

ICNCE 2024

International Conference
on Neuromorphic Computing
and Engineering

Supported by the Strukturwandelprojekt NEUROTEC and the Cluster4future NeuroSys

**Interdisciplinary event including Neuroscience
& Computer Science / Artificial Intelligence (AI)**



© Stock / Stephan Moerold und Jolyon



LinkedIn

Leute, die über ICNCE gepostet haben



Paul Manea

Engineer & PhD Researcher @ Forschungszentrum Jülich & RWT...
Aachen



Sonia Balan

Student at Maastricht University - Systems Biology Master's...
Maastricht



Thorben Schoepe

Postdoc, Forschungszentrum Juelich
Aachen



Stephan Suckow

Head of Nanophotonics Group bei AMO GmbH
Aachen



Paul Kirkland

Research Fellow at University of Strathclyde Neuromorphic Senso...
Glasgow



Max Lemme

Professor at RWTH Aachen University and CEO at AMO GmbH
Cologne Bonn Region



Ekaterina Kutafina

Research leader for data-driven medicine at the Institute of...
Maastricht



Barış Karaali

Şu okulda öğrenci: RWTH Aachen University
Aachen



Monika Loeber

Deputy Director KI.NRW @ Fraunhofer IAIS • AI, sustainability &...
Cologne Bonn Region



Harini Sudha

Researcher at Forschungszentrum Jülich| Prev. KTH Stockholm, IISE...
Germany



Mohammad Dehghani

Ph.D. Candidate at University of Bremen
Bremen



Nils Kopperberg

Wissenschaftlicher Mitarbeiter | PhD Student at RWTH Aachen...
Aachen



Jan van den Hurk

Deputy Head | Chair of Electronic Devices
Aachen



Roberta Caterino

Innovation Manager at RWTH Innovation GmbH
Aachen-Mitte



Fabian Rudolph

Honours Artificial Intelligence Student at Radboud University
Cleves



Praveen Dedigamge

Masters Student @ Tampere University | Biomedical Micro- and...
Tampere



Mahyar Shahsavari

Assistant Professor at Radboud University
Delft



Umut Can ALTIN

Researcher / Developer
Netherlands



Shankha Mukherjee

PHD Researcher at imec & KU Leuven || Ferroelectric Memory...
Leuven



Pradyumn Tiwari

Masters Student at RWTH Aachen University, Germany | Ex-IIT...
Aachen

from:



Forschungszentrum Jülich

Research
Juelich



**Chair of Electronic Devices (ELD),
RWTH Aachen University**

Higher Education
Aachen



Radboud University

Nijmegen, Gelderland



AMO GmbH

Nanotechnology Research
Aachen



RWTH Aachen University

Aachen, North Rhine-Westphalia



Maastricht University

Maastricht, Limburg



University of Strathclyde

Glasgow



Paul Manea • 1st
Engineer & PhD Researcher @ Forschungszentrum Jülich & RWTH...

★ Attending ICNCE 2024 in Aachen was a transformative experience! ★

I learned a lot and it was invaluable to exchange ideas within the community. It was a pleasure to welcome everyone to the city, where I live: Aachen. The conference was exceptionally well-organized, and I extend my gratitude to the organizers for their hard work from RWTH Aachen University and Forschungszentrum Jülich

ICNCE 2024, supported by the NEUROTEC Project, of which I am proud to be also part of.

The event covered a wide range of topics, from AI applications in industry and society to brain simulation and neuromorphic circuits. It was particularly inspiring to see the next generation of scientists and engineers participating and exchanging ideas.

Thank you to everyone who attended and made this conference a success!

#ICNCE2024 #Neuromorphic #AI #Aachen #Science #Engineering



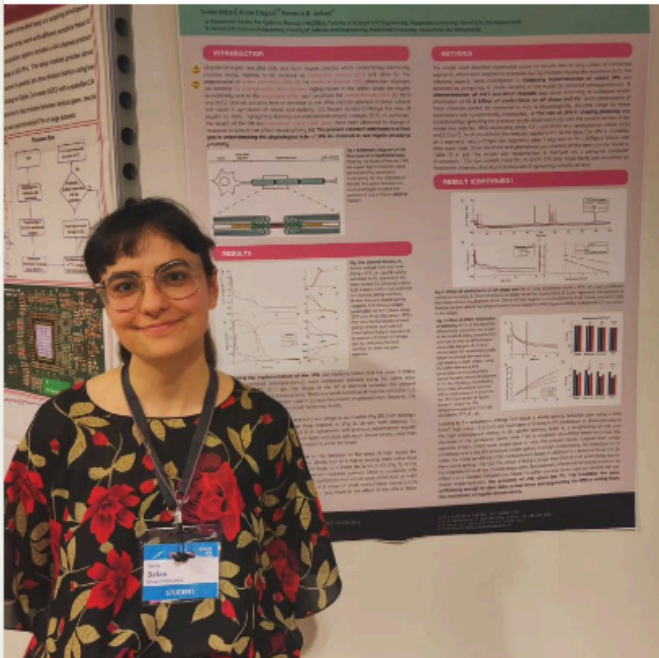
[Mehr auf LinkedIn](#)



Sonia Balan • 3rd+
Student at Maastricht University - Systems Biology Master's Program

After submitting my master thesis last week, I had the amazing opportunity to present my thesis research at yet another conference!

Thank you #ICNCE2024 for the opportunity, and thank you to the two people who liked my work and gave the poster a vote!



[Mehr auf LinkedIn](#)



Thorben Schoepe • 2nd
Postdoc. Forschungszentrum Juelich

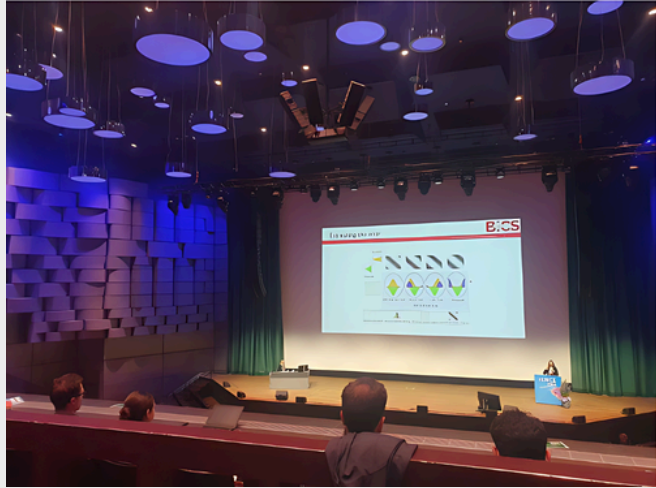
[+ Follow](#) ...

This week Elisabetta Chicca presented our work on insect inspired obstacle avoidance and navigation in spiking neural networks at ICNCE 2024.
<https://icnce-2024.de/>

If you want to read more about this work, check out our Nature Communications and IROS 2023 publications:

<https://lnkd.in/eriFMrv>

<https://lnkd.in/eyCcMsC>



[Mehr auf LinkedIn](#)



Stephan Suckow • 2nd
Head of Nanophotonics Group bei AMO GmbH

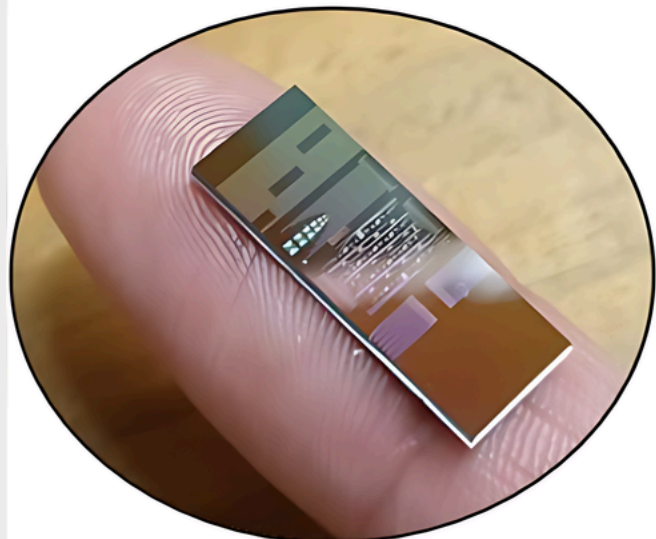
[Follow](#) ...

What can this tiny chip do for neuromorphic computing? Find out at #ICNCE2024 – the International Conference on Neuromorphic Computing and Engineering and visit [Dr. Rijil Thomas](#) and [Enes Şeker](#) in the poster session on the 4th June 2024 15:30 - 18:00 or at the booth of #AMOGmbH.

A bit more technical: the active part is a 4x4 photonic reservoir of the "4-Port" architecture and is actually just the 2nd block from the bottom. It has been able to identify the modulation format of 32 GBaud data streams with 2 dB optical signal-to-noise ration (!) after 100 km of optical fiber (!!) with 87% accuracy (!!!) and reaches 100% for less challenging tasks.

Read more over there:

https://lnkd.in/eEPv_kSN



[Mehr auf LinkedIn](#)

Paul Kirkland · 2nd
Research Fellow at University of Strathclyde Neuromorphic Sensor S...
1w · 🌐

Had a great time at #ICNCE2024.
Had a great time with all the Neuromorphic community.
Two posters shown off with thanks to [Álex Vicente Sola](#).

Thanks to Aachen and Germany for being a lovely host. (This sentiment will dissolve on June 14th though, come on Scotland!)



[Mehr auf LinkedIn](#)

Ekaterina Kutafina · 2nd
Research leader for data-driven medicine at the Institute of Biomed...
1w · 🌐

The second intensive day at the #ICNCE 2024 conference on neuromorphic computing, organized by [RWTH Aachen University](#) and [Forschungszentrum Jülich](#). [Alina Troglio](#) and [Anna Maxion](#) presented our collaborative group's research on peripheral pain signalling during the very crowded poster session.

[Barbara Namer](#) [Jenny Tigerholm](#)

#neuroscience
#pain
#AI



[Mehr auf LinkedIn](#)

Bariş Karaali · 3rd-
Şu okulda öğrenci: RWTH Aachen University
6d · 🌐

This week, I had the opportunity to attend the #ICNCE2024 as a student attendee, thanks to the scholarship granted by the organization and Prof. Dr.-Ing. Rainer Waser. Even though I am new to the field, the opening keynote speech by Prof. Dr. Giacomo Indiveri clarified many concepts, which enabled me to fully engage with the rest of the event. I would also like to thank my colleagues, whose support made this highly informative event more enjoyable and enriching.

[RWTH Aachen University](#)
[Forschungszentrum Jülich](#)



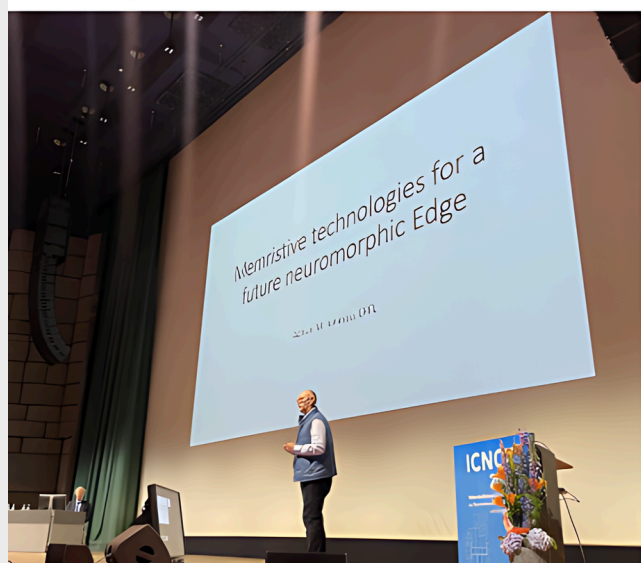
[Mehr auf LinkedIn](#)

Max Lemme · 2nd
Professor at RWTH Aachen University and CEO at AMO GmbH
1w · 🌐

Adrian Ionescu of EPFL is now speaking about new hardware for Edge Computing at ICNCE. Excuse my many posts this week, but I am too excited by the talks of world-renowned experts gathering in Aachen for the International Conference on Neuromorphic Computing and Engineering.

#rvthaaachen #semiconductors #epfl

Rainer Waser, Bastian Leibe, Markus Diesmann



[Mehr auf LinkedIn](#)

Paul Kirkland · 2nd
Research Fellow at University of Strathclyde Neuromorphic Sensor S...
1w · 🌐

Looking forward to 3.5 days of fun at #ICNCE2024. Should be a great conference, that has managed to collect a large amount of the field of #NeuromorphicEngineering with speakers and posters.



[Mehr auf LinkedIn](#)



Monika Loeber • 3rd+
Deputy Director KI.NRW @ Fraunhofer IAI5 • AI, sustainability & digita...
1w •

Follow ...

Nicht ob, sondern wann...

Das Einführungsstatement von **Jansens Pieter J.** passt perfekt zur Aufbruchstimmung bei der „International Conference on Neuromorphic Computing and Engineering (#ICNCE)“ in Aachen.

Noch bis zum 6. Juni 2024 ist **KI.NRW** mit einem Stand dabei und freut sich auf den Austausch rund um neuroinspirierte Hardware für #KI-Anwendungen. Das Event wird im Rahmen des Cluster4future-Projekts »NeuroSys« und des Strukturwandelprojekts »Neurotec« veranstaltet.

Meine Take-outs bisher:

✦ Wir müssen handeln: Der Energieverbrauch von IKT steigt, #KI schlägt zunehmend zu Buche. Durch neuartiges Chipdesign ließen sich #KI-Rechenprozesse deutlich effizienter gestalten. Neuromorphe Hardware ist essenziell für KI-Anwendungen. Sind „spiking neural networks“ und „spike-based learning rules“ womöglich die Zukunft? Und wird die Hardware quasi zum Algorithmus?

✦ Kommt die nächste Generation von KI-Chips demnächst aus der Region um #Aachen und Jülich? Warum nicht! Hier kommen Forschungsexzellenz, ein Innovationsökosystem aus Unternehmen und Start-ups (Shoutout to **AIXTRON SE**, **roofline Clinomic**, **AMO GmbH** und viele andere), Transferakteure wie das **EDIH Rheinland** sowie die Rechenpower, die beispielsweise der neue Supercomputer „Jupiter“ in #Jülich in die Waagschale wirft, zusammen.

Danke an die Organisator*innen und Mitgestalter der **RWTH Aachen University NeuroSys Cluster NEUROTEC Project** **Thorsten Wahlbrink**, **Julia Mann**, **née Hoerner** für die Einladung zur Konferenz und Ausstellung.

□ Und großer Dank auch an das **KI.NRW** Dreamteam **Manna Rusakova**, **Siegfried Eckstedt**, **Fabio Griehl**

#NRWkannKI

[See translation](#)



[Mehr auf LinkedIn](#)



Max Lemme • 2nd
Professor at RWTH Aachen University and CEO at AMO GmbH
1w •

Follow ...

Jochen Hanebeck, CEO of Infineon and RWTH Aachen University alumnus, is now speaking live at the ICNCE conference in Aachen. A great event on Neuromorphic Computing and Engineering, with international speakers is entering its last day.

#rwthaachen #infineon #semiconductors #neuromorphiccomputing #neurosysclustet #bmbf #fzjuelich #amogmbh



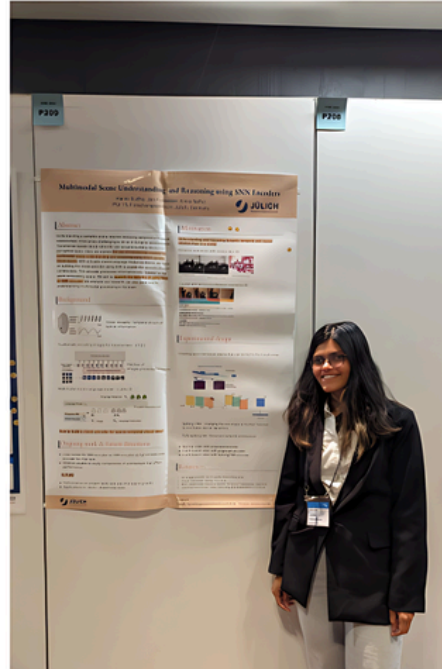
[Mehr auf LinkedIn](#)



Harini Sudha • 2nd
Researcher at Forschungszentrum Jülich| Prev. KTH Stockholm, IISER Pune
4d •

Follow ...

It was a wonderful week participating in the International Conference for Neuromorphic Computing and Engineering #ICNCE 2024 in Aachen. I presented a poster on my ongoing work on Multimodal Scene Understanding and Reasoning with SNN-Encoders. It was followed by wonderful discussions with the neuromorphic community who came all across the world to Aachen. Looking forward to future endeavours of collaborations and idea exchange!



[Mehr auf LinkedIn](#)



Mohammad Dehghan • 3rd+
Ph.D. Electronic (Chip Design and Neural Network), Slovak University o...
2d •

Follow ...

Neuromorphic hardware and Neuromorphic computation.
2024/06/03 - 2024/06/06
ICNCE Conference, Aachen, Germany.

Our Atosens group member
Supervisor: Boris Hudec
Colleague: Matej Horsky



[Mehr auf LinkedIn](#)

Nils Kopperberg • 2nd
Wissenschaftlicher Mitarbeiter | PhD Student at RWTH Aachen (Elec...
1w • Edited •

Follow ...

Tomorrow will be the fourth and last day of the #ICNCE2024 - from my perspective a great success so far!

I enjoyed the interdisciplinary conference as participant, poster presenter and part of the extended organization team. For me, it was a pleasure to see so many experts, to get to know a lot of new people and to help a lot of undergraduate students on one of their first conference experiences.




[Mehr auf LinkedIn](#)

Jan van den Hurk • 2nd
Deputy Head | Chair of Electronic Devices
1w •

+ Follow ...

Yesterday's poster session at #ICNCE2024 reminded me of one of my older papers that celebrates its 10th anniversary this year.

In 2014 we investigated the volatility of the resistance states in ECM memristors and suggested a potential explanation for the working mechanism. We were very happy to also find a potential application in complementary resistive switches (CRS) for those "not properly working" devices. Today those devices are called diffusive memristors and I wish I would have thought more about similarities to spiking neural networks. Could have been a boost for the citations. 😊

So if you are interested in some older but still relevant research, please take a look:

<https://lnkd.in/exQKYgKN>

[Mehr auf LinkedIn](#)

Max Lemme • 2nd
Professor at RWTH Aachen University and CEO at AMO GmbH
1w •

Follow ...

Abu Sebastian from IBM is live at ICNCE in Aachen, speaking about future prospects of in memory computing for AI applications. Abu pointed out the importance of „the entire stack“ working hand in hand (see picture on the left). I fully agree, and it is exactly the strategy we implemented in our Cluster4Future NeuroSys, a regional ecosystem funded by the German government (BMBF).

#rwthachen #amogmbh #ibm #semiconductors #microelectronics #ai

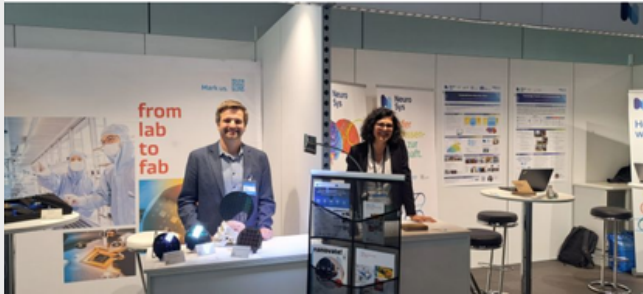


[Mehr auf LinkedIn](#)

Roberta Caterino • 1st
Innovation Manager at RWTH Innovation GmbH
1w •

We are at the #ICNCE2024 this week with NeuroSys Cluster and our friends from AMO GmbH 🤖🧠🔗

Gordon Rinke #WhoPickUpTheKidsToday #NeuromorphicEngineering #NeuromorphicComputing #BrainInspiredTech #Neuroscience



[Mehr auf LinkedIn](#)

CHANCEN DER KI
Max Lemme • 2nd
1w •

Join ...

Looking forward to the panel discussion at ICNCE!

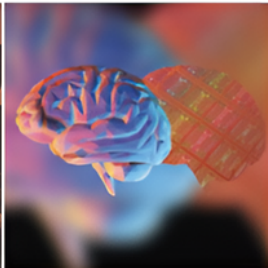
Giacomo Indiveri, Panayiota Poirazi, Max Welling, Stanley Williams, Arndt Reuning

#aachen #RWTH #fzjuelich #amogmbh #neuromorphic #rheinischesrevier #zrr #jrf #nmwp

Fabian Rudolph • 3rd-
Honours Artificial Intelligence Student at Radboud University
5d •

Follow ...

ICNCE 2024 has been an incredible conference, bringing together researchers from around the world to discuss the latest advancements in Neuromorphic Computing. The insights I've gained are invaluable. Thank you to the organizers for providing me the opportunity to participate.

[Mehr auf LinkedIn](#)

ICNCE 2024
Breaking Silos, Crossing Borders, Making Waves: Interdisciplinary Challenges and Opportunities

Panel Discussion

Arndt Reuning (RWTH Aachen), Giacomo Indiveri (ETH Zurich), Panayiota Poirazi (ICGT), Max Welling (MIT), Stanley Williams (Texas A&M)



[Mehr auf LinkedIn](#)

Mahyar Shahsavari • 2nd
Assistant Professor at Radboud University
1w • Edited •

Follow ...

@ICNCE 2024 conference:

10 years ago when I started my PhD in Neuromorphic computing, few people even have heard about it. I am happy now to announce this multidisciplinary domain is growing exponentially. A lot of interesting and inspiring presentations, more than 200 posters and hundreds to thousand of participants, lots of neuromorphic companies and startups, were at this conference in Aachen thanks to **Rainer Waser** and his organizing team. The pioneers in Spiking Neural Network, neuromorphic, circuit and digital designers, AI and machine learning researchers, neuroscientists, computer and electronic engineers, psychologists brain researchers, physicists, material scientists and chemists were gathering in such a great conference. **Giacomo Indiveri**, **Max Welling**, **Wei Lu**, **Kwabena Boahen**, **Stanly Williams**, **Qiangfei Xia**, **Gert Cauwenberghs** and many other scientists, that I have seen most of them only in media, professors and researchers shared their knowledge and progress with students and junior researchers. Thanks to all participants and organizers to create such a high quality world-class event.

#neuromorphic, #AI, #neuromorphic_event, #memristor, #snn, #deeplearning, #LLM



[Mehr auf LinkedIn](#)

Praveen Dedigamge • 3rd+
Masters Student @ Tampere University | Biomedical Micro- and Nan...
1w •

Follow ...

Participating ICNCE-2024
Step by Step towards to Neuromorphic Engineering

[Mehr auf LinkedIn](#)

Umut Can ALTIN • 3rd+
Researcher / Developer
1w •

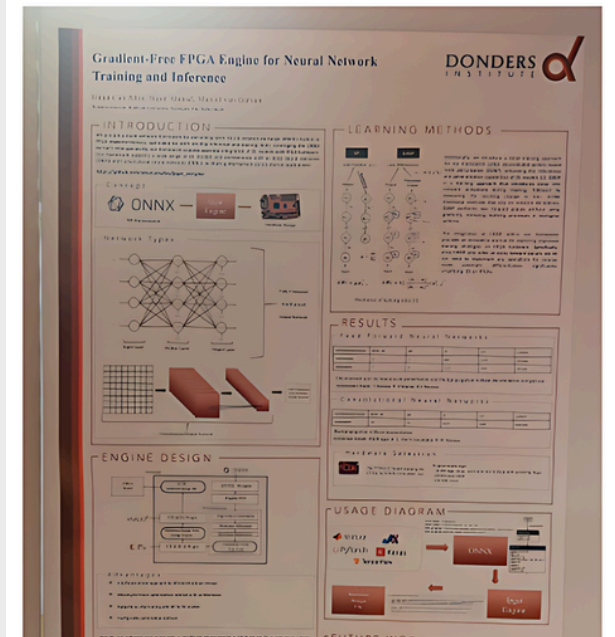
Follow ...

I am honored to present my poster titled "Gradient-Free FPGA Engine for Neural Network Training and Inference" at the International Conference on Neuromorphic Computing and Engineering (ICNCE 2024).

This research was carried out with the invaluable input of Nasir Ahmad and Marcel van Gerven. I would like to extend my deepest gratitude to my supervisor, Marcel van Gerven, for his exceptional guidance and unwavering support throughout this project.

This work is part of the Dutch Brain Interface Initiative (DBI2). While the project is not yet publicly available as I am eagerly awaiting its publication, I am committed to sharing the source codes with the community once it is published. I look forward to engaging with fellow researchers and discussing the latest developments in the field of neuromorphic computing.

#NeuromorphicComputing #FPGA #NeuralNetworks #Research #AcademicConference



[Mehr auf LinkedIn](#)

Shankha Mukherjee • 2nd
PhD Researcher at imec & KU Leuven || Ferroelectric Memory Devic...
5d •

Follow ...

ICNCE 2024 was a different conference, where experts starting from neuroscience, human brain research, semiconductor technologists, device physics researchers, circuit designers and computer scientists came together to discuss the advancements in neuromorphic computing, compute-in-memory architecture and chips with AI hardware. A great initiative, learned a lot.

Aachen, Germany June 2024.



[Mehr auf LinkedIn](#)



Pradyumn Tiwari · 3rd

Masters Student at RWTH Aachen University, Germany | Ex-IIT Delhi | ...
6d · 🌐

Follow ...

I would like to express my gratitude towards the RWTH Aachen University and especially Prof Bastian Leibe for providing me with a scholarship to attend the ICNCE 2024 (International Conference on Neuromorphic Computing and Engineering) held at the Eurogress Aachen, Germany from June 3-6 2024.

I have always been fascinated by Biomimetic designs but Neuromorphic Computing takes it to a whole another level.

My major takeaways:

1. It's not the strong AIs that pose a threat to humanity but blind over reliance on the weak ones.

2. Energy is a major roadblock in achieving AGI and must be tackled aggressively keeping Climate Change in mind.

There were tons of interesting talks and poster presentations, you can find them here: www.icnce-2024.de



[🔗 Mehr auf LinkedIn](#)

Leute, die über ICNCE gepostet haben

Unternehmen/Institute, die über ICNCE gepostet haben



**FMD - Forschungsfabrik
Mikroelektronik Deutschland**
Research Services
Berlin, Berlin



EBRAINS
Research Services
Watermael-Boitsfort, Brussels Region



**Chair of Electronic Devices (ELD),
RWTH Aachen University**
Higher Education
Aachen



EDIH Rheinland
Research Services
Aachen, Nordrhein-Westfalen



Wirtschaftsförderung Aachen
Government Administration
Aachen, North Rhine-Westphalia



AppTek
Software Development
McLean, VA



Peter Grünberg Institut (PGI)
Research Services
Jülich, North Rhine-Westphalia



AMO GmbH
Nanotechnology Research
Aachen



RWTH Innovation
Higher Education
Aachen, Deutschland



aixACCT Systems GmbH
Research Services
Aachen, Nordrhein-Westfalen



KI.NRW
Research Services
Sankt Augustin

EBRAINS
10.632 followers
1w • 🌐

We are at #ICNCE2024 in Aachen, Germany with a booth!

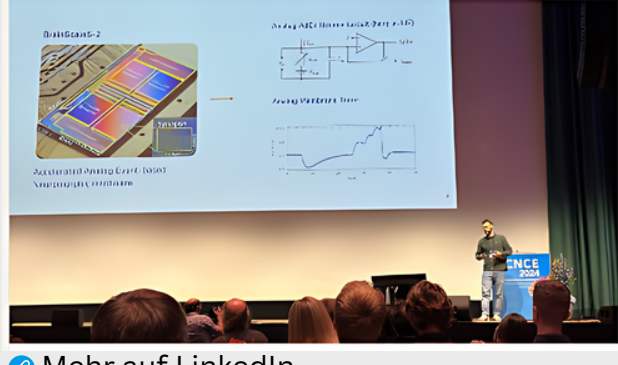
Come visit us to learn how **EBRAINS** Open Science Tools and Services can power your research, and to get an introduction to the German National Node of EBRAINS.



Mehr auf LinkedIn

EBRAINS
10.632 followers
1w • 🌐

In his talk at the #ICNCE2024, Elias Arnold from the University of Heidelberg presented progress on concepts for scalable training on analog event-based #Neuromorphic hardware, such as the EBRAINS platform BrainScaleS.



Mehr auf LinkedIn

Chair of Electronic Devices (ELD), RWTH Aachen ...
378 followers
1w • 🌐

We start into the second day of #ICNCE2024 at Eurogress Aachen. Lots of talks on neural networks, neuro-inspired computing and next generation hardware for artificial intelligence.



Mehr auf LinkedIn

AMO GmbH
3.248 followers
1w • 🌐

The equipment in this box is a demonstrator developed within the AI-NET-PROTECT project, to provide automated resilience and secure networks for critical infrastructure and enterprises.

To learn how it works and what it can do for AI, visit AMO's booth at #ICNCE2024, or join Enes Şeker Seker and Dr. Rijil Thomas at the poster session on June 4, 2024 from 15:30-18:00.

#AINETPROTECT



Mehr auf LinkedIn

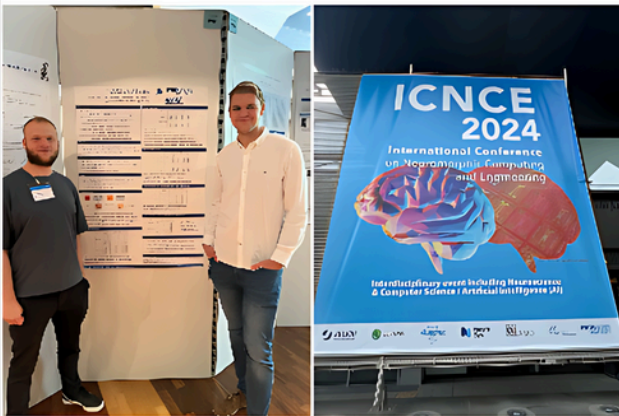
AppTek
2.467 followers
1w • 🌐

Greetings from Aachen, Germany!

The AppTek team is at the International Conference on Neuromorphic Computing and Engineering (ICNCE 2024) today showcasing its presentation titled "Towards Efficient Speech Translation: Degradation-less 8-bit Quantization."

Stop by this week June 4-6 to say hello if you are in town!

#ICNCE2024 #speechtranslation



Mehr auf LinkedIn

🌟 Highlights from ICNCE: Day 1 🌟

The first day of the International Conference on Neuroscience and Computational Engineering (#ICNCE2024) was a success! Throughout the day, partly in two halls at the same time, there were numerous interesting and exciting presentations by nationals and international experts from the fields of:

- Computer Science & Artificial Intelligence (AI)
- Neuroscience & Computational Neuroscience
- Electrical Engineering & Information Technology (EE & IT)

The day concluded with an engaging panel discussion: "Breaking Silos, Crossing Borders, Making Waves: Interdisciplinary Challenges and Opportunities", where [Arndt Reuning](#), [Giacomo Indiveri](#), [Panayiota Poirazi](#), [Max Welling](#) and [Stanley Williams](#) shared their valuable insights.

For more details on the upcoming talks and poster sessions, check out the ICNCE program for the remaining days: <https://lnkd.in/eNzkgc4G>



[Mehr auf LinkedIn](#)

EBRAINS was present at the International Conference on Neuromorphic Computing and Engineering, which took place in Aachen, Germany, from June 3rd to 6th.

The event brought together over 600 people interested in discussing brain-inspired computing, computational neuroscience, artificial intelligence and related fields.

The poster "State-dependent neural manifolds, correlations and timescales in macaque cortex and in spiking neural networks", by EBRAINS researcher [Aitor Morales-Gregorio](#), won the first prize at the ICNCE Best Poster Awards.

Read more: <https://lnkd.in/eNajcBGR>

#ICNCE2024



[Mehr auf LinkedIn](#)

👋 Diese Woche sind wir im Eurogress gewesen und haben uns bei der #ICNCE2024 an mehreren Tag auf der angeschlossenen Messe präsentiert und interessierte Besuchenden über unsere Angebote informiert!

💡 Falls Ihr jetzt wissen wollt, was das sein könnte, dann klickt doch mal hier: www.edih-rheinland.eu

Dank für die Unterstützung geht an
[Werkzeugmaschinenlabor WZL der RWTH Aachen](#)
[Lehrstuhl Informatik 11 - Embedded Software](#)
[Stadt Aachen](#)
& ICE - Institute for Communication Technologies and embedded Systems

#EDIH #EDIHRheinland #Digitalisierung #Digitalization #KI
#KünstlicheIntelligenz #AI #ArtificialIntelligence #HPC
#HighPerformanceComputing

See translation



[Mehr auf LinkedIn](#)

Use your chance and meet us in Aachen, at the ICNCE 2024!

#conference #nanolithography #ebeam #ionbeam #laserlithography
#lithography #aachen



[Mehr auf LinkedIn](#)



FMD - Forschungsfabrik Mikroelektronik Deutschland

4,426 followers
1w •

Die International Conference on Neuromorphic Computing and Engineering - #ICNCE 2024 hat begonnen und unsere FMD-Expert:innen sind aktiv dabei!

Am heutigen Vormittag wurden die Teilnehmenden durch zwei komplementäre Vorträge motiviert, die gegenwärtigen Herausforderungen mit einem interdisziplinären Ansatz auszugehen.

Giacomo Indiveri (ETH Zurich, Department of Information Technology and Electrical Engineering) und Panayiota Poirazi (Institute of Molecular Biology and Biotechnology (IMBB)) zeigten auf Basis sehr unterschiedlicher Ansätze, dass insbesondere für neuromorphic Computing die Grenzen zwischen Hardware und Algorithmen (Software) aufgehoben sind und sich so neue Fragestellungen aber auch Chancen für zukünftige Lösungen ergeben. Dies ist insbesondere für junge Talente eine Inspiration, an ganzheitlichen Lösungen in diesen Bereichen zu arbeiten.

Was erwartet dich am FMD-Stand?

Von heute bis Donnerstag stellen unsere Expert:innen unser Projekt QNC-Modul am FMD-Stand vor und beleuchten dabei die Bedeutung der Arbeit am neuromorphen Computing zur Entwicklung der zukünftigen Hardware-Basis für neuartige Rechentechnologien.

Du kannst unseren FMD-Showroom mit den neuesten Entwicklungen auf dem Bereich des neuromorphen Computings im Rahmen des QNC-Projekts auf einer VR-

Spielwiese besuchen.

Lerne ADELIA (Analog Deep Learning Inference Accelerator) unserer FMD-Institut Fraunhofer IIS und Fraunhofer EMFT kennen. ADELIA erlaubt energie- und zeiteffiziente Berechnungen von Deep Neural Networks (DNNs).

Unsere Expert:innen vor Ort freuen sich auf deinen Besuch an unserem Stand und sind sehr gespannt auf die Gespräche und Diskussionen im Rahmen der ICNCE.

Unser erster Eindruck von der ICNCE? Schon heute zeigt sich, dass für die anstehenden Herausforderungen ein solcher interdisziplinärer Austausch wichtige Impulse für unsere Arbeit geben wird.

Danke Nadiia Telenchuk für die tolle Fotos!

Eurogress Aachen

AMO GmbH, Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik, IHP, Forschungszentrum Jülich, Fraunhofer ENAS, Fraunhofer FHR, Fraunhofer Heinrich Hertz Institute HHI, Fraunhofer IAF, Fraunhofer Institute for Microstructure of Materials and Systems IMWS, Fraunhofer IOF, Fraunhofer IPM, Fraunhofer-Institute for Microelectronic Circuits and Systems, Forschungszentrum Jülich, RWTH Aachen University

See translation



+3

[Mehr auf LinkedIn](#)



Peter Grünberg Institut (PGI)

619 followers
1w • Edited •

Today is the day! The #ICNCE2024 - International Conference on Neuromorphic Computing and Engineering has officially begun! Join us as we delve into the future of Neuromorphic Computing.

Stay tuned for more updates!

#ICNCE2024 #NeuromorphicComputing #AI #Conference



[Mehr auf LinkedIn](#)



aixACCT Systems GmbH

510 followers
3d •

Follow

Inspiring talks, posters and contributions about the rapidly emerging topic of neuromorphic computing at ICNCE 2024. Non-volatile memories are the common denominator for the realisation of this new technology...

...but most important, all the fruitful conversations at our booth. We are presenting our unique approach for a complete analog matrix-testing setup, ready for FAIR data integration.

Many thanks to Rainer Waser for organizing this great conference!

#aixACCT #ICNCE2024 #neuromorphiccomputing #ai #clusterneurosys #neurotec #neurosys #FeRAM #Ferroelectric #RRAM #memristors



[Mehr auf LinkedIn](#)



Peter Grünberg Institut (PGI)

619 followers
2d •

Reflecting on ICNCE 2024

We are very happy to look back on the successful International Conference on Neuroscience and Computational Engineering (#ICNCE2024) in Aachen, initiated by Rainer Waser. This event was an international gathering of minds, bringing together over 600 participants from more than 20 countries around the globe.

The conference was full of insightful plenum sessions, engaging poster presentations and stimulating discussions. These activities created a vibrant platform for knowledge sharing and collaboration, making every interaction meaningful and enriching.

A wonderful dinner at the Aachen Town Hall provided the perfect setting for interaction and networking.

The conference also included a industry exhibition, associations, and start-ups showcasing the latest developments in the neuromorphic computing field and providing further networking opportunities.



[Mehr auf LinkedIn](#)

Unternehmen/Institute, die über ICNCE gepostet haben

Chair of Electronic Devices (ELD), RWTH Aachen ... [Follow](#) ...
378 followers
1w •

Today we are at the International Conference on Neuromorphic Computing and Engineering [#icnce2024](#)

We are looking forward to an event that has the aim to break silos, cross borders and make waves on the background of interdisciplinary challenges and opportunities. Thank you [Rainer Waser](#) for making this conference in [#Aachen](#) possible. Thanks to the co-chairs and honorary chair: [Markus Diesmann](#), [Bastian Leibe](#), [Max Lemme](#), [Giacomo Indiveri](#)!

With us at Eurogress Aachen are [Sibylle Keupen](#), [Jansens Pieter J.](#), [Ulrich Rüdiger](#), [RWTH Aachen University](#), [Forschungszentrum Jülich](#), [NeuroSys Cluster](#), [NEUROTEC Project](#), [RWTH Innovation](#), [Stadt Aachen](#), [AMO GmbH](#), [AIXTRON SE](#), [aixACCT Systems GmbH](#), [RAITH Group](#), and many more!



[Mehr auf LinkedIn](#)

AMO GmbH
3,256 followers
1w •

[Follow](#) ...

We are at [#ICNCE2024](#) – the International Conference on Neuromorphic Computing and Engineering!

The conference has just kicked off at the stunning Eurogress in Aachen, featuring welcome addresses from Aachen's Mayor, [Sibylle Keupen](#); [Jansens Pieter J.](#), from the Board of Directors at [Forschungszentrum Jülich](#); and Ulrich Rüdiger, Rector of [RWTH Aachen University](#).

Supported by the [NEUROTEC Project](#) and the [NeuroSys Cluster](#), the ICNCE promises an outstanding scientific program with world-leading speakers, along with a large trade exhibition. AMO's CEO, Prof. [Max Lemme](#), had the honor of chairing the first session.

Don't miss the opportunity to visit [#AMObooth](#) to discover more about our pioneering projects in neuromorphic computing, as well as our extensive micro- and nano-fabrication services and technology transfer offerings.

We are particularly excited to introduce [INFRACHIP](#), an EU initiative that provides funding to access various advanced technologies within AMO's portfolio, including:

- GFET fabrication for on-chip sensing applications
- Thermal processes
- Dry etching
- Deposition (sputtering & e-beam evaporation)
- Advanced lithography tools
- Wet chemistry
- Characterization

👉 If you have a high-tech product idea but lack the in-house technology to develop a prototype, stop by our booth to learn more about INFRACHIP. It could be the solution you need!

🔗 Looking forward to connecting with you at ICNCE 2024!



[Mehr auf LinkedIn](#)

Wirtschaftsförderung Aachen
1,102 followers
1w •

[Follow](#) ...

Dass Künstliche Intelligenz (KI) boomt, spürt wohl fast jeder tagtäglich. Dass die Entwicklung von KI-Anwendungen rasend schnell vorangeht, bekommen viele ebenfalls mit. Dass KI aber ressourcenseitig auch an seine Grenzen kommt, wird nicht ganz so oft diskutiert. Der Energiehunger ist bereits sehr groß und wächst weiterhin sehr stark an. Neuromorphe Hardware, angelehnt an die menschliche Struktur des Gehirns, könnte eine Lösung sein, um KI Anwendungen deutlich effizienter einzusetzen, was auch ein wichtiger Baustein bspw. für autonomes Fahren sein wird.

Auf der ICNCE (International Conference on Neuromorphic Computing and Engineering) im Eurogress, Aachen, konnten sich internationale Besucher vom 3. bis zum 6. Juni 2024 ein Bild davon machen, wie die Zukunft von innovativer KI Hardware aussehen könnte. Materialwissenschaftler, Elektrotechniker, Informatiker und Sozialwissenschaftler konnten inspirierenden Vorträgen zuhören, Ausstellungsstände besuchen und sich inter-disziplinär vernetzen.

Für uns als Wirtschaftsförderung der Stadt Aachen war es bereichernd, auf dieser Konferenz mit einem Stand vertreten zu sein. Als Beirat des Neurosys Zukunftscluster haben wir ein hohes Interesse an den Entwicklungen im neuromorphen Computing. Als Vertreter der Stadt Aachen sehen wir zudem, dass Aachen seinen Status als Zentrum für KI-Entwicklungen auf Weltklasse-Niveau ausbaut, was wir nur allzu gerne unterstützen und pushen. Als Projektpartner des EDIH-Rheinlands konnten wir zudem dessen herausragendes Angebot für Unternehmen in diesem Umfeld platzieren.

Wir danken den Organisatoren und Einladern für spannende und aufschlussreiche Tage im Eurogress.

[#Neurosys](#) [#ICNCE2024](#) [#AMO GMBH](#) [#Stadt Aachen](#) [#EDIH Rheinland](#) [#KI.NRW](#)



[Mehr auf LinkedIn](#)

EBRAINS
11K followers
1w •

[+ Follow](#) ...

EBRAINS researchers at [#ICNCE2024](#) presented posters on a range of topics, including cortical microcircuits, workflow descriptions, and state-dependent neural dynamics.



[Mehr auf LinkedIn](#)

KI.NRW
4,447 followers
3d • Edited •

Follow ...

👍👏🎯 Drei spannende Tage, drei Fachbereiche, ein Ziel: die Zukunft innovativer KI-Hardware energieeffizient gemeinsam gestalten ...

... So lautet das Fazit der ersten »International Conference on Neuromorphic Computing and Engineering (#ICNCE)«, die vom 3. bis zum 6. Juni in Aachen stattfand. Auch KI.NRW war mit einem eigenen Stand vertreten, an dem unsere KI-Expert*innen [Monika Loeber](#), [Marina R.](#) und [Siegfried Eckstedt](#) über die Angebote unserer Kompetenzplattform informierten.

🗣️ Die Konferenz vernetzte internationale Expert*innen aus den Neurowissenschaften, der Informatik und der Künstlichen Intelligenz miteinander. Über 600 Forschende, Innovationsunternehmen und Start-ups sowie Transferakteure und Forschungszentren konnten am interdisziplinären Austausch mit Vorträgen, Paneldiskussionen, Poster-Sessions und einer Fachmesse rund um Neuromorphes Computing teilnehmen.

💡 Inspiriert von natürlichen Prozessen im Gehirn, könnte [#NeuromorpheHardware](#) eine Lösung sein, um [#KünstlicheIntelligenz](#) effizienter einzusetzen. Nordrhein-Westfalen bietet mit seinem KI-Ökosystem beste Voraussetzungen für die Umsetzung, so treiben bereits verschiedene Akteure aus NRW dieses Thema gemeinsam voran. Denn es zeigt sich schon heute, dass für die anstehenden Herausforderungen ein interdisziplinärer Austausch und die Zusammenarbeit zwischen Forschung und Industrie entscheidend ist.

🙌 Ein großes Dankeschön an die Organisatoren – das [#Cluster4future](#)-Projekt [NeuroSys Cluster](#) und das Strukturwandelprojekt [NEUROTEC Project](#) – und an alle Besucher*innen und Teilnehmenden für die spannenden Insights!

📖 Mehr zum Thema Neuromorphes Computing lesen Sie in unserem Interview mit Prof. Max Lemme, Koordinator des Zukunftsclusters NeuroSys: <https://lnkd.in/eUpd65w>

📅 Eine Übersicht über das gesamte Konferenz-Programm gibt es hier: <https://www.icnce-2024.de/>

[#NeuromorphicComputing](#) [#NRWkannKI](#)

RWTH Aachen University | EBRAINS | AMO GmbH | RWTH Center for Artificial Intelligence | Forschungszentrum Jülich | Zukunftsagentur Rheinisches Revier GmbH | AGIT MBH | IHK Aachen | Stadt Aachen | Holger Hoos | Julia Mann née Hoerner | Christian Temath | GEMESYS | FMD - Forschungsfabrik Mikroelektronik Deutschland

See translation



🔗 [Mehr auf LinkedIn](#)