guiding responsible innovation and ensuring AI advancements benefit society.

*AI policy is a dynamic, ever-evolving landscape. We welcome your ideas and perspectives - email us at [aimatters@sigai.acm](mailto:aimatters@sigai.acm) to discuss topics for the AI Matters Ethics & Policy column.*

*Special thanks to Ella Scallan for editing this piece.*

## References

ACM USTPC (Association for Computing Machinery US Technology Policy Committee). 2025. "USTPC Policy Products." Accessed December 6, 2025. <https://www.acm.org/public-policy/public-policy-statements>

Amodei, Dario. 2024. "AI Is Getting More Powerful. We Need Clear Rules." Time, April 2024.

Barocas, Solon, Moritz Hardt, and Arvind Narayanan. 2019. Fairness and Machine Learning: Limitations and Opportunities. Online book. Retrieved from <https://fairmlbook.org/>

Buolamwini, Joy, and Timnit Gebru. 2018. "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification." Proceedings of Machine Learning Research 81: 77–91.

C2PA. 2024. Content Provenance and Authenticity Standard. Coalition for Content Provenance and Authenticity. <https://spec.c2pa.org/specifications/specifications/2.3/index.html>

CAC (Cyberspace Administration of China) et al. 2023. Interim Measures for the Management of Generative Artificial Intelligence Services. [http://www.cac.gov.cn/2023-07/13/c\\_1690898327029107.htm](http://www.cac.gov.cn/2023-07/13/c_1690898327029107.htm)

CISA. (Cybersecurity & Infrastructure Security Agency). 2024. "Widespread IT Outage Due to CrowdStrike Update" (Alert AA24-201A), last modified August 6, 2024, accessed December 6, 2025, [www.cisa.gov](http://www.cisa.gov).

Clark, Jack, Gillian Hadfield, Percy Liang, and others. 2024. "Frontier AI Regulation: Managing Emerging Capabilities and Systemic Risks." Center for AI Safety White Paper. Conference Board. 2025.

Colman, B. (2025) *Why detecting dangerous AI is key to keeping trust alive in the deepfake era*. World Economic Forum, 7 July. Accessed January 21, 2026. Available at: <https://www.weforum.org/stories/2025/07/why-detecting-dangerous-ai-is-key-to-keeping-trust-alive/>

The Conference Board. AI and Sustainability 2025: Corporate Perspectives on Environmental Impact. <https://www.conference-board.org/press/AI-and-sustainability-2025>

Dilts Marshall, E. (2025) *Taylor Swift, Sabrina Carpenter impersonators scam fans out of \$5.3 billion in 2025: Report*. Billboard Pro. Accessed January 21, 2026. Available at: <https://www.billboard.com/pro/taylor-swift-sabrina-carpenter-impersonators-scam-fans-2025/>

DSIT and Kendall, L. (2025) *New blueprint for AI regulation could speed up planning approvals, slash NHS waiting times, and drive growth and public trust*. Press release, 21 October. Available at: <https://www.gov.uk/government/news/new-blueprint-for-ai-regulation-could-speed-up-planning-approvals-slash-nhs-waiting-times-and-drive-growth-and-public-trust>

Duarte, Tania, Ismael Kherroubi Garcia, Anshur, et al. 2025. Resisting, Refusing, Reclaiming, Reimagining: Charting Challenges to Narratives of AI Inevitability” We and AI, DOI: 10.5281/zenodo.17343830. <https://weandai.org/resisting-refusing-reclaiming-reimagining-ai/>

Duarte, Tania, Kathryn Conrad, Ismael Kherroubi Garcia. 2026. “The Emergence of Critical AI Literacy.” Forthcoming. AI and Ethics Handbook. Cham, Switzerland: Springer Nature. <https://www.amazon.de/dp/3032122007>

Epic Systems Corp. 2025. “Epic Building Out Agentic AI, Broadens Focus Beyond EHRs.” Epic News, March 7, 2025. <https://www.epic.com/epic/post/epic-building-out-agentic-ai-broadens-focus-beyond-ehrs/>

European Commission. 2024, June 13. Artificial Intelligence Act: Regulatory Framework for Trustworthy AI (Regulation (EU) 2024/1689). Official Journal of the European Union L, 2024, 1689. <eur-lex.europa.eu>

Georgieva, Kristalina. 2025. “IMF and Bank of England Warn AI-Led Market Bubble Could Burst.” Financial Times, October 8, 2025. <https://www.ft.com/content/fe474cff-564c-41d2-aaf7-313636a83e5b>

Gedeon, J. (2025) *AI scammer posing as Marco Rubio targets officials in growing threat. The Guardian*, 8 July. Accessed January 21 2026. Available at: <https://www.theguardian.com/us-news/2025/jul/08/marco-rubio-ai-impostor>

Guest, Olivia et al. 2025. “Against the Uncritical Adoption of 'AI' Technologies in Academia.” DOI [10.5281/zenodo.17065098](https://doi.org/10.5281/zenodo.17065098).

Hancock, Jeffrey T., and Jeremy N. Bailenson. 2024. “The Future of Digital Trust: Deepfakes, Authenticity, and the Crisis of Verifiable Media.” *Journal of Online Trust and Safety* 3 (1): 1–22.

International Monetary Fund. 2025. *World Economic Outlook: Navigating Global Divergence*. Washington, DC: International Monetary Fund. <https://www.imf.org/en/Publications/WEO>

Janssen, M. 2025. “Responsible Governance of Generative AI: Conceptualizing AI as a Complex Adaptive System.” *Policy & Society* 44 (1): 38–5

Kumar, N. 2025. How many Google searches per day [New 2026 Data]. DemandSage, 8 December. Accessed January 19th 2026. Available at: <https://www.demandsage.com/google-search-statistics/>

MacIntyre, John, and Larry R. Medsker, eds. 2020–. *AI and Ethics* (journal), Springer Nature. <https://link.springer.com/journal/43681>

McMahon, L. 2025. *BBC threatens AI firm with legal action over unauthorised content use*. BBC News. Accessed January 21 2026. Available from: <https://www.bbc.co.uk/news/articles/cy7ndgylzzmo>

Medsker, Larry R., ed. Forthcoming. AI and Ethics Handbook. Cham, Switzerland: Springer Nature. <https://www.amazon.de/dp/3032122007>

METI (Ministry of Economy, Trade and Industry, Japan). 2023. G7 Hiroshima Process: Guiding Principles for Advanced AI.

Morrison, Jacob, Clara Na, Jared Fernandez, Tim Dettmers, Emma Strubell. 2025. "Holistically Evaluating the Environmental Impact of Creating Language Models." arXiv, March 3, 2025. <https://arxiv.org/abs/2503.05804>

Mzekandaba, S. (2026, January 9). 2025 global tech sector layoffs surpass 200k. ITWeb. <https://www.itweb.co.za/article/2025-global-tech-sector-layoffs-surpass-200k/G98YdqLGPb4MX2PD>

Newman, Lily Hay. 2025. "The Long Tail of the AWS Outage." WIRED, October 22, 2025. <https://www.wired.com/story/aws-cloud-outage-long-tail>

NIST (National Institute of Standards and Technology). 2023. AI Risk Management Framework (AI RMF 1.0). U.S. Department of Commerce.

O'Donnell, J. and Crownhart, C. 2025. We did the math on AI's energy footprint. Here's the story you haven't heard. MIT Technology Review, 20 May. Available at: <https://www.technologyreview.com/2025/05/20/1116327/ai-energy-usage-climate-footprint-big-tech>

OECD. 2023. OECD Framework for the Classification of AI Systems. Organisation for Economic Co-operation and Development.

Patterson, David, et al. 2023. "The Carbon Footprint of Large AI Models." Communications of the ACM 66(10): 58–71.

Nawotka, E. 2025. New lawsuit against AI companies seeking more money. Publishers Weekly. Accessed January 21, 2026. Available at: <https://www.publishersweekly.com/pw/by-topic/industry-news/publisher-news/article/99347-authors-file-new-lawsuit-against-ai-companies-seeking-more-money.html>

Gkritsi, E. and Haeck, P. 2025. Amazon cloud outage fuels call for Europe to limit reliance on US tech. Politico. Accessed January 18, 2026. Available at: <https://www.politico.eu/article/aws-amazon-web-services-outage-europe-limit-reliance-us-tech/>

Radanliev, P., et al. 2025. "AI Ethics: Integrating Transparency, Fairness, and Privacy." Journal of Information, Communication and Ethics in Society 23 (2): 1–18.

Reuters. 2025. *JPMorgan Engineers' Efficiency Jumps as Much as 20% from Using Coding Assistant*. Reuters, March 13, 2025. <https://www.reuters.com/technology/artificial->

[intelligence/jpmorgan-engineers-efficiency-jumps-much-20-using-coding-assistant-2025-03-13/](#).

Reuters. 2025. *Reddit sues Perplexity for scraping data to train AI system*. 22 October. Available at: <https://www.reuters.com/world/reddit-sues-perplexity-scraping-data-train-ai-system-2025-10-22/>

Samuelson, Pamela. 2024. "Generative AI Meets Copyright Law." *Communications of the ACM* 67 (11): 20–23.

Squire Patton Boggs (2025) Key insights on President Trump's new AI Executive Order and policy & regulatory implications. February. Accessed January 21, 2026. <https://www.squirepattonboggs.com/insights/publications/key-insights-on-president-trumps-new-ai-executive-order-and-policy-regulatory-implications/>

Stanford CRFM. 2025. Stanford Center for Research on Foundation Models. (2025). Holistic Evaluation of Language Models (HELM) (Version 2.0). [Stanford University](#). Retrieved December 6, 2025, from <https://crfm.stanford.edu/helm/>

UK Intellectual Property Office. 2024. *Guidance on Copyright and AI Model Training*.  
UNICEF. 2024. *Policy Guidance on AI for Children*. Florence: UNICEF Office of Research – Innocenti. Accessed 2024.  
<https://www.unicef.org/innocenti/reports/policy-guidance-ai-children>

Vahdat, A. and Dean, J. 2025. *How much energy does Google's AI use? We did the math*. Google Cloud Blog, 21 August. Accessed January 18, 2026. Available at: <https://cloud.google.com/blog/products/infrastructure/measuring-the-environmental-impact-of-ai-inference>

White House. 2024. *Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence*. <https://www.whitehouse.gov/>.

Wikipedia contributors. 2024. "Delta Air Lines v. CrowdStrike." Wikipedia, July 19, 2024. Accessed December 16, 2025. [https://en.wikipedia.org/wiki/Delta\\_Air\\_Lines\\_v.\\_Crowdstrike](https://en.wikipedia.org/wiki/Delta_Air_Lines_v._Crowdstrike)

Williams, Hannah Murphy. 2024. "JPMorgan Tests AI Code-Writing Agents to Automate Software Development Tasks." *Financial Times*, February 20, 2024.

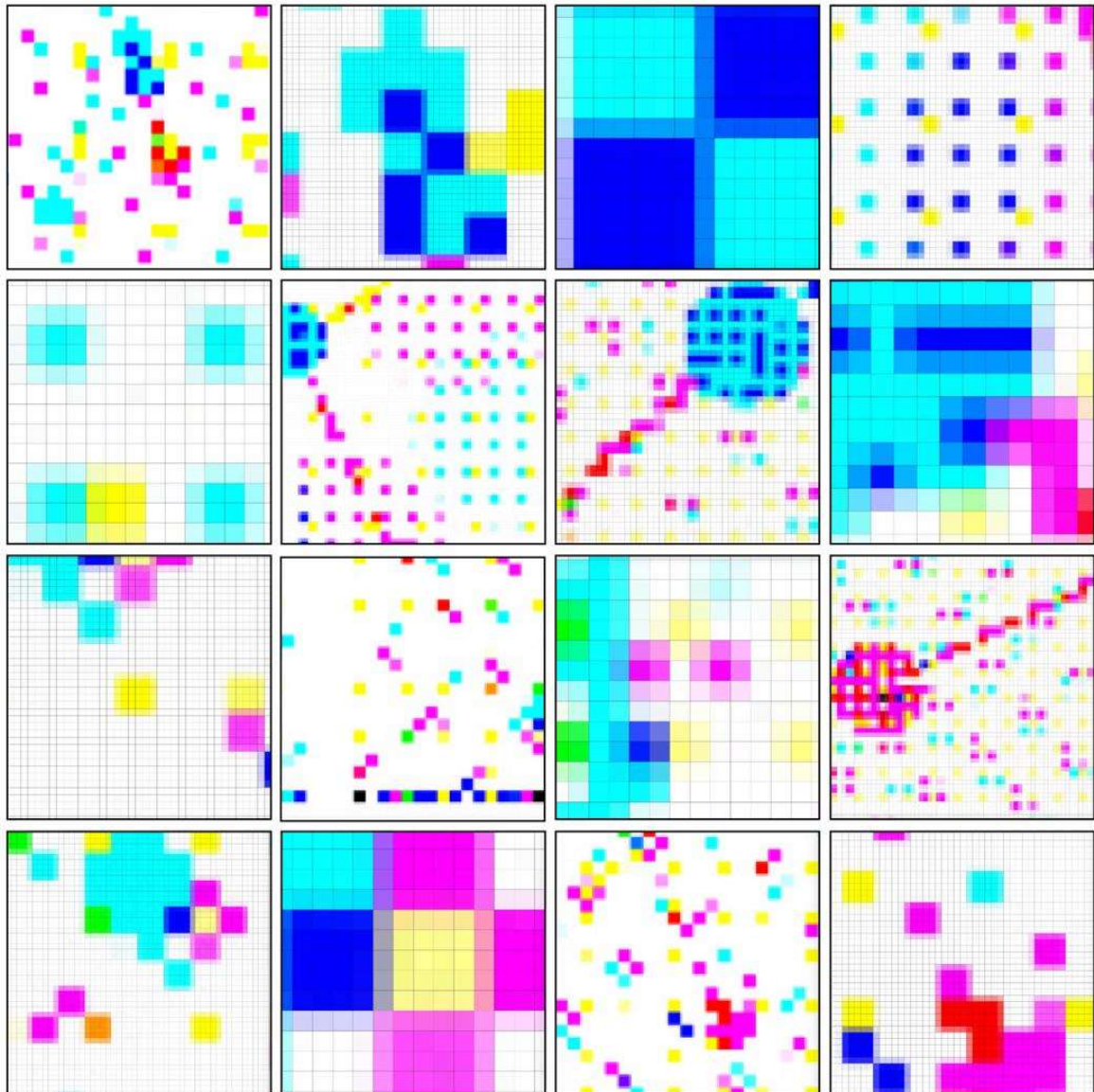


Image credits: Game of Pixels x Toy Models - Elise Racine / <https://betterimagesofai.org/> / <https://creativecommons.org/licenses/by/4.0/>

## Conference Reports - January 2026 Issue

DOI: 10.1145/3795125.3795133

One of SIGAI's missions is to promote and support AI-related conferences. Here, we report on the proceedings of recent events sponsored or run in cooperation with ACM SIGAI. Members receive reduced registration rates to all affiliated conferences. These reports are based on submissions by the conference organisers.

### 18th International Joint Conference on Biomedical Engineering Systems and Technologies

Porto, Portugal, February 20-22, 2025

<https://biostec.scitevents.org>

The purpose of BIOSTEC is to bring together researchers and practitioners - including engineers, biologists, health professionals and informatics/computer scientists - who are interested in Information Systems, Artificial Intelligence, Signal Processing, Electronics, and other engineering tools in knowledge areas related to Biology and Medicine. BIOSTEC is composed of five co-located conferences, each specialized in a different knowledge area.

#### Keynote Lectures

- Jun Xu, Nanjing University of Information Science and Technology, China: *Data-Driven and*
- *Knowledge-Driven Medical Image Computing for Disease Prevention, Diagnosis, Treatment, and Prognosis*
- Peter Kharchenko, Altos Labs San Diego Institute of Science, United States: *Analysis CNVs in Cancer and Normal Tissues with Transcriptomics Data*
- Jordi Solé-Casals, University of Vic - Central University of Catalonia, Spain: *Crossing Borders: My Research Journey from Theory to Applications in Biomedical Signal Processing*
- Sjaak Brinkkemper, Utrecht University, Netherlands: *Care2Report: AI Engineering for Automated Conversation Reporting to Reduce Administrative Workload in the Healthcare and Public Sectors*

#### Best Paper Award

Dennis Küster, Rathi Adarshi Rammohan, Hui Liu, Tanja Schultz and Rainer Koschke: *The Bigger the Better? Towards EMG-Based Single-Trial Action Unit Recognition of Subtle Expressions*

#### Best Student Paper Award

Ryo Furukawa, Shuichi Murakami and Takashi Tateno: *Developing a Head-Attached Interface Device for Closed-Loop Transcranial Ultrasound Stimulation in the Mouse Brain*

#### Best Poster Award

Hee Sik Shin and Sungyoung Choi: *Development of WHO Guideline-Complying CD4 Diagnostic Chip*

The *Institute for Systems and Technologies of Information, Control and Communication* sponsored BIOSTEC 2025, and the *IEE SMC - TC on Cyber-Medical Systems* technically co-sponsored it. The conference was also organized in cooperation with the *ACM SIG on Artificial Intelligence*, the *ACM SIG on Accessible Computing*, the *ACM SIG on Management Information Systems*, the *Association for the Advancement of Artificial Intelligence*, the *European Association for Signal Processing*, the *Portuguese Association for Artificial Intelligence*, the *European Alliance for Medical and Biological Engineering and Science*, the *Finnish Society for Medical Physics and Medical Engineering*, the *Swiss Society for Biomedical Engineering*, the *Societe Francaise de Genie Biologique et Medical*, and the *International Society for Computational Biology*.

BIOSTEC 2026 will take place in Marbella, Spain, March 2-4.

## 14th International Conference on Pattern Recognition Applications and Methods

Porto, Portugal, February 23-25, 2025

<https://icpram.scitevents.org/?y=2025>

ICPRAM is a major point of contact between researchers, engineers and practitioners working on Pattern Recognition and Machine Learning, both from theoretical and application perspectives. The conference includes the applications of Pattern Recognition techniques to real-world problems, interdisciplinary research, and experimental / theoretical studies that advance Pattern Recognition methods.

### Keynote Lectures

- Thomas B. Moeslund, Aalborg University, Denmark: *The Challenge of Computing Responsible AI*
- Nelly Bencomo, Durham University, United Kingdom: *Bayesian Theory of Surprise to Quantify Degrees of Uncertainty*
- Amparo Alonso Betanzos, University of A Coruna, Spain: *Empowering AI Through Frugality*
- Alberto Del Bimbo, Universita degli Studi di Firenze, Italy: *Learning Compatible Representation*

### Best Paper Award

Jose Silva, Aniana Cruz, Bruno Sousa and Nuno Gonçalves: *Towards Secure Biometric Solutions: Enhancing Facial Recognition While Protecting User Data*

### Best Student Paper Award

Corentin Salaün, Xingchang Huang, Iliyan Georgiev, Niloy Mitra and Gurprit Singh: *Online Importance Sampling for Stochastic Gradient Optimization*

**Best Poster Award**

Urmila and Avantika Singh: *Non Contact Stress Assessment Based on Deep Tabular Method*

**Best Industrial Paper Award**

Nathan Allaire, Mahsa Ghazvini Nejad, Sébastien Le Digabel and Vahid Partovi Nia: *Zeroth Order Optimization for Pretraining Language Models*

The *Institute for Systems and Technologies of Information, Control and Communication* sponsored ICPRAM 2025, and the *International Association for Pattern Recognition* endorsed the conference. ICPRAM 2025 was also organized in cooperation with the *ACM SIG on Artificial Intelligence*, the *Association for the Advancement of Artificial Intelligence*, *Associação Portuguesa de Reconhecimento de Padrões*, the *Portuguese Association for Artificial Intelligence*, the *International Neural Network Society*, the *European Association for Signal Processing* and the *European Association for Biometrics*.

ICPRAM 2026 will take place in Marbella, Spain, March 2-4.

## 17th International Conference on Agents and Artificial Intelligence

Porto, Portugal, February 23-25, 2025

<https://icaart.scitevents.org/>

ICAART brings together researchers, engineers and practitioners interested in the theory and applications in the areas of Agents and Artificial Intelligence, covering both applications and current, advanced research. One side of the conferences focuses on Agents, Multi-Agent Systems, Software Platforms, and Distributed Problem Solving, while the other side focuses on Artificial Intelligence, Knowledge Representation, Planning, Learning, Scheduling, and Perception. Both areas use Natural Language Processing, Large Language Models, Legal Technologies and Quantum Computing to tackle their research problems.

**Keynote Lectures**

- Pavan Duggal, Advocate, Supreme Court of India, Chairman, International Commission on Cyber Security Law India, and Chief Executive, Artificial Intelligence Law Hub, India: *How India Navigates Between Binding Government Regulation and Self-Regulation*
- Inge Bryan, Chair of the Dutch Institute for Vulnerability Disclosure, Netherlands: *Rethinking our Defensive Strategy*
- Paul Nemitz, Principal Adviser European Commission, Belgium: *Rules for AI, Governability and the Common Interest of States to Create an International Artificial Intelligence Agency*

**Best Paper Award**

Yunhua Pei, Jin Zheng and John Cartlidge: *Dynamic Graph Representation with Contrastive Learning for Financial Market Prediction: Integrating Temporal Evolution and Static Relations*

**Best Student Paper Award**

Toomas Tahves, Junyi Gu, Mauro Bellone and Raivo Sell: *A Novel Vision Transformer for Camera-LiDAR Fusion Based Traffic Object Segmentation*

**Best Poster Award**

Elias Lumer, Vamse Kumar Subbiah, James A. Burke, Pradeep Honaganahalli Basavaraju and Austin Huber: *Toolshed: Scale Tool-Equipped Agents with Advanced RAG-Tool Fusion and Tool Knowledge Bases*

**Best Industrial Paper Award**

Sadeep Gunathilaka and Nisansa de Silva: *Automatic Analysis of App Reviews Using LLMs*

The *Institute for Systems and Technologies of Information, Control and Communication* sponsored ICAART 2025. The conference was also organized in cooperation with the *ACM SIG on Artificial Intelligence*, the *Association for the Advancement of Artificial Intelligence*, the *Associação Portuguesa de Reconhecimento de Padrões*, the *Portuguese Association for Artificial Intelligence*, the *IberoAmerican Society of Artificial Intelligence*, and the *European Society for Fuzzy Logic and Technology*.

ICAART 2026 will take place in Marbella, Spain, March 5-7.



Image credits: Web of Influence I - Elise Racine & The Bigger Picture / <https://betterimagesofai.org/> / <https://creativecommons.org/licenses/by/4.0/>

## 5th International Conference on Robotics, Computer Vision and Intelligent Systems

Porto, Portugal, February 25-27, 2025

<https://robovis.scitevents.org/Home.aspx>

ROBOVIS unites the three synergistic disciplines of Robotics, Computer Vision, and Intelligent Systems. The development of robots requires technologies which originate from Computer Vision and Intelligent Systems, while these two fields are often driven by research questions in robotics. ROBOVIS provides an important space for these three fields to exchange ideas and foster collaborations.

### Keynote Lectures

- Luís Paulo Reis, University of Porto, Portugal: *FC Portugal: Tri-World Champions in RoboCup 3D Humanoid Soccer Simulation*
- Honghai Liu, University of Portsmouth, United Kingdom: *Multi-modal Sensing and Understanding for Human Machine Systems*
- Roland Siegwart, ETH Zuerich, Switzerland: *Aerial Robots – From Basic Autonomous Flights to Physical Interaction at Hight*

### Best Paper Award

Bram Vanherle, Brent Zoomers, Jeroen Put, Frank Van Reeth and Nick Michiels: *Cut-and-Splat: Leveraging Gaussian Splatting for Synthetic Data Generation*

### Best Student Paper Award

Helmut Engelhardt, Matthias Kalenberg, Jörg Franke and Sina Martin: *Learn Where I Can Walk: Auto-Labeling of Walked Areas Using Monocular Camera Trajectory*

### Best Poster Award

Grzegorz Madejski, Aleksy Stocki, Dawid Gradolewski, Włodzimierz Kaoka and Wlodek J. Kulesza: *Improving Stability and Precision of Bird Tracking in Stereo Vision Systems*

The *Institute for Systems and Technologies of Information, Control and Communication (INSTICC)*, sponsored ROBOVIS 2025, and it was endorsed by the *International Association for Pattern Recognition*. ROBOVIS 2025 was also organized in cooperation with the *ACM SIG on Artificial Intelligence* and the *Portuguese Association for Artificial Intelligence*.

ROBOVIS 2026 will take place in Marbella, Spain, March 2-4.

## 5th International Conference on Applied Mathematics, Modelling and Intelligent Computing

Fukuoka, Japan, March 21-23, 2025

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

CANMIC provides an open and inclusive platform for global scholars, promoting innovation and development in Applied Mathematics, Modelling, and Intelligent Computing.

### Keynote Lectures

- Nishibata Shinya, Tokyo Institute of Technology, Japan: *Spherically symmetric stationary solutions for the compressible Navier-Stokes equation*
- Dong Shen, Renmin University of China: *Iterative Learning Control over Random Fading Channels*
- Shanjian Tang, Fudan University, China: *Linear Quadratic Mean Field Control and Games with Random Coefficients*
- Yang Xiang, Hong Kong University of Science and Technology: *Modeling Effects of Randomness in High Entropy Alloys*
- Samad Noeiaghdam, Henan Academy of Sciences, China: *Dynamical Model of Supply and Demand of Energy for Solar Farms in China*

CANMIC 2026 will take place in Shanghai, China, March 27-29.

## 30<sup>th</sup> Conference on Intelligent User Interfaces

Cagliari, Italy, March 24-27 2025

<https://iui.acm.org/2025/>

IUI aims to improve the symbiosis between humans and digital technologies, by bridging the gap between the two disciplines of Human-Computer Interaction and Artificial Intelligence, and delving into related research areas, such as psychology, cognitive sciences, information systems, and end-user development. Researchers from academia and industry came together to exchange ideas and design solutions that make systems adapt to people, not the other way around.

To enable this, and to give participants the opportunity to have more discussions, IUI was an in-person conference again. There were 7 workshops and one tutorial, which were well attended: *HAI-GEN 2025: 6th Workshop on Human-AI Co-Creation with Generative Models*; *MIND (Mixed-Initiative Next-gen Design): Workshop on Blending Agents and Direct Manipulation for LLMs*; *HealthIUI 2025: Workshop on Intelligent and Interactive Health User Interfaces*; *SOCIALIZE 2025: Workshop on Social and Cultural Integration with Personalized Interfaces*; *STEP-HAI: Strengthening Engineering Psychology for Human-AI Interactions*; *BEHAVE AI: Workshop on BEst Practices and Guidelines for Human-Centric Design and Evaluation of Proactive AI Agents*; *AXAI: Adaptive eXplainable AI*; and *The 3rd DECI Tutorial on Designing Effective Conversational Interfaces*.

**Keynote Lectures**

- Albrecht Schmidt, Ludwig-Maximilian University, Germany: *Reality Design: Shaping Experiences Beyond Interfaces through Human-Centred AI.*
- Vera Liao, Principal Researcher, Microsoft Research: *Human-Centered AI Transparency: Bridging the Sociotechnical Gap.*

**Impact Paper**

- Jerry Falls, Boise State University, USA: *Interactive Machine Learning.*

**Best Paper Award**

Nuwan T. Attygalle, Matjaž Kljun, Aaron Quigley, Klen Čopič Pucihar, Jens Grubert, Verena Biener, Luis A. Leiva, Juri Yoneyama, Alice Toniolo, Angela Miguel, Hirokazu Kato, and Maheshya Weerasinghe: *Text-to-Image Generation for Vocabulary Learning Using the Keyword Method.*

Elizaveta Lukianova, Jae-Yeop Jeong, and Jin-Woo Jeong: *A picture is worth a thousand words? Investigating the Impact of Image Aids in AR on Memory Recall for Everyday Tasks.*

The ACM SIG on Artificial Intelligence and ACM SIG on Human-Computer Interaction sponsored IUI 2025, and it was supported by: the *National Science Foundation*, the *Mohamed bin Zayed University of Artificial Intelligence*, and the *Artificial Intelligence Journal*.

The proceedings of IUI 2025 are in the ACM digital library: <https://dl.acm.org/conference/iui>

IUI 2026 will take place in Paphos, Cyprus, March 23-26.

**27th International Conference on Enterprise Information Systems**

Porto, Portugal, April 4-6 2025

<https://iceis.scitevents.org/>

ICEIS brings together researchers, engineers and practitioners interested in the advances and business applications of information systems. It covers many different aspects, such as Enterprise Database Technology, Systems Integration, Artificial Intelligence, Decision Support Systems, Information Systems Analysis and Specification, Internet Computing, Electronic Commerce, Human-Computer Interaction and Enterprise Architecture.

**Keynote Lectures**

- Philipp Leitner, Chalmers University of Technology, Sweden: *A Brief Journey Through History: From Distributed Objects Over SOA to Microservices*
- Wim Vanhaverbeke, University of Antwerp, Belgium: *Digital Technologies, Business Model*
- *Innovation & Innovation Ecosystem Management in Institutionalized Industries*
- Loic Bachelart, Microsoft, France: *Technological Adoption in the Era of Generative AI*

**Best Paper Award**

Victor José Beltrão Almajano Martínez, Carlos Eduardo V. Gomes, João Augusto F. N. de Carvalho, Francisco Glaubos Nunes Clímaco, João Dallyson Sousa de Almeida, Geraldo Braz Júnior and Tiago Bonini Borchatt: *Mathematical Modeling and Simulation for Optimizing Truck Dispatch in Bulk Unloading Operations: A Case Study at the Port of Itaqui*

### Best Student Paper Award

Ruben Grande, Diego Cordero, David Vallejo, Carlos González, Santiago Schez-Sobrino, Jose Jesús Castro-Schez and Javier Albusac: *Pilot Study on the Effects of Gamification and Virtual Reality on the Shopping Experience*

### Best Poster Award

Tales Guarisa Gomes, António Correia, Jano de Souza and Daniel Schneider: *Unveiling the Expanding Landscape of Attention-Capture Damaging Patterns*

### Best Industrial Paper Award

Pedro Guedes, José Franco Amaral, Thiago Carvalho and Pedro Coelho: *Improving Underwater Ship Sound Classification with CNNs and Advanced Signal Processing*

The *Institute for Systems and Technologies of Information, Control and Communication* (INSTICC), sponsored ICEIS 2025, and it was technically co-sponsored by the *IEEE SMC - TC on Enterprise Information Systems*. The conference was also organized in cooperation with the *ACM SIG on Artificial Intelligence*, the *Association for the Advancement of Artificial Intelligence*, and the *Institute of Engineering and Management*.

ICEIS 2026 will take place in Benidorm, Spain, May 22-24.

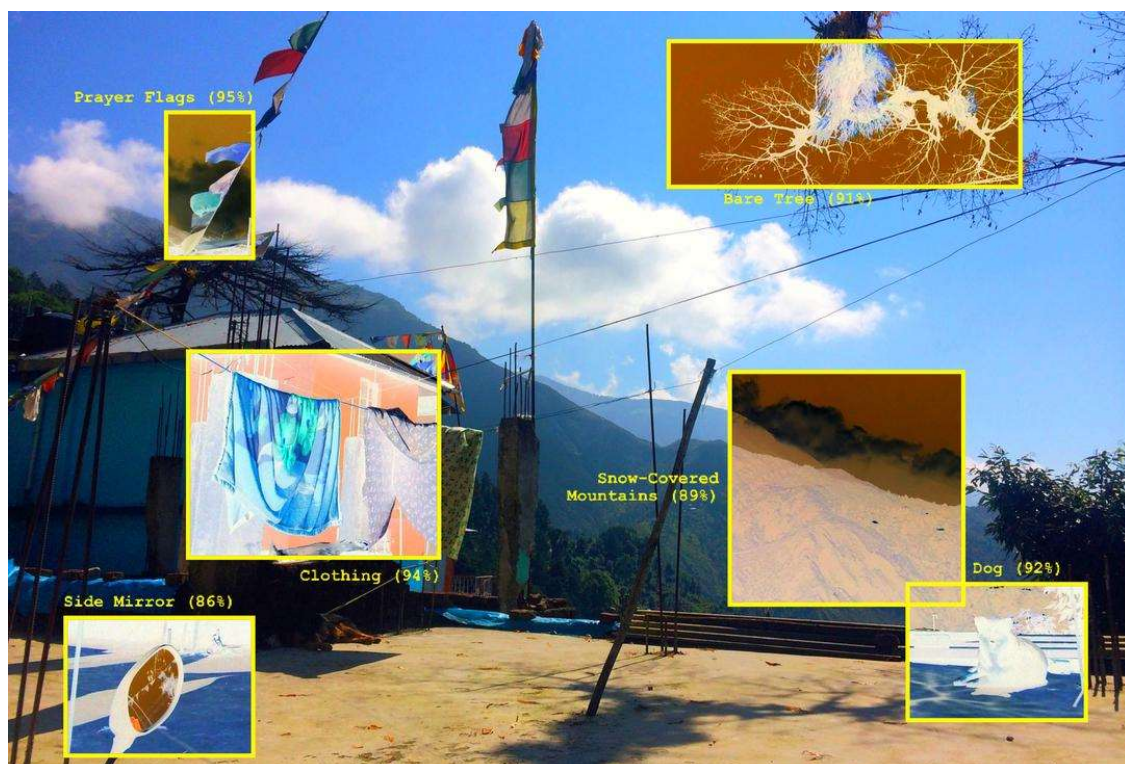


Image credits: Dharamsala - Elise Racine / <https://betterimagesofai.org/> / <https://creativecommons.org/licenses/by/4.0/>

## 14th International Conference on Data Science, Technology and Applications

Bilbao, Spain, June 10-12, 2025

<https://data.scitevents.org>

DATA brings together researchers, engineers and practitioners interested in Big Data, Data Mining, Data Management, Data Security and other aspects of information systems and technology involving the advanced applications of data.

### Keynote Lectures

- Bjoern Schuller, University of Augsburg, Germany and Imperial College London, United Kingdom: *Deep Learning Deep Feelings: Large Models, Larger Emotions*
- Pablo García Bringas, University of Deusto, Spain: *From Data to Impact: Harnessing AI for*
- *Trustworthy, Transparent, and Transformative Innovation*
- Ingmar Weber, Saarland University, Germany: *From Satellites to Social Media: What Data Tells us About Society*

<b>Best</b>	<b>Paper</b>	<b>Award</b>
Eitel J. M. Lauría: <i>Predictors of Freshmen Attrition: A Case Study of Bayesian Methods and Probabilistic Programming</i>		

Moad Hani, Nacim Betrouni, Saïd Mahmoudi and Mohammed Benjelloun: *PPMI-Benchmark: A Dual Evaluation Framework for Imputation and Synthetic Data Generation in Longitudinal Parkinson's Disease Research*

<b>Best</b>	<b>Student</b>	<b>Paper</b>	<b>Award</b>
Andrew P. Berg, Qian Zhang and Mia Y. Wang: <i>4,500 Seconds: Small Data Training Approaches for Deep UAV Audio Classification</i>			

<b>Best</b>	<b>Poster</b>	<b>Award</b>
Ángela López-Cardona, Guillermo Bernárdez, Pere Barlet-Rose and Albert Cabellos-Aparicio: <i>Proximal Policy Optimization with Graph Neural Networks for Optimal Power Flow</i>		

The *Institute for Systems and Technologies of Information, Control and Communication* (INSTICC), sponsored DATA 2025. The conference was also organized in cooperation with the *ACM SIG on Artificial Intelligence* and the *ACM SIG on Management Information Systems*.

DATA 2026 will take place in Porto, Portugal, July 16-18.

## 15th International Conference on Simulation and Modeling Methodologies, Technologies and Applications - SIMULTECH 2025

Bilbao, Spain, June 11-13, 2025

<https://simultech.scitevents.org/Home.aspx>

SIMULTECH brings together researchers interested in the fields of modelling and simulation, across a variety of application areas - from traditional Computer Science and Machine Learning, to Management Science and Engineering. The conference focuses on computational approaches in: Conceptual Modeling, Agent-Based Simulation, Business Process Modeling, Equation-Based Modeling of Continuous Systems, Multi-Physics Simulation, Hybrid Simulation, Interoperability, Digital Twins, Ontologies, and Machine Learning.

### Keynote Lectures

- Julian Scott Yeomans, York University, Canada: *Is SimDec Truly a Revelatory Approach for Global Sensitivity Analysis or is it Turtles All the Way Down?*
- Benoit Gaudou, University Toulouse 1 Capitole, France: *Modeling and Simulation of Dense Crowds Dynamics at the Intersection of Agent-based and Deep-Learning Models: Predict and Understand*
- Andrea Matta, Politecnico di Milano, Italy: *Autonomous Digital Twins for Optimal Control of Discrete Event Systems*

### Best Paper Award

Zhiwei Wang, Lingchong Gao, Michael Kleeberger and Johannes Fottner: *Trajectory Planning for a Knuckle Boom Crane Using Differential Dynamic Programming*

### Best Student Paper Award

Kenneth Caviness, Colton Davis, Derek Renck, Charles Sarr, Scot Anderson, Heaven Robles and Rhys Sharpe: *Indexed Concatenation Notation: A Novel Way to Summarize Networks and Other Complex Systems*

### Best Poster Award

Zohreh Moradinia, Hans Vandierendonck and Adrian Murphy: *Machine Learning-Driven Framework for Identifying Parameter-Driven Anomalies in Multiphysics Simulations*

The *Institute for Systems and Technologies of Information, Control and Communication* (INSTICC) sponsored SIMULTECH 2025, and the following groups co-organized it: *ACM SIG on Artificial Intelligence, Institute of Engineering and Management, Society for the Study of Artificial Intelligence and Simulation of Behaviour, European Council for Modeling and Simulation and Federation of Asia Simulation Societies.*

SIMULTECH 2026 will take place in Porto, Portugal, July 18-20.

## 6th International Conference on Deep Learning Theory and Applications

Bilbao, Spain, June 12-13 2025

<https://delta.scitevents.org>

DeLTA allows researchers across Deep Learning, Big Data Analytics, Data Science, and Machine Learning to come together to exchange ideas. With Deep Learning outperforming the more “classical” state-of-the-art supervised and unsupervised approaches, it is becoming increasingly relevant, especially in IoT applications.

**Keynote Lectures**

- Bjoern Schuller, University of Augsburg, Germany and Imperial College London, United Kingdom: *Deep Learning Deep Feelings: Large Models, Larger Emotions*
- Wojciech Samek, TU Berlin, Germany: *Inspecting AI Like Engineers: From Explanation to Validation with SemanticLens*

**Best Paper Award**  
Ali Bayeh, Malek Mouhoub and Samira Sadaoui: *Enhancing Off-Policy Method SAC with KAN for Continuous Reinforcement Learning*

**Best Student Paper Award**  
Abdul Basit Hafeez, Atif Riaz and Eduardo Eduardo Alonso: *Diagnostic Trouble Codes Prediction with DTC-GOAT and Ensembles*

**Best Poster Award**  
Nuha Aldausari, Gelareh Mohammadi and David Cooper: *Rhythm Fusion: Synchronizing Audio and Motion Features for Music-Driven Dance Generation*

**Best Industrial Paper Award**  
Ikram Bagri, Achraf Touil, Ahmed Mousrij, Aziz Hraiba and Karim Tahiry: *Variational Mode Decomposition (VMD) Parameter Selection Using Sine-Cosine Algorithm (SCA): Application on Vibration Signals for Rotating Machinery Monitoring*

The *Institute for Systems and Technologies of Information, Control and Communication (INSTICC)* sponsored DeLTA 2025, and the *International Association for Pattern Recognition* endorsed it. The following groups co-organized it: *ACM SIG on Artificial Intelligence*, the *Association for the Advancement of Artificial Intelligence*, the *Spanish Association of Artificial Intelligence*, and the *International Neural Network Society*.

DeLTA 2026 will take place in Porto, Portugal, July 16-17.

## The 38th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems

Kytakyushu, Japan, July 1-4 2025

<https://www.i-somet.org/iea-aie2025/>

IEA/AIE emphasizes the applications of intelligent systems to solve real-world problems in industry, science, and engineering. It encompasses a range of domains, such as automation & robotics, business & finance, medicine, bioinformatics, cyberspace, and human-machine interaction.

### Keynote Lectures

- Enrique Herrera-Viedma, University of Granada, Spain: *About Responsible Artificial Intelligence Systems*
- Volker Gruhn, Universität Duisburg-Essen, Germany: *AI in Software Engineering: Productivity Gains Ahead?*
- Hector Perez-Meana, National Polytechnic Institute, Mexico: *Compressive Sensing: Principles and Applications in Signal and Image Processing*

### Best Paper Award

Ying-Tsu Tseng and Huei-Wen Ferng, National Taiwan University of Science and Technology, Taipei, Taiwan: *Adaptive DRL-Based Traffic Signal Control with an Infused LSTM Prediction*

### Best Student Paper Awards

- Erina Murata and Qun Jin, Waseda University, Tokorozawa, Japan: *Classification of Approval Desires and Analysis of Emotional and Linguistic Features in SNS Posts Using Generative AI*
- Yue Zhang and Qiang Zhan: WeldViT, Beihang University, Beijing, China: *A Lightweight Network for Online Identification of Multi-Label Welding Defects*

The following organisations co-organised IEA/AIE 2025: *ACM SIG on Artificial Intelligence*, the *Catalan Association for Artificial Intelligence*, the *China Computer Federation*, the *International Society of Applied Intelligence*, the *Italian Association for Artificial Intelligence*, *Iwate Prefectural University*, the *Japanese Society for Artificial Intelligence*, the *Society for the Study of Artificial Intelligence and the Simulation of Behavior*, the *Spanish Society for Artificial Intelligence*, the *Taiwanese Association for Consumer Electronics*, *Texas State University*, the *University of Hradec Kralove*, and *Universiti Teknologi Malaysia*.

The proceedings of IEA/AIE2025 will be published in two parts in *Advances and Trends in Artificial Intelligence - Theory and Applications*:

<https://link.springer.com/book/10.1007/978-981-96-8889-0>

<https://link.springer.com/book/10.1007/978-981-96-8892-0>

IEA/AIE 2026 will be held in Kuala Lumpur, Malaysia, July 6-9.

## Quantum AI and NLP Conference

Indiana University, Bloomington, USA, August 6-8 2025

<https://qnlp.ai/>

QNLP brings together the global community of researchers and practitioners at the intersection of Quantum Computing, Artificial Intelligence, and Natural Language Processing. The conference emphasises interdisciplinary exchange, with participants from academia, industry, and government, and a diverse set of domains, all with a shared interest in quantum-inspired approaches to intelligence and language. The organisers plan for this conference to become an annual event.

### Keynote Lectures

- Monica VanDieren, Sr. Technical Marketing Engineer for Quantum Computing and HPC, NVIDIA, USA: *AI for Accelerated Quantum Supercomputing*
- Bob Coecke, Chief Scientist, Quantinuum, UK: *From Quantum Pictorialism to Scalable Interpretable Quantum AI*
- Kharen Musaelian, President and Co-Founder, Qognitive Inc.; President/CIO and Co-Founder, Duality Group, USA: *Quantum Cognition Machine Learning (QCML): Theory and Applications*
- Ismael Faro, Vice President of Quantum and AI, IBM, USA: *How AI Is Helping Quantum Computing*
- William Chappell, Vice President and CTO, Microsoft Strategic Missions and Technologies, USA: *Era of Agentic AI*
- Cedric Lin, Amazon AWS Braket, USA: *Quantum Computing with Amazon Braket*
- Michael A. McRobbie, University Chancellor and President Emeritus, Indiana University, USA: *Introductory Remarks: Preparing Universities for the Quantum Age*

Indiana University and a range of its affiliated organisations sponsored the conference, including the *Luddy School of Informatics, Computing, and Engineering*; the *Quantum Technologies for Everyone (QUTE) student club*; the *Quantum Science and Engineering Center (QSEc)*; the *Natural Language Processing Lab (NLP-Lab)*; the *Ostrom Workshop*; and the *Department of Linguistics*. The *Center for Quantum Technologies*—a joint NSF-funded initiative involving Indiana University, Purdue University, and the University of Notre Dame - also sponsored the conference, as did community organisations and regional economic development agencies, such as the *Monroe Country Airport Corporation*.

The conference proceedings will be published in the *Springer Nature* series *Communications in Computer and Information Science (CCIS)*.

QNLP 2026 will be held in Xi'An, China, March 20-22.

## Conference Statistics

<b>Conference</b>	<b>Number of Participants</b>	<b>Number of Submissions</b>	<b>Number of Countries Submissions Were From</b>	<b>Percentage of Papers Accepted / %</b>	<b>Type of Review</b>
BIOSTEC 2025	369	299	45	28.4	Double-blind
CANMIC 2025	-	-	-	-	-
DATA 2025	108	140	41	19.3	Double-blind
DeLTA 2025	36	42	23	21.4	Double-blind
ICAART 2024	404	472	52	23.1	Double-blind
ICEIS 2025	203	300	35	21.7	Double blind
ICPRAM 2025	106	132	32	19.7	Double blind
IEA/AEI 2025	-	-	-	-	-
IUI 2025	-	387	-	25.1	-
QNLP 2025	170	-	-	-	-
ROBOVIS 2025	48	43	20	20.9	Double blind
SIMULTECH 2025	69	52	27	23.1	Double blind