**dScience** – Centre for Computational and Data Science

# Annual Report 2024



UNIVERSITY OF OSLO

dScience
Centre for Computational and Data Science

Enabling interdisciplinary collaboration within computational and data science at the University of Oslo, supporting long-term research and connecting academic research with industry and the public sector.

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# 01

# About dScience

**dScience – Centre for Computational and Data Science** – at the Faculty of Mathematics and Natural Sciences, University of Oslo connects academic research with industry and the public sector, manage and share data and software for research and innovation purposes and provides direct support into long-term research tasks. The centre's work includes building interdisciplinary collaborations, services to the research community, data science analytics and support, and support into education programs.

## Established

2021 by the Faculty of Mathematics and Natural Sciences at the University of Oslo.

## Mission

To advance research in computational and data science at the University of Oslo, fostering and facilitating interdisciplinary and cross sector collaboration and partnerships.

## Goals

- Facilitate ground-breaking research and contribute to radical innovation based on excellence in computational and data science at the University of Oslo.
- Provide new knowledge and insights from research that can also be translated and applied to address the problems and opportunities that society most needs to solve, including the green transition.
- Facilitate co-creation of knowledge through collaborations in research between academia, industry, and the public sector.

## Computational and Data Science

The field encompasses diverse areas such as machine learning, artificial intelligence, digital twin technology, data and system architecture, knowledge representation, language technology, logic, statistics, computational mathematics, robotics, image and signal analysis, and sensor development. dScience also integrates expertise from the natural and social sciences, law, and humanities, with domain knowledge across various sectors.

# 02

# dScience After Four Years

dScience was established in 2021 by the Faculty of Mathematics and Natural Sciences. The plan for the development of the centre outlined that the first two years (2021–2022) should primarily focus on the consolidation of the organisation, while the last three years (2023–2025) in the first 5-year period should focus on the development and growth of the centre's activities. This annual report for 2024 will outline how dScience activities and growth take place. In 2024, dScience has had a highly active year with numerous accomplishments. As we move into 2025, several exciting projects will continue to evolve alongside key strategic initiatives.

## Recap of Phase One: Establishing dScience's Role

During its initial phase, dScience solidified its role in research projects and strengthened its collaboration with the Departments at the Faculty of Mathematics and Natural Sciences and selected groups at other faculties. The centre has become a key forum for knowledge exchange and cross-disciplinary collaboration, actively initiating major interdisciplinary projects such as Centres for Research-based Innovation (SFI), Centres of Excellence (SFF), and large-scale EU programmes.

## Phase Two: Development and Growth

After two years of establishing its presence at the University of Oslo, dScience has transitioned into the final year of its second phase, which has focused on expanding activities, securing funding, and launching new projects. Key highlights in 2024 include:

**1. Expansion of dScience Meeting Places**

- The dScience lunch seminar series saw a steady increase in participation, fostering engagement between PhD students, postdocs, researchers, and industry/public sector representatives.
- Taking a leading and active role as a facilitator for interdisciplinary and cross-sector workshops and project meetings with the aim of stimulating research collaboration and networking.
- Data Science Day 2024 has become a natural annual meeting place for the data science community and attracted over 400 participants, featuring company stands from major industry players such as Equinor, Telenor, Microsoft Norway, SINTEF Digital, and many more.

**2. Major Research and Project Developments**

- DSTrain Programme: A five-year postdoctoral programme co-funded by the EU Horizon Europe MSCA. The first call in 2024 received 346 applications from across the world, leading to 18 selected fellows.
- TRUST – A National AI Centre Proposal: Submitted as a Research Council of Norway proposal, aiming to position Norway as a leader in trustworthy AI.
- Twin Transition Programme: Focused on integrating digital and green transitions, leading to an FME proposal (Twin Energy) and two SFI proposals (REMS & Twin-Tech) submitted to the Norwegian Research Council.
- A COST Action proposal (Twin-Trans) to build a European research network on the twin transition.

**3. Strategic and International Collaboration**

- UK-Norwegian AI Safety Workshop at Norges Bank Investment Management London, focusing on AI integration into critical infrastructure.
- The Guild's Twin Transition Insight Paper discussion, co-organised by dScience at the Norwegian Embassy in the UK.
- Collaboration with Oslo Science City to drive innovation and establish new research networks.

**4. Support for Industry and Public Sector Innovation**

- Advanced Impact Study (AIS) with Norges Bank Investment Management (NBIM): Explored the use of signature-based machine learning in financial time series analysis.
- Advanced Impact Study (AIS) with DNB: Integrating Climate Risk and Energy Efficiency into Mortgage Default Prediction and Risk Management Models.
- BedreFlyt Project: Utilised digital twins to optimise resource efficiency in Norwegian hospitals, involving researchers from UiO and SINTEF.
- Project owner of *A Roadmap for Academic Research-Intensive Innovation*, an initiative under the Centre for Digital Life Norway, leading the design and initiation of a change process in the Norwegian innovation system to enhance innovation from academic research in transdisciplinary digital biotechnology."

**5. Digital Outreach and Engagement Growth**

- Website Growth: Over 100,000 page views in 2024, with DSTrain alone receiving 60,000 views.
- Social Media: LinkedIn followers nearly doubled from 2023, now approaching 2,000 followers.
- Newsletter Expansion: Subscriber base increased by 20%, reaching nearly 1,700 readers.

**6. dScience Partner Program Growth**

- Oslo Municipality as a new member from 1st January 2024.
- New AI and Data Science Research Collaborations with industry partners.
- Launch of Partner Roundtrip Initiative to further strengthen collaboration with key strategic partners.

**7. Hosting and Supporting Conferences & Workshops**

- Future of Energy is Green and Digital Conference: Co-organised with UiO:Energy and Environment, attracting over 500 participants.
- Norway Life Science Conference Session: dScience hosted a session on "Artificial Intelligence in Life Sciences, What's Next?"
- 10th International Conference on Mathematical Methods for Curves and Surfaces (MMCS10): Organised with UiO mathematicians, attracting 100 top international researchers.
- Workshops & Training Programs: Provided over 100 researchers with skills in data science, high-performance computing, and machine learning.

# 03

# Roles, Tasks and Locations

The dScience Board (listed in the last part of the annual report) has overall responsibility for dScience's priorities and strategy. dScience organises its work based on four units, led by Centre Leader and Professor Morten Dæhlen, and Professor Arne B. Huseby (Acting leader in 2024).

The four group units have clear areas of responsibility:

1. Office and Community Services
2. Data Science Analytics
3. The dScience Partner Program
4. Project Development

For dScience operations, two supporting councils have been established – the Science Council at dScience and the dScience Community Forum – appointed by the dScience Board. The Science council serves as the centre leader's advisory group and has 10 meetings a year. The Science council has during 2024 consisted of 12 members – professors from the breadth of sciences. The community forum works on the development of measures and mechanisms for increased interaction across disciplines and units at UiO, focusing on application and project development among the forum's members.

The members of the Science Council and the dScience Community Forum are listed at the end of the report. dScience is located in the Kristine Bonnevie building at Blindern with 18 office spaces, as well as a lounge/meeting area that can accommodate up to 40 visitors.

The office community consists of the dScience administration, the NORA secretariat, as well as UiO's employees at Centre for Digital Life Norway (DLN). Together with the three initiatives UiO Growth House, UiO:Energy and Environment, and UiO:Life Science, dScience has 10 office spaces and meeting room facilities in the Oslo Science Park. These are primarily used by the dScience Partner Program and the DLN innovation team.

The following text will highlight our efforts and strategic activities within dScience's four main operations. As you will see, the different parts interact with each other and ensure holistic management and coordination between dScience's teams and efforts.



# 04

# Office and Community Services








Office and community services at dScience include coworking spaces, events, networking, and communication efforts that strengthen the computational and data science community. Achieving the objectives of dScience relies on the effectiveness of both internal and external communication, supported by strategic use of the dScience website, social media, and newsletters.

Creating meeting places is a cornerstone of dScience's mission, bringing together academia, industry, and the public sector to foster collaboration and innovation. In 2024, key achievements included the successful dScience lunch seminar series, the large-scale Data Science Day, and support for several important events, workshops, and conferences. These initiatives, alongside programmes like DSTrain and centres such as Integreat and NORA, have further united and strengthened the computational and data science community at University of Oslo.




dScience Community Services Team (from left): Christoffer Hals, Eva Michelsen Ekroll (Head of Administration), and Cecilie Linea Ellefsen

## Target Groups

dScience targets key groups to advance the computational and data science community at the University of Oslo. These groups include the academic community, with a focus on students, researchers, and faculty at UiO and beyond, fostering interdisciplinary collaboration and preparing the next generation of professionals.

We also collaborate with industry in sectors such as energy, finance, health, IT, and media, partnering with organisations within and across these sectors to drive innovation and address societal challenges.

Additionally, our collaboration with the public sector ensures meaningful contributions to critical priorities in Norway, such as the green transition and digital governance.

Furthermore, dScience engages in Nordic and European initiatives, strengthening its research network and expanding its global reach. Even though we are targeting key groups we see an increasing awareness of dScience activities among the general public, in particular connected to topics like Artificial Intelligence (AI) and the green transition.

## Creating Meeting Places

In 2024, dScience meeting places have proven to be effective catalysts for networking and collaboration. Bringing together the computational and data science community at the University of Oslo has always been a core goal, along with connecting them to key partners in the private and public sectors.

There are several factors contributing to our success in creating relevant meeting places. A key factor is our ability to secure excellent presenters, ranging from PhD students to professors, and to cover topics that resonate with our target groups. Additionally, strong networks provide valuable tips on potential lecturers, and an efficient invitation system ensures smooth coordination. Our seminars are further promoted by attendees who recommend them to friends and colleagues with similar interests, expanding our reach and impact.




## dScience Lunch Seminar Series

The meeting place that incarnates this perhaps the best is the dScience lunch seminar series. In this series we have had a steady increase of participants through 2024 and every week we see great engagement and constructive connections made between PhD students, postdocs, various researchers and representatives from industry and public sector.

## Data Science Day

In addition to the dScience lunch seminar series, dScience has been organising the annual Data Science Day since 2021. On 17th October, 2024, Data Science Day was held at the University of Oslo, in the Science Library and Sophus Lie's auditorium. The event drew over 400 participants.

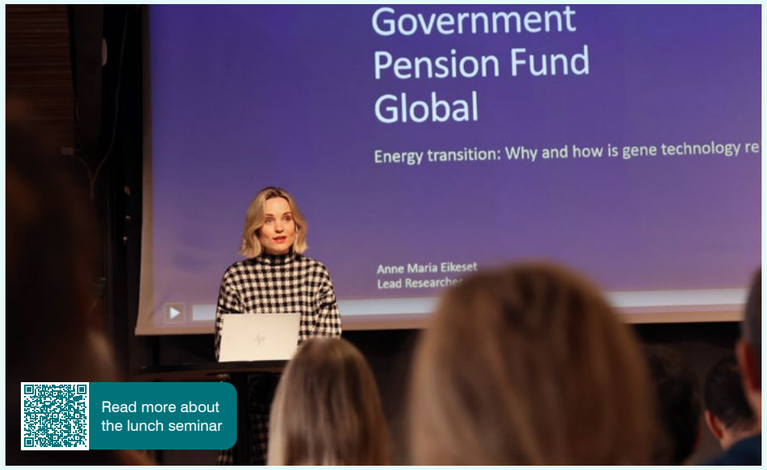
A wide variety of companies and organisations participated in the event by setting up stands to engage with the attendees, including ABB AS Marine & Ports, Amazon Web Services, Bane NOR, Chronos AS, DNV, Doscon, Equinor, Folkehelseinstituttet, Gjensidige, Hance, Kartverket, Kongsberg Digital, Microsoft Norway, Norsk Regnesentral, Rystad Energy, SINTEF Digital, SLB (Schlumberger), Soundsensing, Statistisk sentralbyrå (SSB), Telenor, Tet Digital, and UiO:Energy and Environment.








dScience Lunch Seminar: Set Priorities for Cancer Prevention Policy: The Role of Disease Simulation Modeling, with Emily Burger, Associate Professor at the Department of Health Management and Health Economics at the University of Oslo, as well as a Research Scientist at Harvard Center for Health Decision Science in the US




Anne Maria Eikeset, Lead Researcher at Norges Bank Investment Management, presented at a lunch seminar about genome sequencing opening doors for public sector and industry collaboration



Excellent hosts at Data Science Day 2024! From the left: Per August Jarval Moen, Roxana Pop, Tobias Verheugen Hvidsten, Alouette van Hove.




Rector Svein Stølen opening the Future of Energy Conference 2024.








Professor Stephan Oepen, Department of Informatics, UiO



Professor Knut Mørken, Vice Dean at the The Faculty of Mathematics, UiO



Professor Tom Lyche, UiO

## Events and Collaborative Initiatives

dScience also hosts and organises sessions featuring UiO's own academics and researchers. These sessions showcase their expertise in computational and data science at various conferences, events and other meeting places. The aim is to highlight their work and make connections across disciplines and with various industry partners for knowledge sharing and further collaborations.

One example is the session hosted by dScience at The Norway Life Science conference 2024. The title of the session was "Artificial intelligence in life sciences, what's next?" where the goal of the session was to explore the forefront of research and try to explain what we can expect in the field of AI specifically for life sciences in the years to come. The session was organised and moderated by Professor Stephan Oepen, Department of Informatics.

dScience has also organised top international conferences at the University of Oslo in 2024. The 10th International Conference on Mathematical Methods for Curves and Surfaces – MMCS10, was organised by dScience together with the mathematician Tom Lyche (UiO) and Knut Mørken, Vice Dean at the The Faculty of Mathematics and Natural Sciences. The successful event gathered around 100 top international researchers for a three-day conference packed with talks and networking.

In addition to be main organiser for several events, dScience also assists various relevant events at the University of Oslo in planning and execution. Two highly successful events that dScience assisted with administration and communication services in 2024 was the Future of Energy is Green and Digital Conference and the Science Impact Conference of 2024 – tomorrow's solutions start today. All in all, these conferences gathered thousands of participants to UiO Campus during 2024.

## Forums for UK-Norwegian Collaboration

Another notable event was the exclusive workshop “Safety of AI in Energy & Critical Infrastructure,” held on 21 March 2024, at the Norges Bank Investment Management London office. This workshop focused on addressing the challenges of integrating AI into critical infrastructure and energy systems while accelerating its safe and effective implementation, with a strong emphasis on UK-Norwegian collaboration.

The background for the event is that the UK and Norway have significant stakes in robust and resilient critical infrastructure and energy systems. With the rising integration of AI technologies, there is an urgent need for international collaboration and shared expertise.

Therefore, the participants in the workshop represented a mix of academic, business, and policy expertise and the key desired outcomes were establishment of a UK-Norway working group on AI safety standards, and a collaborative research and development agenda to address shared challenges.

Members of the dScience Partner Program and the AI Safety working group played a significant role in planning and taking part in the workshop.

dScience also co-organised an exclusive discussion on The Guild’s Twin Transition Insight Paper at the Norwegian Embassy in the UK on behalf of the University of Oslo.

The insight paper authored by dScience Centre Leader Morten Dæhlen, examines a world where rapid technological advancements and escalating environmental issues are intertwined. It highlights the need to understand and integrate the digital and green transitions to leverage their combined benefits. The insight paper offers practical strategies for addressing these challenges, suggesting clear paths forward.

The invite-only event included in-depth panel discussions on the impact of this transition on society and business, emphasising UK-Norwegian collaboration.

## Workshop: The twin transition – promise and peril?

Last year’s workshop at the Oslo Science Park on the twin transition was also a great success, bringing together experts to discuss how the green and digital transitions can create synergies for a more sustainable future. Hosted by INTRANSIT and dScience, the event featured presentations, a panel discussion, and interactive roundtable sessions. Participants explored key challenges and opportunities, emphasising the need for innovation, policy support, and cross-sector collaboration.

INTRANSIT is the Centre for the Study of Innovation Policy for Industrial Transformation, Sustainability, and Digitalisation. It is a research centre focused on understanding how the Norwegian economy can transition to become smarter and more sustainable through industrial transformation. The Centre is based at the University of Oslo.

The workshop highlighted dScience’s role in fostering collaborative meeting places, strengthening connections between research, industry, and public policy.

dScience will continue playing a crucial role in creating meeting places and organise top level conferences, seminars and other events for the University of Oslo in 2025. We believe it plays a crucial role in uniting the computional and data science community at the University of Oslo and connecting it with relevant actors in private and public sector.








Workshop on “Safety of AI in Energy & Critical Infrastructure” held on 21 March 2024, at NBIM London office.



Morgan Briggs, Research Associate for Data Science and Ethics, Alan Turing Institute, and Nilla Karlsen-Davies, dScience Partner Program.



Vebjørn Bakken, Director of UiO:Energy and Environment, Asuncion St. Clair, Climate Change Lead-Digital Assurance, Group R&D at DNV and Helge Dahl-Jørgensen, Leader for Industry and Sustainability, Digital Norway.



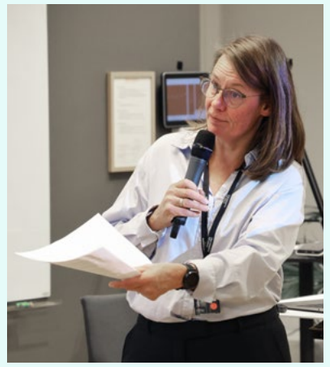

Networking reception at the Norwegian Ambassador's Residence in London.




Frank Børre Pedersen, Programme Director, DNV.



Idar Kreutzer, Director at the Confederation of Norwegian Entreprise (NHO).



Professor Taran Thune, Director, INTRANSIT.




## dScience's Digital Communication

Our main online communication channel is the dScience website where we share information about the Centre, relevant projects, research, activities, and news in Norwegian and English.

In 2024 the dScience website had more than 100,000 page views recorded by Google Analytics. In Google Analytics, a page view is counted each time a page on your website is loaded or reloaded by a user. This is a fundamental metric that tracks how often individual pages are visited, helping to understand user engagement and website traffic.

The sections of the dScience website that stand out in terms of highest number of page views are our News and Events section with around 20,000 page views and the DSTrain site with 60,000 page views in 2024.

DSTrain is a 5-year postdoctoral programme that will award 36 postdoctoral fellowship positions of 36 months each in two calls over the programme period within the overarching frame of data science. The programme will train researchers and innovators with disciplinary, interdisciplinary and transferable skills and a foundation in data science methods enabling them to become Europe's digital leaders across disciplines and sectors.

The first call was announced in January 2024 and advertised internationally to potential applicants, which would explain the high number of page views. Read more about the DSTrain programme in the Research and Project Development section of this report.

### Social Media

dScience uses Linkedin for its social media outreach where we have an active presence with several posts every week and good engagement from our followers. The total number of Linkedin followers are now almost 2000, which is a doubling of followers since 2023. This reinforces our view that the centre's activities are meeting the interests and needs of the target groups.

### Newsletter

In 2024 we have increased the number of newsletters published and made the distribution more regular. The newsletter has now close to 1700 subscribers, which is a 20 percent increase from last year.








Minister of Research and Higher Education, Oddmund Hoel congratulates Integreat Director Arnoldo Frigessi at the official centre launch.

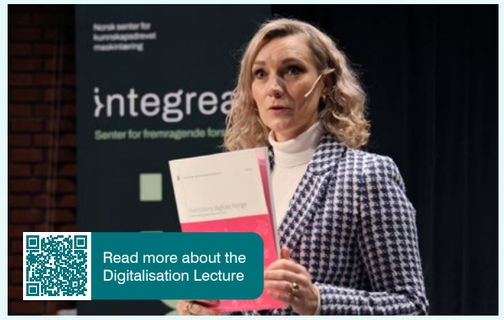
## Communication Support

In 2024, dScience played a key role in enhancing Centre of Excellence Integreat's communication outreach for several major events.Highlights include their participation at Arendalsuka, focusing on leveraging artificial intelligence in Norway; the official launch of Integreat at the University of Oslo; the digitalisation lecture featuring Norway's Minister of Digitalisation and Public Governance, Karianne Tung; and Integreat's annual retreat in Tromsø.

dScience also assists the new COFUND, DSTrain, with website development, content and communication, social media, events and workshops as well as marketing of postdoc positions.

In 2024, dScience also supported NORA – the Norwegian Artificial Intelligence Research Consortium – with administrative and communication efforts. Key highlights include the CuttingEdgeAI event on open Norwegian language models, the NORA Annual Conference 2024, and another CuttingEdgeAI event featuring renowned AI researcher Stuart Russell.

In addition, dScience worked closely with UiO's central communication in 2024, the Faculty of Mathematics and Natural Sciences, and collaborated with Oslo Science City on various relevant activities and joint efforts.




Norway's Minister of Digitalisation and Public Governance Karianne Tung delivered the 2024 Integreat Digitalisation Lecture at the University of Oslo.

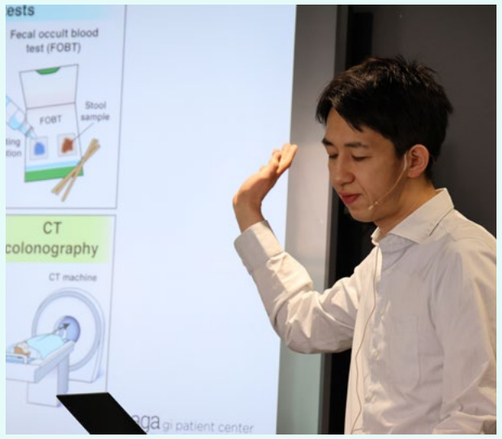
# In total, we recorded over 2300 participants across 35 meeting places and events in 2024

| | |
|---|---|
| **Lunch seminars in the lounge** | **Spring**: 9<br>**Fall:** 9<br><br>Number of participants varies between 15–40 |
| **Lunch seminars in the Science Library** | **Spring:** 3<br>**Fall:** 3<br><br>Number of participants varies between 40–82 |
| **Workshops** | **8 January:** Project management for PhD students with Arash Ahmadi and Anders Kvellestad<br><br>**11 January:** Version Control with Arash Ahmadi, Svenja Christiansen and Sherin Sugathan<br><br>**21 June:** HPC Visualization using ParaView with Sherin Sugathan<br><br>**24 September:** The twin transition – promise and peril? with INTRANSIT and dScience<br><br>**14 November:** Version Control with Arash Ahmadi, Svenja Christiansen and Sherin Sugathan<br><br>**2 December:** Getting up-to-speed with Python with Sherin Sugathan, Maiken Pedersen, Luigi Maglanoc, Knut Waagan and Arash Ahmadi |
| **September** | **10 January:** The Future of Energy is Green and Digital (400)<br><br>**13 February:** Norway Life Science: Artificial intelligence in life sciences, what's next? (300)<br><br>**26–28 June:** 10th International Conference on Mathematical Methods for Curves and Surfaces – MMCS10 (80)<br><br>**25 September:** Science Impact 2024 (100)<br><br>**17 October:** Data Science Day (400) |
| **Total events** | 35 |


















# Lunch seminars:

| Date | Place | Speaker | Title |
|---|---|---|---|
| Feb 8 | UB | Emily Burger, Associate Professor, Department of Health Management and Health Economics | Set Priorities for Cancer Prevention Policy: The Role of Disease Simulation Modeling |
| Feb 15 | Lounge | Tero Aittokallio, Adjunct Professor, Institute of Basic Medical Sciences | Predictive modelling of drug treatment responses for precision oncology |
| Feb 22 | Lounge | Ana Ozaki, Associate Professor, Department of Informatics, University of Oslo | Knowledge Graphs and Ontologies in AI |
| Feb 29 | Lounge | Tejaswinee Kelkar, Associate Professor, Department of Musicology | Studying Melodic Embodiment: Computational Approaches |
| Mar 7 | Lounge | Yuichi Mori, Professor, Institute of Health and Society | Artificial Intelligence in Colonoscopy Screening |
| Apr 4 | UB | Trude Storelvmo, Professor, Section for Meteorology and Oceanography | Global simulations of the interactions between climate and the economy |
| Apr 11 | Lounge | Hannes Kneiding, PhD Candidate, Hylleraas Centre for Quantum Molecular Sciences RT5 | Directional Multiobjective Evolution of Metal Complexes at the Billion-Scale |
| Apr 18 | Lounge | Haghish Ebad Fardzadeh, Postdoctoral Fellow, Department of Psychology | Machine Learning for Mental Health Research |
| Apr 25 | Lounge | Thomas Schellenberger, Researcher, Section of Physical geography and Hydrology | Towards global glacier mapping from satellite data by deep learning |
| May 2 | Lounge | Fahimeh Najafi, PhD Candidate, NJORD | Modeling mechanical properties of material using neural networks |
| May 16 | Lounge | Øyvind Christiansen, PhD Candidate, Institute of Theoretical Astrophysics | Late-time domain walls in cosmological simulations |
| May 23 | UB | Hedvig Nordeng, Professor, Section for Pharmaceutics and Social Pharmacy | Capitalizing on Norwegian health registry data in large European federated data base initiatives |
| Sep 5 | Lounge | Salvatore Florio, Professor, Department of Philosophy, Classics, History of Art and Ideas | Core Constructional Ontology: A Unified Theory of Sets, Parts, and Relations |
| Sep 12 | Lounge | Antonio Martini, Professor, Department of Informatics | Better software for all: using LLMs to improve software development practices |





| Date | Place | Speaker | Title |
|---|---|---|---|
| Sep 19 | UB | Henrik Skaug Sætra, Associate Professor, Department of Informatics | Don't trust your senses! |
| Sep 26 | Lounge | Duncan Watts, Researcher, Institute of Theoretical Astrophysics | Mapping the universe from the Big Bang to the solar system |
| Oct 10 | Lounge | Benedikte Wallace, Researcher, Department of Informatics | How do we teach robots to dance? And why should we? |
| Oct 24 | UB | Magnus Li, Postdoctoral Fellow, Department of Informatics and Alexander Kempton, Associate Professor, Department of Informatics | Why is public sector digitalization so difficult? |
| Oct 29 | Lounge | Policy Officer at the European AI Office, Alex Moltzau | Inside the European AI Office: Is science and research at the heart of Artificial Intelligence (AI) Policy? |
| Oct 31 | Lounge | Harald Weedon-Fekjær, Senior Researcher, Oslo Centre for Biostatistics & Epidemiology – OCBE | Are all breast cancer carcinomas detected at screening progressive? |
| Nov 7 | Lounge | Sondre Wold, PhD Candidate, Department of Informatics | Compositional Generalization in Language Models |
| Nov 14 | Lounge | Poushali Sengupta, PhD Candidate, Department of Informatics | Balancing Explainability-Accuracy of Complex Models |
| Nov 21 | UB | Anne Maria Eikeset, Lead Researcher, Norges Bank Investment Management and Kjetill Sigurd Jakobsen, Professor, CEES – Centre for Ecological and Evolutionary Synthesis | Genome sequencing of all species on Earth – Opportunities for the public and industry sector |
| Nov 28 | Lounge | Kristin Brunk, Postdoctoral Fellow, Centre for Ecological and Evolutionary Synthesis | Data-driven ecology: Opportunistic citizen science data reveal shifts in the breeding distribution of a common alpine bird across the Fennoscandian peninsula |

# 05

# Data Science Analytics




The Data Science Analytics Group's (dSAG) mission is to speed up the integration of data science technologies such as data management, high-performance computing, machine learning, and AI into research projects. We work closely with the University of Oslo's IT Department and Norwegian Artificial Intelligence Cloud (NAIC) to leverage existing infrastructure and knowledge.




From the left: Svenja Christiansen, Researcher and Arash Ahmadi, Head of Data Science Analytics Group.

Our goal is to enhance the competitiveness and productivity of researchers at UiO and among our dScience partners. To achieve this, we focus on two main mandates:

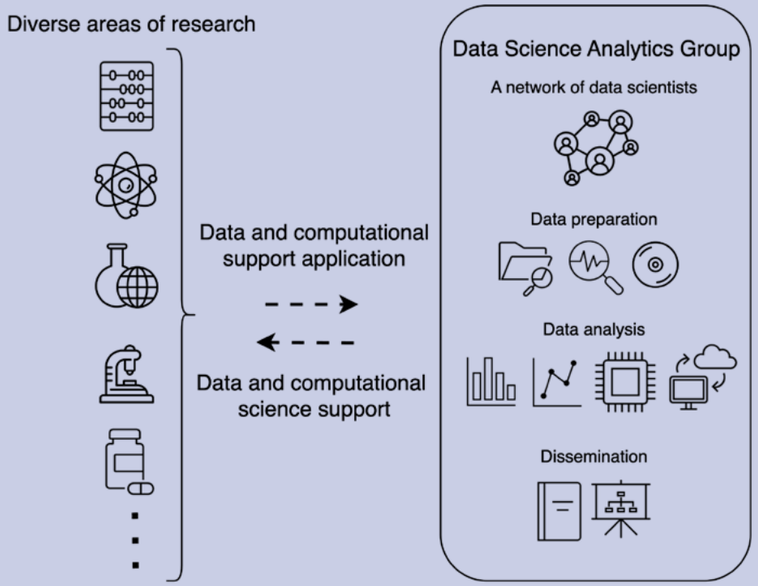
- Providing targeted courses and workshops on common research challenges.
- Engaging directly in the data and computational science aspects of research projects.

The dSAG develops courses and workshops based on common issues faced by researchers. In 2024, over 100 participants benefited from our workshops. Here is a list of workshops regularly held by dSAG:

- Version control using Git and GitHub
- Project Management for PhD students
- Project Management for Postdoctoral Researchers
- HPC data visualisation using ParaView
- Getting up-to-speed with Python

Each April, dScience invites research groups within the Faculty of Mathematics and Natural Sciences to submit structured applications detailing their data and computational challenges. We assess the feasibility of providing support based on the challenge's relevance and our expertise. If feasible, we collaborate with the groups to formulate an action plan that serves as a roadmap for the support provided. In 2024, we addressed 10 submitted projects in addition to 3 dScience initiatives. The scope of our support is centered around three main areas: "Data Preparation," "Data Analysis," and "Dissemination," with the following specific sub-categories:

- Data preparation
  - Data storage and access (systematic storage and sharing of data)
  - Big data (challenges with storage and backup and memory for processing)
  - Data organisation and management (need to develop a system)
  - Data pipeline and automation (use the data efficiently and effectively in pipeline)
  - Data wrangling and transformation (prepare and structure data for analysis)
- Data analysis
  - High performance computing
  - Programming support (need limited programming support on particular issues)
  - Prototyping and implementation (turning your idea into a model)
  - Statistical data analysis (you know what but do not know how)
  - Machine learning (from brainstorming on ideas to implementation and interpretation)
  - Exploratory data analysis (need to explore and understand your data)
- Dissemination
  - Data visualisation and communication (effective visualisation of results for publications)
  - Platform development (turning code to packages and graphical user interface)




**Here is a summary of dSAG activities in 2024:**

# Direct involvement:

### 1. Department of Physics – Tor Ole Odden

**Scope:** Enhancing qualitative data analysis in Physics Education through NLP methods.

**Approach:**

- Performed fine-tuning a pre-trained BERT model to better capture domain-specific nuances.
- Implemented a Hugging face-based pipeline on Educloud's NVIDIA A100 GPUs for efficient processing.
- Assisted in text data extraction from non-regular OCR outputs and shared our existing OCR-GPT pipeline.

### 2. Department of Biosciences – Jan Heuschele

**Scope:** Facilitating secure data upload, metadata pairing, and standardised organisation, alongside a web service for image and metadata preprocessing.

**Approach:**

- Developed an easy-to-use method for data upload to a secure location, paired with metadata, accessible by multiple users, with standardised file and folder organisation.
- Created a web service in Python for image preprocessing, with pipelines for CPICS and Planktoskope data, including optional upload to Ecotaxa. Made accessible via command-line and a frontend interface (Streamlit), and established an Educloud project for data storage and multi-user access.





### 3. Department of Biosciences – Lauren Wiesebron

**Scope:** Analysing 2 TB of hydroacoustic EK80 echosounder data to study krill behavior in relation to dissolved oxygen and other environmental parameters.

**Approach:**

- Assisted in transferring raw data to a storage hotel and processed data to Educloud, ensuring accessibility for all project members.
- Generated and converted code from Matlab to Python, automated data processing pipeline for efficient analysis.
- Supported data analysis and contributed to dissemination of results.

### 4. Department of Mathematics – Geir Storvik

**Scope:** Holding workshop for utilising the version control tools in R and R-studio oriented environment

**Approach:**

- Held a workshop covering basic usage of Git and Github in version control, along with collaborative version control projects in single and multiple branch context.

### 5. Department of Mathematics – Geir Storvik – on behalf of the whole section

**Scope:** Designing and holding workshops on getting started with python and machine learning introduction to python.

**Approach:**

- Held a workshop covering basics of package and environment management on Python along with an in-depth introduction to Integrated Development Environment (EDIs).
- Plan on designing a workshop covering the bird's eye perspective on machine learning tools in python.

### 6. Department of Medical Biochemistry – Bjorn Dalhus

**Scope:** Developing and disseminating an interactive analysis platform for analysing DNA scanning data from single molecule experiments.

**Approach:**

- Developed an R package along with a Docker-based application called SMITracker (Single Molecule Interaction Tracker) based on the existing analytical platform.
- Created comprehensive documentation for the platform's use and contributed to the manuscript presenting the results.
- Plan to run the analytical platform as an online Shiny application for the review process of the paper.

### 7. Department of Pharmacy – Osman Gani

**Scope:** Supporting the team in resource management, high performance computing and AI/ML integration into existing simulation programs.

**Approach:**

- Provided initial support with an overview of the existing HPC capacities at UIO as well as national and international systems.
- Currently, Awaiting detailed evaluation results from the research team to identify specific areas needing assistance, enabling the development of a comprehensive support plan.

“Our goal is to enhance the competitiveness and productivity of researchers at UiO and dScience partners”

### 8. Department of Geosciences – Agata M. Krzesinska

**Scope:** Creating a library of terrestrial rocks to organise and manage the data from Mars Sample Return (MSR) ESA-NASA joint mission.

**Approach:**
- Plan to design a database to integrate existing and new information with an intuitive user interface, in addition to ensuring the database is compliant with the PDS4 standard for public accessibility and archival.
- Currently, awaiting secondary response from the team on initial data curation to prototype the database and the interface according to the plan.

### 9. Department of Geosciences – Elena Mamonova

**Scope:** Assisting with data organisation, storage, and analysis given the large volume of data, and improving code performance.

**Approach:**
- Identified compression mechanisms to reduce data volume by half and recommended cost-effective data storage solutions.
- Explored data slicing methods for faster data exploration as well as initial code profiling to find the potential performance bottlenecks.

### 10. Department of Chemistry – Evgeniy Redekop

Implementation of a digital ecosystem for the curation of data from a particular type of instruments (transient spectro-kinetic data).

**Scope:** Enhancing data curation for Temporal Analysis of Products (TAP) experiments with a unified digital solution for data and metadata management.

**Approach:**
- Supported in selecting an appropriate database and designing a class structure.
- Proposed PostgreSQL for storing both structured and unstructured data, with initial exploration of ready-made solutions like NOMAD implemented on Educloud.
- Will support in implementation of database and python classes.



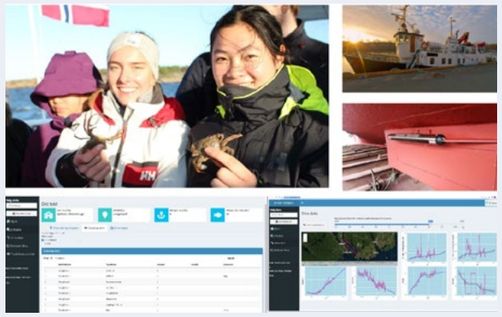


# dScience projects:

### 11. Innsikt Oslofjord

**Scope:** Continuation of the project from 2022, consisting of managing data flow, ensuring data quality, and updating the Innsikt Oslofjord app for use in school classes as part of a learning package.

**Approach:**
- Improved data collection and onboard visualisation during a school cruise, and updated data flow directly to an Educloud project.
- Created a Python module to replace existing processing, enhancing data consistency and metadata handling across all Oslofjord projects.
- Developed a prototype for a more user-friendly Innsikt Oslofjord app, receiving positive feedback from Inspiria instructors.

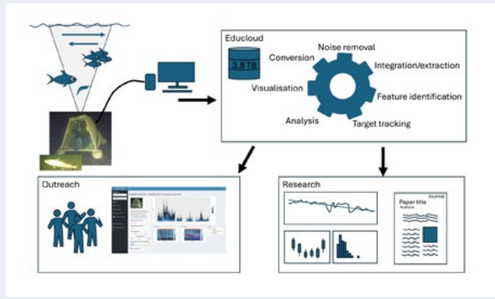


Read more about the project here

### 12. Lander

**Scope:** Maintaining data flow and instrument functionality for the underwater observatory in Drøbaksund, processing and analysing data, and integrating results into the Innsikt Oslofjord app.

**Approach:**
- Established an automated data transfer and processing pipeline to an Educloud project, and made data accessible for various research projects.
- Implemented a lander panel in the Innsikt Oslofjord app for data exploration and maintained lander operation, addressing technical issues and sensor checks.
- Contributed to the lander’s retrieval for repair, and plan to support its redeployment.
- Plan to improve the automation and app integration while fostering research use of the data.




Read more about the project here

### 13. Bastoe

**Scope:** Managing data transfer, processing, and analysing EK80 echosounder data from the Bastø Electric ferry, and visualising results for public access through the Innsikt Oslofjord app.

**Approach:**
- Established data transfer from the ferry to an Educloud project and have been resolving transfer issues in collaboration with Kongsberg Discovery team.
- Tested and planned data processing methods, including using an SQL database for efficient data and metadata retrieval; exploring alternative solutions like file systems.
- Integration of EK80 data processing module to ensure compatibility with the Bastø data and incorporation into the Innsikt Oslofjord app.




Senior Engineer Sherin Sugethan lecturing at a DSAG workshop.

"We design courses and workshops tailored to common challenges faced by researchers. In 2024, over 100 participants benefited from these initiatives, and we plan to expand these activities further in 2025."

## Courses and workshops

### 14. Version control

**Scope:** Providing a comprehensive hand-on workshop on version control using git and GitHub for data analysis and programming.

**Approach:**

- Begins with a theoretical understanding of version control, followed by hands-on practice with basic commands in a demo project.
- Develops collaborative demo projects in both single-branch and multi-branch contexts, and explores advanced Git/GitHub features.
- Target audience includes PhD students, postdocs, and researchers, focusing on terminology, command-line operations, GUI operations (RStudio and VSCode), merge conflict resolution, and version tracking.
- The workshop was held twice, in January and September, the material for the workshop is published as a GitHub page: https://arashah.github.io/version_control_workshop/

### 15. Project management for PhD student / Postdoctoral researchers

**Scope:** Providing PhD students with strategies and tools for effective project management.

**Approach:**

- Covers topics including knowledge and progress management, analysis and software management, reporting and dissemination, and teamwork.
- Discusses best practices and facilitates discussions to share personal experiences for practical insights.
- There are two different versions of this workshop prepared for PhD students and postdoctoral researchers.
- The workshop was held in January, the material for the workshop is published on Zenodo: https://zenodo.org/records/10474595

### 16. HPC visualisation with ParaView

**Scope:** Raising awareness about the capabilities of ParaView in scientific visualisation and its potential on HPC infrastructure like the Norwegian AI Cloud (NAIC)

**Approach:**

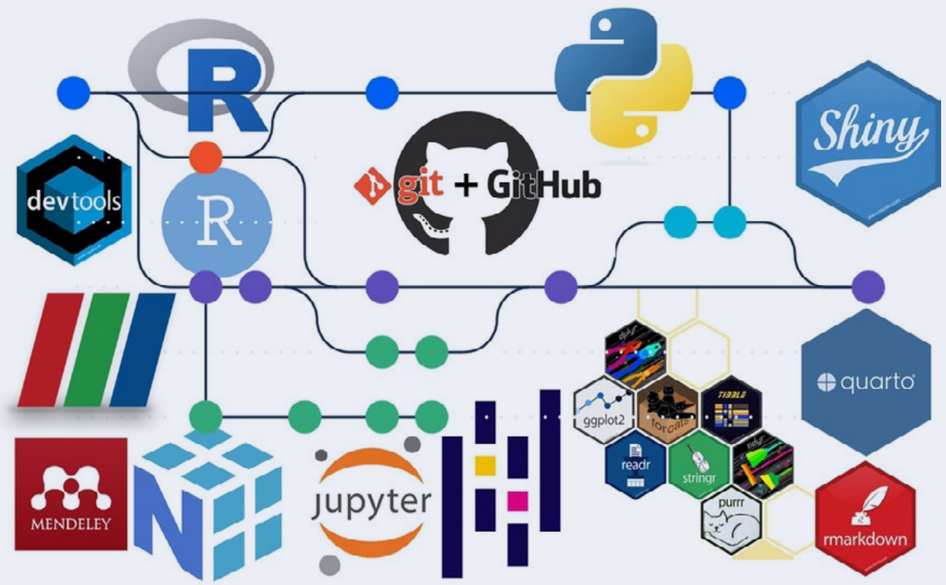
- Introduces ParaView and its functionalities, including Python scripting for automation and extending ParaView.
- Covers advanced topics and the use of ParaView under NAIC, with hands-on exercises using provided datasets and examples.
- The workshop was held in June, the material for the workshop is published on GitLab: https://naic.pages.sigma2.no/tutorials/hpc-visualization-using-paraview/

### 17. Getting up-to-speed with Python

**Scope:** Equipping researchers with tools and procedures to effectively manage Python, packages, environments, and IDEs, providing an informed starting point for programming in python.

**Approach:**

- Cover package and environment management using Pip, Conda and poetry, along with integrating R and Python through Quarto and Reticulate.
- Introduce prototyping tools like VSCode, PyCharm, Jupyter, and production tools like HPC servers and Educloud on demand.
- The workshop was held in December, the material for the workshop is published as a GitHub page: https://arashah.github.io/python_workshop/




# Data Science analytics group website

We have created content for our webpage, outlining the scope of our activities, featuring detailed descriptions of our workshops and summaries of completed projects. This resource provides audiences with a clear understanding of our mission and initiatives at dSAG. Additionally, upcoming workshops are announced on the dScience events page and promoted through our newsletters and contact networks, with support from the dScience communications team.

## Contributions

dScience staff:

- Svenja Christiansen (Researcher)
- Sherin Sugathan (Senior Engineer)
- Arash Ahmadi (Head of dSAG)

IT Department:

- Maiken Pedersen (Senior Engineer – Scientific Computing Services)
- Lars Thomas Hansen (Senior Engineer – Scientific Computing Services)
- Knut Waagan (Senior Engineer – Data Management)
- Luigi Maglanoc (Senior Engineer – Data Management)

Guest contributor:

- Anders Kvellestad (Researcher – Department of Physics) – contributed to the “Project management for PhD student / Postdoctoral researchers” workshop





# INDEPTH:

# University of Oslo’s Contribution to the Frisk Oslofjord 3.0 Project in 2024



## Introduction

The University of Oslo (UiO) plays a key role in the Frisk Oslofjord 3.0 project by further developing, completing, and maintaining the *Innsikt Oslofjord* solution. This involves setting up and managing data streams from the school boat *Rognfjell*, the *Bastø Electric* ferry, and the marine station in Drøbak. Additionally, UiO processes and prepares data and results for use in *Innsikt Oslofjord* and research projects. This report outlines UiO’s contributions to various aspects of the Frisk Oslofjord 3.0 project in 2024.

## *Rognfjell* Data and *Innsikt Oslofjord*

Data from school expeditions are sent to UiO for processing and preparation so they can be used in the *Innsikt Oslofjord* app, which is also maintained by UiO. Furthermore, UiO ensures data quality and maintains close communication with *Inspiria* instructors onboard regarding sensor and data-related issues. In 2024, efforts began to update data flow and processing to achieve more consistent and insightful results. An updated version of the *Innsikt Oslofjord* app is also being developed in collaboration with *Inspiria* instructors.




In 2024, UiO delivered the following:

- Participated in a school expedition to gain an overview of onboard procedures and teaching content. Investigated and proposed changes to the EK80 settings for improved visualisation and data quality.
- Updated data flow: After *Kongsberg Discovery* installed *Starlink* onboard, UiO established an automated daily direct data transfer from the boat to UiO. This eliminated the need for instructors to manually upload data, except for multibeam echosounder data, which still requires manual transfer due to large file sizes and long upload times via *Starlink*. A better solution is needed here.
- Improved existing data processing, fixing several issues that previously caused processing interruptions. The previous method analysed all data files from one day collectively, making it vulnerable to errors in individual files. The new approach processes data on a per-file basis, reducing errors.
- Developed a Python module for handling EK80 data across different project components (*Rognfjell*, *Bastø Electric*, and the marine observatory). This module enhances data usability and sharing.
- Designed a new version of the *Innsikt Oslofjord* app in collaboration with *Inspiria* instructors. The goal is to make the app more user-friendly for high school students by displaying only relevant data and meaningful results, with a simplified text layout and an interface aligned with the *Frisk Oslofjord* design.



Data Science Analytics

“UiO processes and prepares data and results for use in Innsikt Oslofjord and other research projects.”

## Marine Station

The marine station in Drøbak Sound monitors fish, plankton, ocean currents, and several abiotic parameters. It was deployed for the second time at the end of 2023. However, frequent electrical faults and noise issues throughout winter 2024 caused sensor malfunctions, making the system unreliable. In consultation with UiO, *Kongsberg Discovery*, and *Imenco* (the station’s manufacturer), it was decided to retrieve the station for repairs. It was lifted in April and sent to *Imenco*, where the repair process took several months due to complex faults. Eventually, *Imenco* resolved various issues, and final tests indicated a more stable system with less noise. A final spare part is still awaited before redeployment in early 2025.

During the station’s operational period in 2024, UiO accomplished the following:

- Managed and monitored sensor operations.
- Established automated data transfer to UiO.
- Developed automated processing and visualisation of the data.
- Added a dedicated tab in the *Innsikt Oslofjord* app for marine station results.
- Made data available for multiple master’s theses as part of a digital twin project.
- Presented initial findings at the *ICES Annual Science Conference*, receiving positive feedback.
- Organised and participated in retrieving the marine station for repairs.
- Contributed to decision-making and communication throughout the repair process.

## *Bastø Electric* Ferry

The *Bastø Electric* ferry was equipped with an EK80 echosounder in November 2023 and has since collected plankton and fish data several times daily along the Horten–Moss route. The echosounder is operated by *Kongsberg Discovery*, while data are transferred to UiO for processing and visualisation. The results will eventually be integrated into the *Innsikt Oslofjord* app. UiO set up an automated data transfer from the ferry to its data center in early 2024, but stability issues persist due to operational changes onboard.

In 2024, dScience at UiO delivered the following:

- Proposed and established a method for automated data transfer to UiO. While initially successful, the data flow later stopped. UiO is in ongoing discussions with *Kongsberg Discovery* to stabilise it.
- Received data from winter 2023/2024 and planned possible applications and analyses.
- Developed processing methods for *Bastø* data as part of the Python module mentioned in the *Rognfjell* section. Unlike *Rognfjell* and the marine station, the ferry's high speed results in lower spatial resolution but allows for repeated transect measurements. This makes the data well-suited for time-series analysis. Several storage and analysis methods, including an SQL database, have been tested.

## Summary

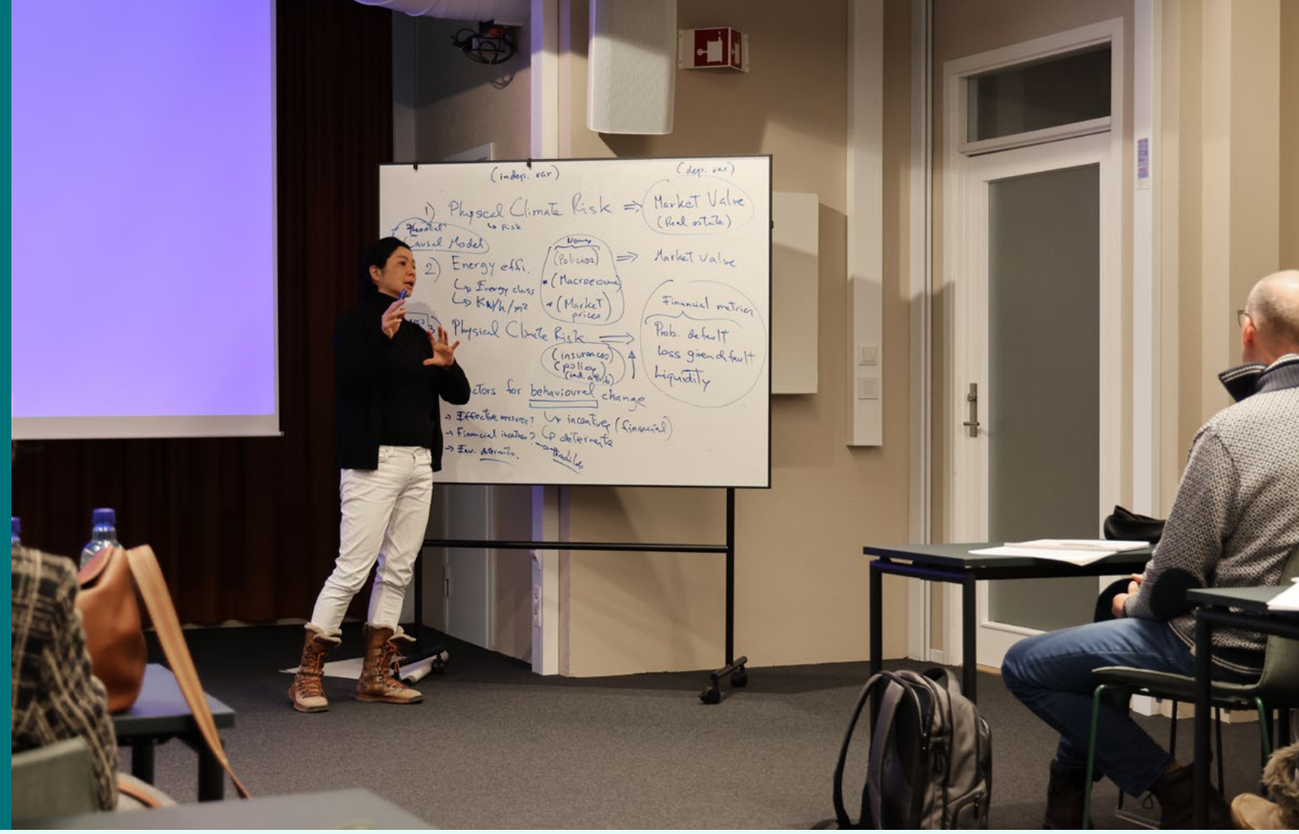
dScience and UiO has contributed to data flow, processing, and analysis in three key areas of *Frisk Oslofjord 3.0*: *Rognfjell* and the *Innsikt Oslofjord* solution, the marine station, and the *Bastø Electric* ferry. Progress has been significant, though issues with the marine station's equipment and data transfer from the ferry have caused some delays. In 2025, priorities include finalising the new *Innsikt Oslofjord* solution (by the end of February), redeploying the marine station, and stabilising the *Bastø Electric* data flow so it can be integrated into analyses and *Innsikt Oslofjord*. Automation of data processing across all subprojects will be completed, allowing a greater focus on analysis, research, and visualisation.



The University of Oslo's marine biology field station is located right by the dock in Drobak.

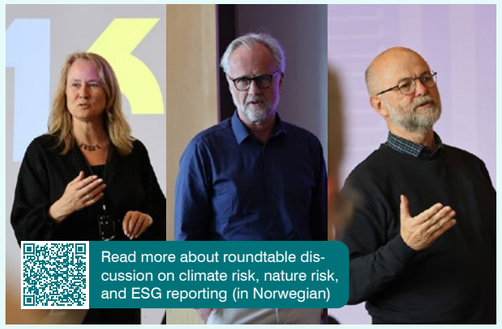
# 06

# dScience Partner Program




Aiko Yamashita, AI and Sustainability Analytics Specialist at DNB at a Partner Program Thematic Working Group workshop.

The **dScience Partner Program** continues to foster strategic collaborations between academia, industry, and the public sector, delivering advanced and tailored advisory services and driving impactful initiatives in data and computational science. This year, the program's focus on addressing societal challenges and creating value through data-driven innovation has reached new heights.




From the left: Astrid Rusås Kristoffersen (DNV), Bjørn Jamtveit (Faculty of Mathematics and Natural Sciences, UiO),and Arne Bang Huseby (dScience).

**The Partner Program focuses on:**

- Fostering Collaboration: Strengthening partnerships that leverage research excellence and practical applications.
- Unlocking Value from Data: Enhancing the potential of data and digital resources for all stakeholders.
- Supporting the Twin Transition: Driving sustainable and digital transformations across industries and society.
- Strengthening partner to partner relations: Addressing joint initiatives from partners.

**Three Key Pillars**

The dScience Partner Program is built upon three foundational pillars: Projects, People, and Capacity Building, each designed to support impactful collaboration and innovation.

The **Projects** pillar encompasses large-scale research initiatives funded by organisations such as the Research Council of Norway (NFR) and the European Union. These projects often involve interdisciplinary collaboration and cutting-edge methodologies.

Some examples of project applications this year include a proposal for an AI Centre called TRUST and several applications for Centres for Research-Driven Innovation.

In addition to these longer-term initiatives, the program supports PhD and postdoctoral research projects that span three to five years, fostering deep expertise in critical areas. Complementing these are Advanced Impact Studies (AIS), which are shorter-term projects lasting six months. These studies are designed to address pressing challenges, delivering rapid and impactful results.

The work in the thematic working groups very often ends up either as concrete projects with partners or input to project proposal as the big AI-proposal TRUST submitted to The Research Council of Norway. Moreover, dScience, based on invitations from partners, has coordinated participation into projects and applications initiated by partners, e.g. Maritime AI.

The **People** pillar focuses on nurturing talent and fostering professional growth. Through recruitment pipelines, the program connects partners with talented students at all academic levels, ensuring access to a diverse pool of expertise. Robust mentorship and supervision programs are provided to support academic and industry needs, bridging gaps between research and practical application. Furthermore, the program includes industrial and public PhD initiatives, supported by the Research Council of Norway (RCN), and lifelong learning opportunities through customised courses and workshops, ensuring continuous professional development.



Svein Stølen, Rector, University of Oslo at the workshop on “Safety of AI in Energy & Critical Infrastructure” held on 21 March 2024, at NBIM London office with members of the dScience Partner Program.




Morten Dæhlen presenting at the exclusive discussion of The Guild’s Insight Paper The Twin Transition Century: The role of digital research for a successful green transition of society

The **Capacity Building** pillar emphasises the long-term development of research and educational capabilities in specialised fields. By fostering a two-way exchange of knowledge between academia and partners, this pillar strengthens the foundation for sustainable innovation and collaboration. This continuous interaction ensures that cutting-edge research is translated into actionable insights and real-world applications, benefiting both academia and industry alike.

#### The Partner Program is supported by all dScience operations

All dScience operations support and complement the efforts of the Partner Program. Office and Community Services play a vital role in creating meeting places, organising events and workshops, and ensuring effective communication with partners. The Data Science Analytics Group contributes directly to Advanced Impact Studies (AIS) and provides tailored courses and workshops for our partners. Meanwhile, the Research and Project Development team actively involves partners in key projects and high-value forums, benefiting both the partners and the University of Oslo.

#### Team and Collaboration

The program is led by Centre Leader Morten Dæhlen, with a team of specialised advisers focusing on various sectors, including energy, health, environmental systems, and finance. They actively engage partners, develop networks, and support project management and R&D funding applications





# 2024 Highlights:

## TRUST – A National AI Centre

TRUST is a proposed national AI center led by the University of Oslo, the Norwegian Computing Center, and SINTEF, aiming to position Norway at the forefront of trustworthy AI research. Submitted as a proposal to the Research Council of Norway, TRUST aspires to become Norway’s equivalent of the Alan Turing Institute in the UK. The center will focus on developing fair, efficient, safe, and sustainable AI systems, integrating expertise from machine learning, governance, and philosophy to ensure AI aligns with democratic values and human rights. If funded, the center is expected to launch in August 2025.

TRUST will collaborate with both private and public sectors, including members of the dScience Partner Program, to drive AI innovation while addressing ethical, legal, and societal challenges. Through its User Program and Network Actions, organisations will gain access to cutting-edge research and industry partnerships, fostering technological advancements and sector-specific solutions. The center aims to strengthen Norway’s AI ecosystem, enhance governance frameworks, contribute to economic growth, and support sustainability efforts across multiple domains, including healthcare, democratic governance, and environmental sustainability. Read more in our Research and Project development section in this report.

## DSTrain – Advancing Data Science Talent with dScience Partners

DSTrain is a five-year postdoctoral programme led by dScience at The Faculty of Mathematics and Natural Sciences, co-funded by the EU Horizon Europe MSCA programme. The first call in 2024 attracted 346 applications across nine research areas, resulting in 18 selected fellows who began their positions in October 2024. The programme was officially launched at a kick-off seminar in the following November, bringing together fellows, supervisors, and key stakeholders.

A key strength of DSTrain is its collaboration with dScience Partner Program industry and research institutions, offering fellows internships and career mentoring. Training seminars and workshops further strengthen these connections, ensuring real-world impact. The second call opens in January 2025, with up to 18 new fellowships available.

## COST Action – Exclusive network for Partner Program members

The EU COST Action (European Cooperation in Science and Technology) is an interdisciplinary research network that connects researchers and innovators across Europe for a period of four years to investigate a chosen topic. COST Actions typically include participants from academia, SMEs (small and medium-sized enterprises), public institutions, and other relevant organisations.

In November 2024, dScience submitted a COST Action proposal led by Oslo University and supported by universities from the UK, Sweden, Turkey, Ukraine, Romania, and Slovenia. The goal is to establish a network of universities and companies interested in the green transition of society, with a secondary aim of building a European network for future EU Horizon funding applications. Members of the partner program will be invited to join the network at no additional cost. Read more in our Research and Project development section.

## Proposal for a new R&I instrument and funding scheme to stimulate collaborations with industry

In line with dScience’s mission to foster collaborations between academia, industry, and the public sector, dScience and UiO Growth have jointly developed a projectproposal for piloting a new research and innovation (R&I) instrument. The instrument is a funding scheme that aims to provide financial and structural incentives for researchers and innovators in higher education providing institutions (HEPs) and companies across all industries and particularly small and medium sized companies (SMEs). The scheme provides a platform with unique and effective mechanisms for facilitating collaboration on specific R&I challenges, motivating both parties for co-creation and exchange of knowledge.

The scheme aims to provide a starting point for HEPs and e.g. SMEs to explore opportunities for collaborations and can also act as a steppingstone for further strategic and long-term collaborations on R&I post project. By design the scheme will stimulate the parties to engage in short

R&I projects of 12–24-month duration and with tangible benefits to both parties. It will have low user/transaction costs and will especially appeal to companies and HEPS with little or no experience of collaborating with each other on R&I.

Our proposed scheme combines funding from a public R&I agency and companies in private industry and is based on the Knowledge Transfer Partnerships (KTP) scheme out of UK Research and Innovation. KTP is one of the main R&I schemes in the UK and engages most UK universities including research intensive Russel Group universities. KTP has proven to be successful and impactful in economic terms and for unlocking and transferring latent knowledge and competency from UK universities with the intent of solving industry specific R&I challenges. We plan to present our proposal for developing and piloting a Norwegian version of KTP to relevant ministries and R&I agencies during Q1 2025.

## BedreFlyt – Smarter Resource Management for Better Patient Flow

Data science plays a pivotal role in the future of healthcare services in Norway. Researchers from the University of Oslo (UiO), in collaboration with dScience, are working to leverage real-time data from hospital workflows to enhance service efficiency while maintaining high-quality care despite reduced healthcare personnel availability.

We are exploring ways to optimise healthcare delivery through adaptable allocation of medical equipment, flexible staffing, and decision-support tools that facilitate patient movement through the system.

In 2024, dScience conducted an Accelerated Impact Study (AIS) to assess the needs and potential applications of digital twins in hospital wards. Digital twins function as real-time decision-support systems, modelling hospital activities as they occur. They enable scenario planning by simulating various possible future conditions – ranging from best-case to worst-case scenarios – based on the current state of a hospital ward. This can, for example, assist in planning bed allocations or scheduling healthcare personnel more effectively.

UiO researchers collaborated with two hospital wards within Helse Sør-Øst, one at Rikshospitalet and the other at Kalnes. Two UiO research groups were involved: a team led by Professor Einar Broch Johnsen, which developed a flexible and scalable digital twin architecture as a proof of concept, and the Oslo Centre for Biostatistics and Epidemiology (OCBE), which analysed historical data to gain insights into patient flow at Rikshospitalet. Additionally, SINTEF researchers contributed, alongside UiO's Troels Monstad and a master's student supervised by Professor Miria Grisot.

For BedreFlyt in 2024, the AIS provided valuable insights into ward operations and workflows, particularly in relation to resource allocation and efficiency. It resulted in a master's thesis and two scientific articles published in 2024.

The findings from the AIS serve as a foundation for future research included in the AI Centre application TRUST. Moving forward, we aim to further investigate digital twins for optimising resource efficiency within hospital wards and across the broader healthcare system.

## Advanced Impact Study (AIS) with NBIM – Classifying Characteristics of Financial Time Series by Signatures

This Advanced Impact Study (AIS), a collaboration between Norges Bank Investment Management (NBIM) and dScience at the University of Oslo, explored the use of signature-based machine learning for analysing financial time series. The proof-of-concept demonstrated the potential of this method for improving risk management and investment decision-making.





## Accelerated Impact Study (AIS) with DNB: Integrating Climate Risk and Energy Efficiency into Mortgage Default Prediction and Risk Management Models.

Climate change refers to significant, long-term changes in global temperatures and weather patterns. From a risk perspective, it presents numerous challenges, including physical risks like more frequent and severe extreme weather events (e.g., hurricanes, heatwaves, and floods), rising sea levels, and prolonged droughts. These risks can lead to substantial impacts on infrastructure, agriculture, water resources, and human health.

For homeowners, these risks can make it harder to keep up with financial commitments, such as mortgage payments. Higher costs for home repairs, maintenance, and energy bills may reduce their ability to meet their obligations.

DNB is exploring new ways to assess mortgage risk by including climate factors and energy efficiency ratings of homes. By analysing these variables, they aim to evaluate the potential impact of adverse climate factors on property values and the likelihood of homeowners defaulting on loans. This project is a collaboration between DNB and UiO through the dScience Accelerated Impact Study.

## Roundtable Discussion on Climate Risk, Nature Risk, and ESG Reporting

On 27 May 2024, in collaboration with Oslo Science City and partner DNV, dScience facilitated a high-impact roundtable discussion at the University of Oslo. This event addressed pressing issues related to climate and nature risk and the evolving ESG reporting requirements, bringing together experts from various fields to discuss actionable solutions.

## Workshop on Safety of AI in Energy & Critical Infrastructure

Held on 21 March 2024, at NBIM's London office, this workshop tackled the integration of AI in critical infrastructure, emphasising safety and cross-border collaboration. The event showcased how partnerships between Norway and the UK can accelerate AI's safe and efficient application in energy systems.

## Launch of Partner Roundtrip Initiative

Starting in December 2024, the Partner Roundtrip initiative included individual meetings with key partners such as Equinor, allowing the program to align expectations and refine strategies for collaborative activities. The roundtrip promotes direct engagement to evaluate the tangible and intangible outcomes of partnership efforts. Several key meetings are already planned for first quarter of 2025.

# 07

# Research and Project Development

2024 was a year of significant activity and initiatives at dScience. As a leading hub for computional and data science as well as innovation at the University of Oslo, dScience played a crucial role in developing and supporting research projects across disciplines. Our mission is to foster collaboration and create impact in academia, industry, and society.




Throughout the year, dScience facilitated the development of ambitious research proposals, strengthened international and national partnerships, and provided a dynamic environment for interdisciplinary collaboration. Researchers across various fields convened at dScience to exchange ideas, participate in seminars, and co-develop project applications, reinforcing our position as a key enabler of research excellence.

This section provides an overview of the major research projects where dScience has taken a leading role or acted as a critical contributor. These initiatives span a wide range of topics, including digital transformation, energy systems, artificial intelligence, and the green transition. They exemplify our commitment to advancing knowledge, fostering innovation, and ensuring that research findings translate into real-world solutions.

Arne B. Huseby, Project Leader of DSTrain and Acting Leader of dScience – Centre for Computational and Data Science in 2024.




## DSTrain – Successful Completion of the First Call

DSTrain is a five-year postdoctoral programme that offers 36 postdoctoral fellowship positions, each lasting 36 months. These positions will be awarded in two calls during the programme period, all within the overarching framework of data science. The programme aims to train researchers and innovators with expertise in disciplinary, interdisciplinary, and transferable skills, grounded in data science methods. This will empower them to become Europe's digital leaders across various disciplines and sectors.

The programme is managed by dScience at the Faculty of Mathematics and Natural Sciences, University of Oslo (UiO), and is co-funded by the EU Horizon Europe through the MSCA programme.

### First Call Success

The first call, announced in January 2024, attracted an impressive 346 applications. Applicants had to write their own projects selecting from among 70 different topics organised within 9 different research areas: astrophysics, biology, chemistry, geosciences, informatics, mathematics and statistics, pharmacy, physics, and technology systems. Following a thorough evaluation process, 43 applicants were invited for interviews. After rigorous screening, 18 exceptional candidates were selected and offered fellowship positions.

In October 2024, most of these fellows began their roles, working on projects aligned with their applications. We are delighted with the caliber of talent this call attracted and are confident that these postdoctoral researchers will make significant contributions to the field of data science for the University and our partners.

## DSTrain Postdoctoral Fellows



**Mohamed Aziz Boukraa**
From France



**Azusa Inoue**
From Japan



**Camilla Lingjærde**
From Norway



**Etienne Lalechère**
From France



**Gunnar Felix Lange**
From Norway



**Kishore Thapliyal**
From India



**Leiv Rønneberg**
From Norway



**Maciej Ejsmond**
From Poland



**Marco Palmiotto**
From Italy



**Miguel Ángel Gaona Fernández**
From Spain



**Viktor Svensson**
From Sweden



**Zhihong Cui**
From China



From the left: EU Adviser Hilde Hvistendahl from The Faculty of Mathematics and Natural Sciences, and DSTrain Programme Coordinator and Research Adviser, Martha Elisabeth Brigg.

### Official Kick-off

The DSTrain programme was officially launched at Kickoff Seminar on 8 November 2024, The kick-off was hosted at the University Library at the University of Oslo, and gathered the newly appointed postdocs, their supervisors, and key stakeholders invested in the programme's success.

### Training Actions

As the programme's title suggests, this initiative focuses on training the next generation of data scientists. Over the project, we will organise many training seminars and workshops. These activities aim to equip researchers and innovators with disciplinary, interdisciplinary, and transferable skills, all rooted in data science methods. By doing so, the programme prepares participants to become Europe's digital leaders across a wide range of disciplines and sectors.

### Partners

The projects within the programme involve numerous partners, including research institutes, industry leaders, hospitals, and public sector organisations, particularly in Norway and the Oslo region. These partnerships are crucial, as they provide candidates with opportunities for internships and career mentoring. Additionally, the programme's seminars and workshops serve as key arenas for recruiting future data scientists, fostering connections between participants and potential employers.

Internships with industry partners from the dScience Partner Program will also play an important role in the programme in 2025 and forward.

### The Second call

The University of Oslo (UiO) is from January 2025 accepting applications for the second call of DSTrain postdoctoral fellowships. Up to 18 positions are available for researchers in computational and natural sciences. The fellowships start in autumn 2025.

### Programme Management Office

Arne Bang Huseby
Programme Coordinator (PC) / Scientific Coordinator

Martha Elisabeth Brigg
Administrative Coordinator

# TRUST – A National AI Centre: “Pioneering Trustworthy AI for a Sustainable Future”

## Background

The Research Council of Norway will fund 4–6 AI Centres and the deadline for submitting full proposals is 15 January 2025. The expected start of the AI centres is August 2025.

Leading AI institutions in Norway, including the University of Oslo, the Norwegian Computing Center, and SINTEF, have submitted a mandatory outline to the Research Council for establishing TRUST, a national AI center with high international ambitions. TRUST aims to become the Norwegian equivalent of the Alan Turing Institute in the UK or the Pioneer Centre in Denmark.

## What is TRUST?

The main goal of TRUST is to develop trustworthy AI systems, and their surrounding governance ecosystems, that will be fair, efficient, safe, and sustainable for society.

The research in TRUST will be foundational, interdisciplinary and multi-methodological conducted within and across three strong research communities.

In partnership with private and public users, TRUST will create impact in multiple areas and sectors enabling trustworthy AI innovation and governance.

The research in TRUST will be carried out by three broad research communities:

Machine Learning:
- Developing scalable, efficient, secure and “green” AI algorithms.
- Advancing AI methods and technologies for solving complex, multimodal tasks.

Governance:
- Creating legal and ethical AI governance frameworks.
- Understanding societal impacts of AI in various domains.

Philosophy:
- Exploring ethical and philosophical questions related to AI.
- Promoting AI that aligns with democratic values and human rights.

## User Program and Network Actions

As a member of the TRUST User Program and Network Actions, organisations gain access to collaborative projects and innovation initiatives, allowing them to leverage cutting-edge research, develop new technologies, and tackle sector-specific challenges.

TRUST aims to deliver research that provide a competitive advantage to the Norwegian economy and to our partners; strengthen the autonomy of individuals and their role in democratic societies; help transform the health system services, patient’s safety, efficacy of prevention and treatment; contribute to the creation of jobs in the private and public sector; and foster a more sustainable future for people and the planet.

## Other AI Centre Applications

In additon to TRUST, dScience has also played an important role in other AI Centre applications at the University of Oslo.





# Anchoring results from the SIRIUS Centre

During 2024 there has been a focus on anchoring the results of the SIRIUS Centre for Research Based Innovation. This Centre concluded in 2023 and had built a promising research and innovation program for digital twins, knowledge graphs and hybrid AI in engineering, manufacturing and infrastructure. Staff from dScience worked with partner program companies and others to build a new consortium for furthering this work. This resulted in a well-defined research agenda that is relevant both to the infrastructure and energy sector. The theme of the work is that the industrial transformation of Norway requires focused work on making sure that operational and design data is well-defined, interoperable and able to be used to support complex, interdisciplinary decisions. The work done in 2024 provides a foundation for a series of research projects and innovation proposals in 2025.

Read more about SIRIUS here




Launch of the Insight Paper in Brussels




# The Twin Transition Program

The ongoing energy transition is heavily dependent on solutions capturing core knowledge from digital and mathematical sciences coupled with deep knowledge and competences on energy systems and markets.

The dScience Twin Transition Program encourages academics to actively collaborate with industry and public entities. A collaborative environment will have a positive impact on the green transition of society.

The program was established following the September 2023 Guild Insight Paper: The Twin Transition Century, the role of digital research for a successful green transition of society (Author: Centre Leader Morten Dæhlen). The Guild insight paper envisaged that digital technologies would support and/or enable society to move towards lower carbon energy sources.

The Twin Transition Program was established in 2024. During the year, dScience collaborated with academics at UiO, national and international universities/research institutes and industrial and public entities. The objective was to develop research proposals, build networks with industry and public entities in support of the green transition of society.

The following actions were taken:

- One Centre for Environment-friendly Energy Research (FME) and two Centres for Research-based Innovation (SFI) applications to the Research Council of Norway.
- One European Union COST Action application (Twin-Trans) and evaluation of relevant European Union Horizon research calls for 2025/2026.
- Leverage existing academic research – The Huginn project

The Twin Transition program is still to gain success in terms of research proposal awards. However, it has identified areas where academia can play an impactful role in advancing the green transition of society.

Going forward into 2025, structural consideration must be given to the place of the Twin Transition Program within dScience and its relationship with the dScience Partner Program. One option would be to create an energy cluster within dScience. The aim of the cluster is to further develop the program and strengthen the relationship between Twin Transition and the dScience Partner Program.

## Centre for Environment-friendly Energy Research (FME) and Centres for Research-based Innovation (SFI) Applications

One FME application (Twin Energy) and two SFI applications (REMS & Twin-Tech) were submitted to the Norwegian Research Council.

The primary objective of Twin Energy FME application was to enable a step change in the capacity for uptake of intermittent renewable energy, at all levels and for all components of the energy system, through transformative data-driven decision making and digitally aided public engagement of all stakeholders.

Twin Energy gathered research groups covering data and connectivity sciences with emphasis on topics like digital twins, standardisation, distributed systems, cyber-physical security, and various aspects of data analytics and simulation to increase automation and participation in the energy transition.

Examples of the work proposed was more flexibility in design and implementation of digital twins, new and more efficient ways of representing knowledge in expert workflows, introduction of more knowledge and better utilisation of data in computational algorithms (artificial intelligence, machine learning, hybrid analytics, optimisation, stochastic modelling), development of the next generation distributed systems technologies, including important cyber security issues, for achieving massive uptake of energy at the edge, new solutions for green data sharing and computing, and tailored interdisciplinary actions with expertise from law and psychology.

## The proposed Twin Energy FME Work Program (WP) Structure:

Connected to the research activities, Twin Energy proposed to focus on life-long learning and building of knowledge capacities for the twin transition in energy. These actions covered topics like twin transition governance, energy innovation studies, data science, artificial intelligence, green computing, and software and system engineering for energy applications.

The FME application had strong support from industry and academia. The research groups behind Twin Energy were connected to strong research groups around the world.

Unfortunately, the Twin Energy FME proposal was not awarded a grant from The Research Council. Subsequently two proposals were submitted to the Research Council for SFI V. These proposals were based on two of the Twin Energy FME work programs (WP 2 Digital Twins for Renewable Energy Systems and WP3 Managing Risk in Energy Systems and Markets).

The SFI Proposals focused on model enabled industrial transformation (Twin Tech) and Risk in Energy Systems and Markets (REMS). These proposals were submitted for phase 1 of SFI V. Unfortunately, they were not selected to move into phase 2.

There was disappointment that these proposals were not selected. The calls for large scale centre proposals are becoming increasingly more competitive with close to 100 proposals for 8 centres. During Q1 2025 the feedback from the Norwegian research council for the submitted FME and SFI applications will be evaluated and recommendations made for future proposal improvements.

Considerable effort was made to develop these proposals which in itself helped to clarify important research topics and build networks of industry partners and researchers that are interested in the green transition of society. This has lead to an application to the European Union COST Action Program to develop a European Twin Transition Network (Twin Trans).

## EU COST Action application (Twin-Trans) & EU Horizon calls for 2025/2026

A COST Action is an interdisciplinary research network that brings researchers and innovators together to investigate a topic of their choice for four years. COST Actions are typically made up of researchers from academia, SMEs, public institutions and other relevant organisations or interested parties.

A COST Action proposal (Twin-Trans) was submitted in November 2024. The proposal aims to establish a network of Universities and Companies that are interested in the green transition of society. A secondary objective was to establish a European network that would potentially develop proposals to compete in programs such as EU Horizon.

University of Oslo is the main proposer supported by Lancaster University in the UK, KTH University in Sweden, Baskent University in Turkey, The National Technical University of Ukraine, Babes-Bolyai University in Romania and Ljubljana University in Slovenia.

The application was based on 4 working groups:

1. Scale and Limit (WG1): Explore how we balance large-scale power generation and grids versus localised, efficient solutions, and evaluate the balance between technological development, resource efficiency, and scalability, whilst addressing the unintended consequences of these transitions.
2. Risk and Market (WG2): Investigating financial and market risks associated with the twin transition, identifying pathways to avoid unanticipated market barriers to inclusive, sustainable and resilient practices.
3. Governance and Stewardship (WG3): Toward ethical, legal, and policy frameworks to guide the twin transition through adaptive and equitable governance models.
4. Living Laboratories and Test Beds (WG4): Offering live platforms for experimentation, learning and knowledge sharing, through real-world testing and refinement of innovative solutions across the member countries and contexts.

The COST Action award will be in May 2025.

The EU Horizon Program has several calls that would support the Twin Transition Program. Horizon requires the establishment of European consortiums with industry partners that could potentially lead and submit the application.

Preparations were started in 2024 for the EU Horizon 2025 and 2026 applications. The focus in 2024 was to identify relevant calls, researchers at UiO and potential industrial partners. The COST Action Network could play a significant role in establishing European consortiums.

This activity will be continued in 2025 with a view to submit applications for EU Horizon funding in 2026.

## Leverage existing academic research – The Huginn Project

The external engagement process for the Twin Energy FME application generated valuable information. Following the feedback from the research council it was agreed with the FME industrial participants and municipalities to continue the established relationship for future applications. The REMS SFI and future EU Horizon applications are examples of the continued collaboration.




One other area of interest for continued collaboration was a desire to leverage existing academic research for future applications and projects. Traditional literature searches of research papers were considered but proved to be time consuming and less effective for screening applications of new research with industrial and public sector partners.

Consideration was given to using AI frameworks to generate relevant information that may help provide research ideas and possibly solutions for industrial and societal challenges. To address this, the Huginn project was created.

The Huginn project aims to liberate the information and research results contained within the University of Oslo's historical research papers. The project was initiated to create a platform that encourages closer collaboration between the University, industrial end users and public entities.

Huginn aims to provide end users with insights to valuable research already conducted at the University. These insights may help resolve industrial and societal challenges and positively impact society's green transition.

Huginn will also identify the UiO researchers that have expert knowledge in relevant domains. These researchers can actively participate in future research projects together with interested end users.

At the end of 2024, Huginn was in the discovery phase aiming to formulate a project plan during quarter one 2025. It is envisaged that Huginn will develop an AI framework RAG (Retrieval-Augmented Generation) that will access full academic papers at UiO.

The Huginn scope only includes research at UiO. However, in the case of success it has the potential to be tested at other Norwegian Universities.

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# Hosting Centre of Digital Life Norway and NORA

## NORA

The University of Oslo (UiO) hosts the national consortium NORA – Norwegian Artificial Intelligence Research Consortium, and dScience is assigned the responsibility for the secretariat. The centre leader has employer responsibility for the general manager Klas Pettersen, and dScience assists NORA with various administrative tasks. The collaboration with NORA is extensive, and there are good academic synergies and cooperation between the staff working on the development of dScience at UiO and those working in the NORA secretariat. Here is some highlights from NORA in 2024:

### CuttingEdgeAI with Stuart Russell – a Kavli Prize Week Special (4 September 2024)

This edition of CuttingEdgeAI was organised in collaboration with The Norwegian Ministry of Education and Research and The Norwegian Academy of Science and Letters (DNVA), as a special event during the Kavli Prize Week. Held in the University Aula, it featured keynote speaker Stuart Russell, Professor of Computer Science, a leading researcher in AI and co-director of the Kavli Center for Ethics, Science and the Public at UC Berkeley, who addressed the implications of AI. The event was led by Torkild Jemterud, science journalist and radio host at the Norwegian Broadcasting Corporation, and in addition to several prominent AI researchers, Minister of Research and Higher Education Oddmund Hoel and Prime Minister Jonas Gahr Støre were also on the speaker list. The event was attended by almost 400 guests, including students from nearby schools.




Stuart Russell – a Kavli Prize Week Special

### Arendalsuka 2024

It has become an annual tradition for NORA to organise at least one event in Arendalsuka, as part of our strategic goal to strengthen Norway's research policy and commitment to AI. The event 'Norway's Role in the AI Revolution' was coorganised with University of Agder (UiA) and took place in their tent. We had prominent guests on the panel. Inga Strümke and Morten Goodwin represented the research community. They were accompanied by Minister of Digitalisation and Public Governance Karianne Tung, comedian and AI enthusiast Anne-Kat. Hærland and Yngvar Ugland from the banking sector (DNB). The panel was chaired by Klas Pettersen.

### Annual Conference & Nordic AI Meet

The NORA Annual Conference and the Nordic AI Meet (NAIM) represent two significant pillars of this endeavour. The NORA Annual Conference is a yearly event that brings together the Norwegian research community within the field of AI. The conference provides a forum where consortium partners, strategic partners, thought leaders in AI and other participants can share research, ideas, theories, models and new perspectives, whilst interacting with peers in the field.

In 2024, the NORA Annual Conference brought together the Norwegian AI community in Kristiansand for a two-day high-quality programme. Knowledge sharing and interaction are at the centre of the conference, and this year's conference highlighted AI's impact on several fields, from biomedicine and ethics to misinformation. The conference featured keynote presentations, thematic tracks for oral presentations, poster sessions, startup and industry presentations, and an AI-centre pitching session with The Research Council of Norway

The Nordic AI Meet, initiated by NORA.ai, is an annual conference that convenes early-career researchers from across the Nordic region to present research and build networks. The event has evolved into a truly collaborative Nordic initiative, hosted by the Pioneer Centre for AI in Copenhagen (2023), Finnish Center for AI (FCAI) in Helsinki (2024), and planned for Sweden in 2025 in collaboration with the Wallenberg AI, Autonomous Systems and Software Program (WASP). The Nordic Machine Intelligence Journal supports the conference by publishing selected submissions.

### NORA.startup

In 2024, NORA.startup's network grew and advanced national activities across partner institutions. Currently, NORA.startup consists of more than 57 startups and 80 researchers.

NORA Strategic Partners is a network for and of research-based innovation projects launched in January 2022. In 2024, NORA welcomed Brønnøysund Register Centre (Norwegian government agency and registration authority) and TINE (one of Norway's largest food companies) as members in the network, joining existing partners NAV (the Norwegian Labor and Welfare Administration), Ruter (public transport authority for Oslo and Akershus), Posten AS (Norwegian Postal Service) and Norsk Helsenett (Norwegian Health Network).

Read NORAs annual report for 2024 here



Hosting Centre of Digital Life Norway and NORA

# Centre for Digital Life Norway

dScience also hosts the administrative UiO staff that works for Centre for Digital Life Norway (DLN). DLN is a national centre for biotechnology research, education and innovation. The centre facilitates collaboration between biotechnology and data sciences, across institutions and between researchers, industry and policymakers.

The centre is a collaborative project between the Norwegian University of Science and Technology (NTNU), the University of Oslo (UiO), the University of Bergen (UiB), the Norwegian University of Life Sciences (NMBU), Oslo University Hospital (OUS), SINTEF and UiT the Arctic University of Norway. The centre is run by a competence hub and includes a research school and research projects.




Andy Boyce, Senior Adviser Innovation and Industry Involvement at Centre for Digital Life Norway.

The competence hub is funded by the Research Council of Norway, and the second 5-year funding period DLN 2.0 started in February 2021. In addition to hosting DLN we also became the project owner of the DLN project: A roadmap for academic research-intensive innovation, funded by Research Council of Norway. This NOK 30 million from the Research Council of Norway aims to design and initiate a change process in the Norwegian innovation system with the aim of increasing innovation from academic research within transdisciplinary digital biotechnology.

The project has produced two reports ("AS IS" and "TO BE") about the Norwegian research innovation system and is now running several pilots to explore and experiment with the findings in these reports. These include support for: early-career researcher buyouts to focus on innovation, proof of principle funding for innovation gaps, innovation mentoring, industry internships, and a 5-day entrepreneurship bootcamp.

In 2025, DLN has partnered with ALEAP to delivery Norway's first national biotech accelerator programme (called the Forge), which aims to prepare 10 of the best academic projects and early-stage companies to raise their private first investment.

Read more about the project and various pilots here

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# Staffing, the Board, Councils, and Committees



### Management

- Morten Dæhlen, centre director of dScience (On sabbatical leave in 2024, while working part-time for dScience)
- Arne Bang Huseby (1.1.2024–31.12.2024, Deputy for the Centre Leader)
- Eva Michelsen Ekroll, Head of Administration

### Office and Communication

- Cecilie Linea Ellefsen
- Christoffer Hals

### Data Science Analytics Group

- Arash Ahmadi
- Svenja Christiansen
- Sherin Sugathan

### Research and Projects

- DSTrain – Professor Arne Bang Huseby
- Leif Næss (Senior Adviser, 15.10.2024–28.02.2025)
- Keith Lewis (40%)
- David Cameron
- Martha Elisabeth Brigg

### Partner Program

- Birte Hansen (50%, from 1.4.2024 – on leave from September 2024)
- Nilla Karlsen-Davies (on leave from September 2024)
- Laura Slaughter
- Sander Tufte (50%, from 15.8.2024)

### NORA

- Klas Pettersen (CEO)
- Sachin Gaur (until 31.3.2024)
- Birte Hansen (until 31.3.2024)
- Anam Javaid (on leave)
- Alex Moltzau (until 16.6.2024)
- Michael Solvang
- Kushtrim Visoka
- Snezhina Duevska (from 15.8.2024)
- Justine Dickhoff (from 15.9.2024)
- Margrete Alva (from 1.5.2024)
- Geir Halnes (from 1.10.2024)
- Anne-Kat. Hærland (20%, from 29.8.2024)

### Digital Life Norway

- Andrew Boyce
- Ingrid Shields (from 15.1.2024)
- Henrik Lund
- Birte Hansen (50%, from 1.4.2024 – on leave from September 2024)

### dScience Board

- Solveig Kristensen, Chairman (The Faculty of Mathematics and Natural Science)
- Morten Dalsmo (SINTEF Digital)
- Astrid Fossum Gulbransen (DNB)
- Stephan Oepen (Department of Informatics)
- Geir Dahl (Department of Mathematics)
- Susanne Viefers (Department of Physics)
- Cecilie Rolstad Denby (Department of Technology Systems)

### dScience Council

- Fred Espen Benth (Department of Mathematics)
- Arnoldo Frigessi (Faculty of Medicine)
- Arne Bang Huseby (Department of Mathematics)
- Bjørn Høyland (Faculty of Social Sciences)
- Einar Broch Johnsen (Department of Informatics)
- Are Raklev (Department of Physics)
- Geir Kjetil Sandve (Department of Informatics)
- Anne H. Schistad Solberg (Department of Informatics)
- Trude Storelvmo (Department of Geosciences)
- Geir Olve Storvik (Department of Mathematics)
- Erik Velldal (Department of Informatics)
- Ingrid Kristine Glad (Department of Mathematics)
- Morten Dæhlen (dScience)
- Arne Bang Huseby (dScience)

### dScience Community Forum

- Marianne Zeyringer (Department of Technology Systems)
- Hans Arnold Winther (Institute of Theoretical Astrophysics)
- Ann-Cecilie Larsen (Department of Physics)
- Simen Kvaal (Department of Chemistry)
- Norbert Pirk (Department of Geosciences)
- Jonas Paulsen (Department of Biosciences)
- Ida Robertsen (Department of Pharmacy)
- Egor Kostylev (Department of Informatics)
- Kjetil Lysne Voje (Natural History Museum)
- Louise Emilsson (Faculty of Medicine)
- Diana Saplacan (Department of Informatics)
- Salvador Ortiz-Latorre (Department of Mathematics)
- Mikael Mortensen (Department of Mathematics)
- Johan Pensar (Department of Mathematics)

We would also like to thank the Faculty Administration for services within finance, HR and research, as well as the Science Library for their assistance at our monthly seminars.

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