

# Academia Europaea Bergen Knowledge Hub

Annual Report 2024

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# Introduction

By Eystein Jansen, Professor at the Department of Earth Science, University of Bergen, Academic Director of Academia Europaea Bergen Hub.

Dear all.

The Academia Europaea Bergen Hub (AE Bergen) is pleased to present our annual report for 2024. As for the previous years, 2024 has been profoundly affected by the ongoing war in Ukraine, reshaping the landscape for research and academic life across Europe. The aggression and its broader geopolitical implications have diminished security and limited opportunities for peaceful scientific collaboration and the open exchange of ideas and results.

We now find ourselves in a situation where research funding competes increasingly with military expenditures, raising concerns about the norms of openness in science. The potential for research outcomes to be misused for hostile purposes against our European democracies (the Dual Use dilemma) is a pressing issue.

The ongoing conflicts in the Middle East, marked by horrific atrocities against civilians, further complicate this landscape. Additionally, the return of the Trump administration in the USA creates uncertainties for rational, science-based governance in the world's largest economy, which could have global repercussions for academia.

The current climate for research is undeniably precarious. Europe is lagging in research-based innovation compared to the USA and China, and the long-term outlook appears challenging. However, there are positive developments also. In my role as Vice-President of the ERC, overseeing

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Physical Sciences and Engineering, I have seen influential reports emerge as we approach the 10th EU Framework Programme for research. The Draghi report on the future of European competitiveness, the Letta report on the European internal market, and the Heitor report on the design of the 10th Framework Program all commend the ERC's achievements in advancing world-class frontier science. These reports advocate for the extension of the ERC and the restructuring of the European research and innovation landscape, following the ERC's model of excellence, investigator driven

frotnier research and independent governance. The implementation of these recommendations appear to be a part of the new EU Commission policies, and this could foster the emergence of more leading research groups in Europe, strengthening our research and innovation base against global competition, aligning closely with the strategic goals of Academia Europaea.



Academic Director of Academia Europaea Bergen, Eystein Jansen.

In 2024, as in the previous year, our Hub's activities focused on science and

science diplomacy in the Arctic. We hosted a well-attended side event at Arctic Frontiers 2024 conference, titled <u>A New Arctic Energy Mix</u>, featuring leading experts on energy and the green transition. Through our ongoing <u>Rethinking Arctic Collaboration project</u> we have organised events at key European Arctic conferences, including the Arctic Circle in Berlin in May and at the Arctic Circle Assembly in Reykjavik in October, the latter featuring both a closed roundtable with key stakeholders and an open event. We also attended a workshop at Dartmouth College's Institute of <u>Arctic Studies</u>, kicked off with a <u>public event</u>. Planned outcomes of the Rethinking Arctic Collaboration project are policy recommendations on Arctic science cooperation and science diplomacy in turbulent and challenging times, pointing towards the upcoming 5th International Polar Year in 2032.

We encourage our members to bring forward suggestions and initiatives for Hub activities, which this year led to our partnership with Professor Jens Braarvig (MAE) in co-organising the <u>Second Biennial Conference of the World Philology Union</u> at Uppsala University from December 4th to 6th, 2024. The central theme was historical languages and how philology engages with the narrative heritage of different cultures. We look forward to welcoming further membership initiatives.

More details on last years' events and engagements on the following pages.

Eystein,

Bergen, January 27th, 2025

#### **Our Mission**

Our Hub aims to be a catalyst for collaboration, knowledge exchange and ideas to:

- Engage research and scholarship with policymaking in Europe and in the Nordic and Baltic Regions, on behalf of Academia Europaea and in close collaboration with national academies of the region.
- Promote excellent research from and about the Nordic and Baltic Region, its surrounding seas, and the Arctic with emphasis on marine and maritime research, sustainability, and the Nordic social model, through scholarly workshops and public events.
- Demonstrate the importance of scientific scholarship and maximise engagement with our members, policymakers, private and public entities and the wider public.
- Stimulate scientists to accomplish stringent and unequivocal communication and interaction with decision makers, media, and the public.

# Our main strategic priorities

- Our major framing perspectives are marine and Arctic issues, our cooperation with SAPEA
  (Scientific Advice for Policy by European Academies), and advocacy for establishing independent
  national science advice mechanisms throughout our region. Our hub will promote sustainability
  issues including the UN Sustainable Development Goals (SDGs), emphasizing sustainable use
  of the ocean and marine resources, climate change, energy transformation and policies for the
  development of governance and welfare, as well as promoting the arctic as a military low-tension area.
- We emphasize the importance of collaborative efforts from scholars from the natural sciences, the social sciences, and the humanities, to solve major human challenges.
- Our Strategic Plan runs from 2021 to 2024. A more thorough outline of the strategic areas of the AE-Bergen Hub, can be found in the **Strategic Plan**. A concentrated version is found below:

# Strategic areas for the AE-Bergen Hub

## Area 1 - Science-policy interface

- We aim to contribute to evidence reports for science-policy interactions, including to propose
  future SAPEA topics, and to promote science advice and science diplomacy in general. The Hub
  will advocate independent national science advice mechanisms, comparable to the EUs' Science
  Advice Mechanism (SAM). Our advocacy for establishing national independent scientific advice
  mechanism, will primarily focus on the need for processes providing independent and transdisciplinary scientific/knowledge-based reviews, and to clearly separate such reviews from political
  recommendations.
- As outlined in our Strategy Plan, we will organize debates and dialogues on scientific topics relevant to policymaking. We will engage with SAPEA and EU's Scientific Advice Mechanism (SAM), including nomination of candidates to SAPEA activities. In addition, we will engage with national mechanisms for science advice to policymakers in our region.

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#### Area 2 - Promote and showcase excellent research and scholarship

 We will promote and showcase research and scientific excellence within our region and beyond, through various events and communication channels, engaging with our membership base and members of the Young Academy of Europe in our region. We will pose critical research-based questions, contribute to scientific debates, and illuminate scientific breakthroughs and outcomes from meetings and conferences.

• From 2021 we have co-organised science lectures with UiB's Horizon lecture series on a regular basis, highlighting excellent research on cross-disciplinary issues for a broad science-interested public. We also co-organise events with the Bergen programme-committee of the Norwegian Academy of Technological Sciences (NTVA).

### Area 3 - Visibility and regional engagement

- We will increase our visibility in the region and strengthen our engagement with relevant actors and communities (private, public and NGOs). To fulfill our mission, we aim to further develop the Hub's portfolio of activities and sponsorships at the intersection of science and the wider society.
- By sharing publications and reports, news items and interviews, we aim to make our website an engaging showcase of our activities and engagements. We will establish and update a calendar of activities and events, aiming to attract a broad audience from the academic, public, and private sectors. I addition to in-person events, we will communicate broadly through webinars, our website, newsletters, and social media channels. We will participate in relevant local forums and arenas that match our priorities, both to increase our visibility and to actively seek collaboration with others.

## Area 4 - Cooperation with national academies in our region and the other AE Hubs in Europe

We aim to establish good connections to the national academies of our region. In this endeavour
we will emphasize AE's strengths in science advice for policy, its pan-European perspectives,
and strong connections to leading European research institutions e.g., the European Research Council, in addition to the thematic areas of our Hub. We aim to strengthen the interaction
between academic communities across Europe, starting with collaboration with other AE Hubs.
We will engage in inter-Hub meetings to discuss possibilities for e.g., joint events, activities,
mutual learning and sharing
of resources.



A map of Academia Europaea locations in Europe.

# Highlights from 2024 activities

## **January**

Academia Europaea Bergen was represented by Academic Director Eystein Jansen at the Arctic Frontiers Conference 2024 'Actions & Reactions', in Tromsø, 29 th January – February 1st. Our Hub

co-organised a panel discussion titled <u>A new Arcticenergy mix – at what costs?</u> The Finnmark example. The range of insights from keynotes, speakers, and panelists, as well as the audience response, proved that we had found a hot topic for the event. Our experts explored how the energy sources in use in Norway will have to be supplemented by new energy sources in the future. While the emphasis of our experts varied, they all agreed on one thing; that in the future a mix of energy sources will be necessary, while also addressing the 1.5 or 2-degree targets set by the Paris Agreement. <u>A recording of the event is available.</u>



Lars-Henrik Paarup Michelsen, director of the Norwegian Climate Foundation, during his introduction at our Arctic Frontiers 2024 event.

# **February**

AE-Bergen co-organised a Darwin Day & Horizon lecture, February 12th. The lecture <u>The evolution of learning and the origins of consciousness</u>, was held by Professor Eva Jablonka, an evolutionary theorist and a geneticist. She explored the question of the origins of animal mentality, a subject which Darwin himself avoided. An evolutionary approach for studying this has been developed by



Darwin Day & Horizon lecture, February 12th: Professor Eva Jablonka explored the origins of animal mentality.

Jablonka together with Simona Ginsburg. Their proposal is that the emergence of primary consciousness was driven by the evolution of a domain-general, representational form of associative learning, which they called unlimited associative learning (UAL). By characterizing UAL and following its evolution, Jablonka argues one can figure out how primary mental powers (minimal consciousness) had emerged, what the neural dynamics of minimal consciousness are like, how consciousness is distributed in the living world, and in which ecological context it first emerged.

AE-Bergen continued our involvement as co-organiser of a well-established local <u>meeting series</u> together with the Bergen offices of the Norwegian Academy of Technological Sciences (NTVA Bergen) and The Norwegian Society of Graduate Technical

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and Scientific Professionals (Tekna Bergen). In 2024, the series started on February 13th, with a panel discussion on the subject <u>Is the green shift too costly?</u>. Keynotes were held by journalist Øystein Heggdal, and by UiB Professor Christian G. Gebhardt, head of the Bergen Ocean Wind Energy Centre.

### March

We co-organized a NTVA-Tekna-AE event March 12th on the topic <u>Do we need Alternative Monetary Systems?</u> Monetary systems are critical infrastructure in society. What does it cost to operate them? And does it make sense, in terms of future societal security, to stick with one or more alternative monetary systems? Introductions to the debate were held by researcher Svein Ølnes and by Professor Arne Krokan.

## **April**

We co-organized a NTVA-Tekna-AE event April 9th on the topic Nature crisis versus climate crisis? Finding the balance in sustainability efforts. Understanding the big picture of sustainability is a challenging task. While solutions to many problems seem obvious when examined in isolation, upon closer examination we realize that there are tensions between different sustainability goals. Introductions by Professor Katja Enberg and Professor Øyvind Fiksen.



Introduction by Professor Katja Enberg at the event Nature crisis versus climate crisis? Finding the balance in sustainability efforts.

## May

Our Hub is actively engaged in issues concerning science and science diplomacy in the Arctic, and we are in lead of the project <u>Rethinking Arctic collaboration</u>. The project is funded partly by a grant of 400 000 NOK from UArctic for 2023-2025, and has partners from USA, Canada, Germany and Norway. There have been several events organised by the project consortium during 2024, one

of them being a panel debate at the Arctic Circle Berlin Forum May 8th. In her introduction, Melody Brown Burkins, Director of the Institute of Arctic Studies at the John Sloan Dickey Center, Dartmouth, said: «Even in our group, we are not all defining science diplomacy and cooperation challenges in the same way, but we all want to see a future with shared Arctic science diplomacy goals. We want to see if we can learn what paths to future Arctic science cooperation will work. And we want to see Arctic science done with just, ethical, and inclusive Arctic



The Academia Europaea Bergen-led project Rethinking Arctic collaboration organised panel discussions at several conferences in 2024. Here a panel debate at the Arctic Circle Berlin Forum, May 8th.

governance. She highlighted that an ethical and equitable future for Arctic science diplomacy would have to include Arctic Indigenous Peoples in both knowledge creation and diplomatic decision-making.

#### **June**

Our Academic Director Eystein Jansen is also the Vice-President for Physical Sciences and Engineering at the ERC. He played a key role in bringing the ERC Board to Bergen for an ERC board meeting and seminar in Bergen on 26th-27th June. <u>A recording of the seminar is available.</u>

# **August**

Since the first Rosendal Week in 2020, Academia Europaea Bergen has been represented at this regional conference on climate change and energy transitions in Western Norway. Our representative at the 2024 Rosendal Week (August 5th – 6th) was Hub Manager Kristin Bakken.



Rector Margareth Hagen, University of Bergen, Maria Leptin, President, European Research Council, and Oddmund Hoel, Minister of Research and Higher Education in Norway at the ERC seminar in Bergen. Photo: Paul S. Amundsen/UiB



Professor Jens Braarvig (MAE), president of the World Philology Union.

Following an initiative by Professor Jens Braarvig (MAE), president of the World Philology Union, a meeting was held August 20th to explore possibilities for cooperation between the World Philology Union and Academia Europaea Bergen. The meeting resulted in an agreement that AE-Bergen would be a co-organizer of the December conference at Uppsala University, "Philology and the narrative heritage", with AE-Bergen contributing to outreach efforts.

# **September**

Academia Europaea Bergen co-organized, together with the Horizon Lecture Committee, a lecture on the topic <u>Fusion power – the ultimate source for clean energy</u>, on September 16th. Controlled energy production based on fusion has many advantages but has so far not been realized despite intense research for more than 60 years. However, significant progress now happens based on two technologies: magnetic confinement

and strong laser pulses. Professor Odd Erik Garcia described in his lecture the international development within magnetic confinement fusion, a topic he has been leading research projects within during the past decades, now as Head of Aurora Centre for Non-linear Dynamics and Complex Systems Modelling (DYNAMO) at UiT the Arctic University of Norway.

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#### **October**

Following petroleum products, fish and seafood are Norway's most important export, increasingly dominated by farmed salmon. The aquaculture industry faces significant challenges related to fish welfare and excessive mortality in production. We co-organized a NTVA-Tekna-AE event on the topic of <u>Fish welfare in Norwegian aquaculture</u>, and how research can improve it, on October 8th. Introductions by Geir Magne Knutsen, Sofie Remø and Sigurd Olav Handeland.

Our 'Rethinking Arctic Collaboration project' presented status and findings at a panel discussion at the Arctic Circle Assembly in Reykjavík, October 2024. The discussion is available as a recording. The event was moderated by Ole Øvretveit, parttime researcher employed by our Hub and funded by the project. In the panel were Melody Brown Burkins of the Institute of Arctic Studies, Dartmouth College, Lise Øvreås, president of The Norwegian Academy of Science and Letters. Vol-

ker Rachold of the German



Our 'Rethinking Arctic Collaboration project' presented status and findings at a panel discussion at the Arctic Circle Assembly in Reykjavík, October 2024.

Arctic Office, Alfred Wegener-Institute (AWI), Gunn-Britt Retter, Arctic & Environmental Unit, Saami Council and Henry Burgess, Head of the NERC Arctic Office, British Antarctic Survey; President, International Arctic Science Committee (IASC). In her introduction, Melody Brown Burkins described how the Arctic Science Diplomacy Project is a group with very diverse perspective, with several group members part of the Arctic Circle Assembly panel.

As part of the Arctic Circle Assembly our 'Rethinking Arctic Collaboration project' also organised a closed session for Arctic Senior Officials (Diplomats) applying Chatham house rules, where amongst other issues the challenges for the Arctic Council after the Russian full-scale invasion of Ukraine was discussed.

#### **November**

The 'Rethinking Arctic Collaboration" project gathered for both an open session panel debate and a closed workshop at Dartmouth College, New Hampshire November 16th -20th. The panel debate titled <u>Climate Diplomacy on Thin Ice: Navigating Arctic Cooperation & Polar Governance</u> took place on November 18th. The workshop focused on potential scenarios that may help guide Arctic diplomacy and cooperation as we look toward 2032 and the 5th International Polar Year (IPY-5). <u>A recording of the event</u> is available on youtube.

Artificial intelligence is both a scientific discipline, an engineering discipline, a business model, and a tool. So, what does it mean to do "sustainable" AI? AI is a globally distributed business that relies on Asian hardware, European consumer money, North American technological innovation, cheap labor from the global south, and globally distributed researchers and software developers. So how sustainable is the AI business globally from this perspective? This topic was explored at a well-atten-



Keynotes from Professor Marija Slavkovik and Professor Jill Walker Rettberg.

ded <u>NTVA-Tekna-AE event</u> November 19th, with keynotes from Professor Jill Walker Rettberg and Professor Marija Slavkovik, followed by a lively discussion.



A presentation of the years' activities at AE-Bergen Hub was given by Academic Director Eystein Jansen.

Academic Director Eystein Jansen, Hub manager Kristin Bakken and communication adviser Nils Olav Sæverås all attended the <u>35th Annual Conference of Academia Europaea</u> (26th -28thth November in Wroclaw, Poland. Events included a meeting of the Academia Europaea Hubs, as well as the Academia Europaea Annual General Meeting, where a presentation of the years' activities at AE-Bergen Hub was given by Academic Director Eystein Jansen.

#### **December**

Communication adviser Nils Olav Sæverås represented AE-Bergen at the Second Biennial Conference of the World Philology Union – Philology and the narrative heritage – at Uppsala University, December 4th to 6th, an event co-organized by our Hub. The 3-day conference program focused on how philologists engage with the narrative heritage of different cultures, showcasing the vital role of the discipline in curating, analyzing, interpreting, and teaching stories preserved from all regions of the world, from the Old Norse stories to the Vedas.

Ingela Nilsson, Deputy Dean of the Faculty of Languages, welcomes participants at Uppsala University.



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# **History and organisation**

Academia Europaea (AE), or The Academy of Europe, is a Pan-European non-for-profit company association of individual scientists and scholars established in 1988. The members are experts and leaders in their own subject areas as recognized by their peers. The Young Academy of Europe (YAE) is independent but affiliated to Academia Europaea.

Academia Europaea operates through its sections and disciplinary classes, but also through a network of regional knowledge hubs, so far in Barcelona, Cardiff, Wroclaw, Bergen, Tbilisi and Budapest. The Budapest Hub is hosted by the Hungarian Academy of Sciences, established in December 2020 to support academics, scholars, and independent research in Hungary, facing a challenging political environment.

The AE-Bergen Hub was established in 2014 and hosted by The University of Bergen (UiB) from 2016. UiB sponsors the running of the Hub, including qualified personnel, appropriate spaces and services for its correct operation and full functioning. AE-Bergen is headed by an Academic Director appointed by UiB, currently AE member (MAE) professor Eystein Jansen (from 2018). The cooperation agreement between AE and UiB states that the Academic Director, an Advisory Board, and a Steering Group shall ensure strategic direction and activities in line with AE's purpose and the intentions of the agreement. The contract between AE and UiB was renewed on May 25th 2021, ensuring that UiB will host and provide facilities and personnel for the running of the AE-Bergen Hub until June 2025. A process regarding the hub's continuation is ongoing.

# Academic Director and Hub Administration of AE-Bergen



Academic Director **Professor Eystein Jansen**Eystein.Jansen@uib.no (part time dedication)



Hub Manager **Kristin Bakken**Kristin.Bakken@uib.no (part time dedication)



Communication Adviser

Nils Olav Sæverås

Nils.severas@uib.no (part time dedication)

# **Advisory Board members in 2024**

- Margareth Hagen; Chair, Rector and Professor, University of Bergen, Norway (Italian Literature)
- Erland Källen; MAE, Professor, University of Stockholm, Sweden (Meteorology/Climate)
- Kirsten Drotner; MAE, Professor, University of Southern Denmark, (Media)
- Carl G. Gahmberg; MAE, Professor Emeritus, University of Helsinki, Finland (Molecular and Integrative Biosciences)
- Björn Wittrock; MAE, Professor Emeritus, Uppsala University and Vice President AE
- Jüri Allik; MAE; Univ. of Tartu, Estonia (Psychology)
- Ole Arve Misund; MAE, Director/Professor Tromsø (Marine and fisheries biology)
- Martin Fernø; MYAE, Professor, University of Bergen (Physics)

# Steering Group members in 2024

- Kjersti Fløttum; MAE, Univ. Bergen (Linguistics)
- Petter Bjørstad; MAE, Univ. Bergen (Informatics)
- Dieter Roerich; MAE, Univ. Bergen (Physics)
- Svein Sundby, MAE, Professor, Institute for Marine Research, Bergen (Oceanography)
- Anne Gro Salvanes, MAE, Professor, Univ. of Bergen (Marine biology)
- Dag L. Aksnes; MAE, Professor, Univ. of Bergen (Marine biology)
- Sigrid Eskeland Schütz; Professor Univ. of Bergen (Law)
- Matthias Kaiser; MAE, Professor, Univ. of Bergen (Philosophy of science)
- Stein Kuhnle; MAE, Professor, Univ. of Bergen (Political science)
- Hans Z. Munthe-Kaas; MAE, Professor, Univ. of Bergen (Mathematics)
- Ole Øvretveit, Project mananger, (Pilot Digital Coast)
- Lise Øvreås; MAE, Professor, Univ. Bergen (Geomicrobiology)
- Marc Bezem; MAE, Professor, Univ. Bergen (Informatics)

# AE-Bergen office and contact

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# Terms of reference (TOR) for the Advisory Board

- Formulate an overall strategy for the Hub
- Provide input to the strategic and annual plans of the Hub in terms of meetings, discussions, and events.
- Ensure the development of science advice for policy within the Nordic/Baltic political context.
- Ensure that the Hub is visible and has activities on a Nordic/Baltic scale, including engagement in activities outside of the Bergen region.
- Provide links with international and national academic networks.
- Provide links to AE members and academic environments in the Nordic/Baltic Region and activate these in Hub activities.

# Terms of reference (TOR) for the Steering Group

- Develop strategic and annual plans together with the Academic Director and the Hub management team.
- Develop collaborations and broad linkages with the society of Bergen and Western Norway, such as: The regional academic institutions and research environments, regional and municipal authorities and their organisations, regional industry, business environments and industry clusters and the public.
- Link high level academic scholarship with key societal issues, e.g. through the SDGs.
- Stimulate knowledge-based policy development, and actively pursue science for policy options on the national and European levels though existing science for policy mechanisms and other activities, as well as taking part in nominating suitable candidates for such tasks.
- Establish scoping processes to identify policy challenges at the regional, national and/or the European levels that can be enlightened by scientific evidence and advice.
- Propose engagements and opportunities for the Hub in terms of conferences and public events.
- Provide links with international and national academic networks.

# **Rethinking Arctic Collaboration 2024**

Future Arctic science collaboration and science diplomacy will be different from those of the pre-2022 period and the Cold War period.

Arctic science collaboration remains in flux. As the project Rethinking Arctic Collaboration has learned through various meetings, conferences, and discussions throughout 2024, Arctic science diplomacy and science collaboration are adapting to different and more turbulent times. Arctic science remains essential for understanding significant climate system changes, ocean development, and environmental and biological changes and securing evidence-based knowledge for local, national, and global decision-making. Still, the securitization of the Arctic, necessary as it may be, overshadows the softer sides of international Arctic collaboration, not least science collaboration. Disruptive times allow working on new, bold ideas for the future Arctic science collaboration structure. In the second half of the project period, the group focused less on the immediate future of Arctic Science Diplomacy, instead looking ahead to possible scenarios in the build-up to the 5th International Polar Year 2032-2033.

In addition to our four panel discussions at major events in 2024 (detailed elsewere in the Annual Report), the main outcome of the Rethinking Arctic Collaboration project will be a paper outlining visions for a new Arctic science collaboration structure.



# THE ACADEMY OF EUROPE

BERGEN KNOWLEDGE HUB

# **Hosted by**



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