INTERESTS FROM NTNU IN THE UPCOMING MISSIONS

MISSIONS - HORIZON EUROPE WORK PROGRAMME 2023-2025

Photo: Lars R.Bang/NTNU

NTNU

NTNU in Europe: List of calls with their respective interested NTNU researchers

Produced by: NTNU Brussels Office

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Produced by NTNU Brussels office

DISCLAIMER: Please notice that the Topics list is clickable to allow you to immediately reach the topic for which you could be interested to open a collaboration dialogue with NTNU

INTRODUCTION

NTNU
Brussels Office

Dear Reader

The following document suggests an introduction of the dynamic collaboration initiative held by NTNU (Norwegian University of Science and Technology) and researchers specializing in pivotal thematic areas outlined in the MISSIONS - HORIZON EUROPE WORK PROGRAMME 2023-2025.

As we navigate the complex challenges in the upcoming years, these missions serve as guiding beacons towards transformative solutions. In this document, we present a curated list of experts from NTNU, each uniquely adept in addressing critical missions in Horizon Europe.

Our collaborative endeavor aims to harness the collective expertise and interdisciplinary approach of our researchers to confront these pressing challenges head-on. By fostering partnerships and knowledge exchange, we endeavor to catalyze innovative solutions that contribute to shaping a more sustainable, resilient, and equitable future.

Within these pages, you will find profiles of our esteemed NTNU researchers, each representing a wealth of knowledge, experience, and dedication to their respective fields. Click on each profile to delve deeper into their expertise, ongoing projects, and potential avenues for collaboration.

Join us as we embark on a mission-driven pursuit towards a better tomorrow, where research, collaboration, and action converge to address some of the most urgent global challenges of our time.

ASSOCIATED RESEARCHERS

Mission: Cancer

Here you can find potential NTNU professors and employees that are interested in collaborations on mission Cancer.

The following pages are sorted into the calls for the mission. To simplify your navigation among available expertise per topic, the list of topics have been made clickable.

MISSION CANCER - CALLS

DISCLAIMER: Please notice that the Topics list is clickable to allow you to immediately reach the one for which you could be intersted to open a collaboration dialogue with NTNU

Call - Mission Cancer

HORIZON-MISS-2024-CANCER-01-01: Use cases for the UNCAN.eu research data platform

HORIZON-MISS-2024-CANCER-01-02: Support dialogue towards the development of national cancer data nodes

HORIZON-MISS-2024-CANCER-01-03: Accessible and affordable tests to advance early detection of heritable cancers in European regions

HORIZON-MISS-2024-CANCER-01-05: Improving the understanding and management of late-effects in adolescents and young adults (AYA) with cancer

Tone Frost Bathen

Deptartment of Circulation and Medical Imaging
Faculty of Medicine and Health Sciences

Contact information

Tone.f.bathen@ntnu.no
+47 95021097

Relevant links outside academia

- St. Olavs University Hospital

Provided expertise

- MRI and PET/MRI
- Image analysis, artificial intelligence, machine learning breast and prostate cancer metabolomics, lipidomics
- NMR spectroscopy
- MALDI MSI

Relevant projects

- **Horizon 2020 FET-project:** https://cordis.europa.eu/project/id/801075
- **RCN project (Digital Life program):** https://www.ntnu.edu/isb/proviz#/view/about

HORIZON-MISS-2024-CANCER-01-02: SUPPORT TO THE DEVELOPMENT OF NATIONAL CANCER DATA NODES

Guro F. Giskeødegård

Department of Public Health and Nursing
Faculty of Medicine and Health Sciences

Contact information

guro.giskeodegard@ntnu.no
+47 90550347

Provided expertise

- Molecular epidemiology
- Metabolomics
- Gut microbiome
- Spatial -omics tissue analysis (metabolomics, transcriptomics)
- Multi-omics integration
- Statistical modelling
- Breast cancer

Relevant projects

- **Novel strategies for cancer prevention by large scale gut microbiome characterization -** NTNU Health- PI
- **The role of the gut microbiota in early cancer development -** The Liaison Committee for education, research and innovation in Central Norway - PI
- **Associations between long-term lifestyle patterns and cancer risk in the HUNT population -** Norwegian Cancer Society- PI
- **Gut microbiota and metabolomics for assessing late effects of breast cancer treatment** - Norwegian Cancer Society- PI
- **Metabolic characterization of breast cancer for improved precision medicine** - NTNU strategic funding- PI
- **Metabolomics for improved stratification of breast cancer patients based on prognosis and treatment response** - Norwegian Cancer Society- PI
- **MR metabolomics in cancer research- identification of new prognostic biomarkers for clinical use -** The Liaison Committee for education, research and innovation in Central Norway- PI
- **Serum metabolome profiling in breast cancer risk assessment -** Norway Grants- co-PI

HORIZON-MISS-2024-CANCER-01-03: ACCESSIBLE AND AFFORDABLE RISK PREDICTOR TESTS TO ADVANCE EARLY DETECTION OF HERITABLE CANCERS IN EUROPEAN REGIONS

Guro F. Giskeødegård

Department of Public Health and Nursing
Faculty of Medicine and Health Sciences

Contact information

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+4790550347

Provided expertise

- Molecular epidemiology
- Metabolomics
- Gut microbiome
- Spatial -omics tissue analysis (metabolomics, transcriptomics)
- Multi-omics integration
- Statistical modelling
- Breast cancer

Relevant projects

- **Novel strategies for cancer prevention by large scale gut microbiome characterization -** NTNU Health- PI
- **The role of the gut microbiota in early cancer development -** The Liaison Committee for education, research and innovation in Central Norway - PI
- **Associations between long-term lifestyle patterns and cancer risk in the HUNT population -** Norwegian Cancer Society- PI
- **Gut microbiota and metabolomics for assessing late effects of breast cancer treatment** - Norwegian Cancer Society- PI
- **Metabolic characterization of breast cancer for improved precision medicine** - NTNU strategic funding- PI
- **Metabolomics for improved stratification of breast cancer patients based on prognosis and treatment response** - Norwegian Cancer Society- PI
- **MR metabolomics in cancer research- identification of new prognostic biomarkers for clinical use -** The Liaison Committee for education, research and innovation in Central Norway- PI
- **Serum metabolome profiling in breast cancer risk assessment -** Norway Grants- co-PI

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- **RCN project (Digital Life program):** https://www.ntnu.edu/isb/proviz#/view/about

HORIZON-MISS-2024-CANCER-01-05: IMPROVING THE UNDERSTANDING AND MANAGEMENT OF LATE-EFFECTS IN ADOLESCENTS AND YOUNG ADULTS (AYA) WITH CANCER

Guro F. Giskeødegård

Department of Public Health and Nursing
Faculty of Medicine and Health Sciences

Contact information

guro.giskeodegard@ntnu.no
+4790550347

Provided expertise

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ASSOCIATED RESEARCHERS

Mission: Restore our Oceans and Waters by 2030

Here you can find potential NTNU professors and employees that are interested in collaborations on mission Restore our Oceans and Waters by 2030.

The following pages are sorted into the calls for the mission. To simplify your navigation among available expertise per topic, the list of topics have been made clickable.

MISSION RESTORE OUR OCEANS AND WATERS BY 2030 - CALLS

DISCLAIMER: Please notice that the Topics list is clickable to allow you to immediately reach the one for which you could be intersted to open a collaboration dialogue with NTNU

Call - Mission Restore our Oceans and Waters by 2030

Contact information
martin.c.lukas@ntnu.no

Martin C. Lukas

Department of Geography

Provided expertise

- **Thematic specialty:** River and watershed management.
- **Methodological specialty:** Integration of remote sensing, mapping, and qualitative interviews across political levels.

Relevant projects

- 14 years of research experience related to the mentioned themes.

ASSOCIATED RESEARCHERS

Mission - A Soil Deal for Europe

Here you can find potential NTNU professors and employees that are interested in collaborations on mission A Soil Deal for Europe.

The following pages are sorted into the calls for the mission. To simplify your navigation among available expertise per topic, the list of topics have been made clickable.

MISSION A SOIL DEAL FOR EUROPE - CALLS

DISCLAIMER: Please notice that the Topics list is clickable to allow you to immediately reach the one for which you could be intersted to open a collaboration dialogue with NTNU

Call - Mission a Soil Deal for Europe

HORIZON-MISS-2024-SOIL-01-01: Co-creating solutions for soil health in Living Labs

HORIZON-MISS-2024-SOIL-01-02: Living Labs in urban areas for healthy soils

HORIZON-MISS-2024-SOIL-01-03: Towards a dynamic monitoring system to assess status and spatiotemporal changes of soil erosion at European scale

HORIZON-MISS-2024-SOIL-01-05: Soil health, pollinators and key ecosystem functions

HORIZON-MISS-2024-SOIL-01-08: Managing forest peatsoils

HORIZON-MISS-2024-SOIL-01-09: Assessment of Soil Health in Africa

HORIZON-MISS-2024-SOIL-01-01: CO-CREATING SOLUTIONS FOR SOIL HEALTH IN LIVING LABS

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Public sector
- Stakeholders dealing with natural hazards and management of critical infrastructures such as NVE, NPRA, BaneNor

Provided expertise

- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Critical infrastructure

Relevant projects

- SFI Klima 2050
- KlimaDigital

Provided expertise in relation to this topic:

- Slope stability
- Landslides
- Debris flow
- Nature-based solutions for slope stabilization
- Effects of vegetation on mechanical properties of soil
- Stability of trees
- Settlements
- Climate adaptation
- Climate resilience

HORIZON-MISS-2024-SOIL-01-02: LIVING LABS IN URBAN AREAS FOR HEALTHY SOILS

Ivan Depina

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Faculty of Engineering

Contact information

ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Public sector
- Stakeholders dealing with natural hazards and management of critical infrastructures such as NVE, NPRA, BaneNor

Provided expertise

- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Critical infrastructure

Relevant projects

- SFI Klima 2050
- KlimaDigital

Provided expertise in relation to this topic:

- Slope stability
- Landslides
- Debris flow
- Nature-based solutions for slope stabilization
- Effects of vegetation on mechanical properties of soil
- Stability of trees
- Settlements
- Climate adaptation
- Climate resilience

Yutao Pan

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

yutao.pan@ntnu.no
+47 92046973

Provided expertise

- Geotechnical engineering
- Ground stablisation
- Ground water seepage control
- Numerical simulation

Provided expertise in relation to this topic:

- Geotechnical engineering
- Ground stablisation
- Ground water seepage control
- Numerical simulation

HORIZON-MISS-2024-SOIL-01-03: TOWARDS A DYNAMIC MONITORING SYSTEM TO ASSESS STATUS AND SPATIOTEMPORAL CHANGES OF SOIL EROSION AT EUROPEAN SCALE

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

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+47 40389387

Relevant links outside academia

- Public sector
- Stakeholders dealing with natural hazards and management of critical infrastructures such as NVE, NPRA, BaneNor

Provided expertise

- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Critical infrastructure

Relevant projects

- SFI Klima 2050
- KlimaDigital

Provided expertise in relation to this topic:

- Effects of erosion on slope stability
- Landslides
- Debris flow

HORIZON-MISS-2024-SOIL-01-05: SOIL HEALTH, POLLINATORS AND KEY ECOSYSTEM FUNCTIONS

Yutao Pan

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

yutao.pan@ntnu.no
+47 92046973

Provided expertise

- Geotechnical engineering
- Ground stablisation
- Ground water seepage control
- Numerical simulation

Provided expertise in relation to this topic:

- Geotechnical engineering
- Ground stablisation
- Ground water seepage control
- Numerical simulation

HORIZON-MISS-2024-SOIL-01-08: MANAGING FOREST PEATSOILS

Martin C. Lukas

Department of Geography

Contact information
martin.c.lukas@ntnu.no

Provided expertise
- **Thematic areas of expertise**: land use; land use change and its drivers; organic agriculture.
- **Methodological specialty:** Integration of remote sensing, mapping, and qualitative interviews across political levels.

Relevant projects
- 14 years of research experience related to the mentioned themes.

Yutao Pan

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information
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+47 92046973

Provided expertise
- Geotechnical engineering
- Ground stablisation
- Ground water seepage control
- Numerical simulation

Provided expertise in relation to this topic:
- Geotechnical engineering
- Ground stablisation
- Ground water seepage control
- Numerical simulation

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information
ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia
- Public sector
- Stakeholders dealing with natural hazards and management of critical infrastructures such as NVE, NPRA, BaneNor

Provided expertise
- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Critical infrastructure

Relevant projects
- SFI Klima 2050
- KlimaDigital

Provided expertise in relation to this topic:
- Building infrastructure in peat areas

Martin C. Lukas

Department of Geography

Contact information

martin.c.lukas@ntnu.no

Provided expertise

- **Thematic areas of expertise:** land use; land use change and its drivers; organic agriculture.
- **Methodological specialty:** Integration of remote sensing, mapping, and qualitative interviews across political levels.

Relevant projects

- 14 years of research experience related to the mentioned themes.

ASSOCIATED RESEARCHERS

Mission - 100 Climate-Neutral and Smart Cities by 2030

Here you can find potential NTNU professors and employees that are interested in collaborations on Mission - 100 Climate-Neutral and Smart Cities by 2030

The following pages are sorted into the calls for the mission. To simplify your navigation among available expertise per topic, the list of topics have been made clickable.

MISSION MISSION - 100 CLIMATE-NEUTRAL AND SMART CITIES BY 2030 - CALLS

DISCLAIMER: Please notice that the Topics list is clickable to allow you to immediately reach the one for which you could be intersted to open a collaboration dialogue with NTNU

Call - Mission 100 Climate-Neutral and Smart Cities by 2030

HORIZON-MISS-2024-CIT-01-01: Rethinking urban spaces towards climate neutrality

HORIZON-MISS-2024-CIT-01-02: Zero-pollution cities

HORIZON-MISS-2024-CIT-01-03: Mobility Management Plans and Behavioural Change

HORIZON-MISS-2024-CIT-01-04: Integrated peri-urban areas in the transition towards climate neutrality

HORIZON-MISS-2024-CIT-02-01: Supporting national, regional and local authorities across Europe to prepare for the transition towards climate neutrality within cities

HORIZON-MISS-2024-CIT-01-01: RETHINKING URBAN SPACES TOWARDS CLIMATE NEUTRALITY

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Public sector
- Stakeholders dealing with natural hazards and management of critical infrastructures such as NVE, NPRA, BaneNor

Provided expertise

- Natural hazards
- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Climate-impact
- Multi-hazard analysis
- Critical infrastructure

Provided expertise in relation to this topic:

- Natural hazards
- Geohazards
- Risk analysis
- Climate adaptation
- Climate-resilient infrastructure
- Multi-hazard
- Nature-based solutions
- Decision-making

Relevant projects

- SFI Klima 2050
- KlimaDigital

Heidi Rapp Nilsen

NTNU Business School
Faculty of Economics

Contact information

heidi.r.nilsen@ntnu.no
+47 41688207

Relevant links outside academia

- Cooperating as part of research projects.
- Occasionally hold lectures on sustainability to organizations.

Provided expertise

- Circular economy
- Sustainability in business
- ESG reporting
- ESRS
- Business ethics

Relevant projects

- Sustainable market actors for responsible trade https://www.smart.uio.no/
- Water smart industrial symbiosis https://ultimatewater.eu/the-project/
- Biosmart- how to manage the transition into a smart bioeconomy? https://biosmart.no/?lang=en

Inger Andresen

Department of Architecture and Technology

Contact information

inger.andresen@ntnu.no
+4740649405

Relevant links outside academia

- Strong links to the Norwegian Building Industry

Provided expertise

- Zero Emission Buildings
- Zero Emission Neighbourhoods
- Plus Energy Districts
- Planning+Design+Evaluation

Relevant projects

- ARV - Climate Positive Circular Communities (H2020)
- syn.ikia - Sustainable Plus Energy Neighbourhoods (H2020)
- PEDvolution - Interoperable Solutions to streamline PED evolution and cross-sectorial integration (Horizon Europe)

Irina Oleinikova

Department of Electric Energy

Faculty of Information Technology and Electrical Engineering

Contact information

irina.oleinikova@ntnu.no
+48 508251

Relevant links outside academia

- DSO
- TSO

Provided expertise

- Transmission and Distribution
- Smart Grids
- Power System Operation
- Digital Power System Protection and Control
- Flexibility for Resilience studies.

Relevant projects

- Project HONOR - Holistic flexibility market integration of cross-sectoral energy sources, ERA-Net Smart Energy Systems. The project develop and evaluate a trans-regional flexibility market mechanism, integrating cross-sectoral energy flexibility at a community-wide level.

- Project ASAP - Advanced system protection schemes applied in the power grid, focused on the design the next generation of system protection through the development of new methods for risk control, optimization and automation, and an intelligent interface with the control centers' operators.

- Project ZeroCoast, features multiple innovations within energy and other fields, and developing a cohesive plan for hydrogen supply and charging infrastructure along the Norwegian coast.

Yutao Pan

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information
yutao.pan@ntnu.no
+47 92046973

Provided expertise

- Geotechnical engineering
- Ground stablisation
- Ground water seepage control
- Numerical simulation

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Relevant links outside academia

- Cooperating as part of research projects.
- Occasionally hold lectures on sustainability to organizations.

Provided expertise

- Circular economy
- Sustainability in business
- ESG reporting
- ESRS
- Business ethics

Relevant projects

- Sustainable market actors for responsible trade https://www.smart.uio.no/
- Water smart industrial symbiosis https://ultimatewater.eu/the-project/
- Biosmart- how to manage the transition into a smart bioeconomy? https://biosmart.no/?lang=en

Irina Oleinikova

Department of Electric Energy
Faculty of Information Technology and Electrical Engineering

Contact information

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+48 508251

Relevant links outside academia

- DSO
- TSO

Provided expertise

- Transmission and Distribution
- Smart Grids
- Power System Operation
- Digital Power System Protection and Control
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Relevant projects

Project HONOR - Holistic flexibility market integration of cross-sectoral energy sources, ERA-Net Smart Energy Systems. The project develop and evaluate a trans-regional flexibility market mechanism, integrating cross-sectoral energy flexibility at a community-wide level.

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Inger Andresen

Department of Architecture and Technology

Contact information

inger.andresen@ntnu.no
+4740649405

Relevant links outside academia

- Strong links to the Norwegian Building Industry

Provided expertise

- Zero Emission Buildings
- Zero Emission Neighbourhoods
- Plus Energy Districts
- Planning+Design+Evaluation

Relevant projects

- ARV - Climate Positive Circular Communities (H2020)
- syn.ikia - Sustainable Plus Energy Neighbourhoods (H2020)
- PEDvolution - Interoperable Solutions to streamline PED evolution and cross-sectorial integration (Horizon Europe)

HORIZON-MISS-2024-CIT-01-03: MOBILITY MANAGEMENT PLANS AND BEHAVIOURAL CHANGE

Irina Oleinikova

Department of Electric Energy
Faculty of Information Technology and Electrical Engineering

Contact information

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+48 508251

Relevant links outside academia

- DSO
- TSO

Provided expertise

- Transmission and Distribution
- Smart Grids
- Power System Operation
- Digital Power System Protection and Control
- Flexibility for Resilience studies.

Relevant projects

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Project ZeroCoast, features multiple innovations within energy and other fields, and developing a cohesive plan for hydrogen supply and charging infrastructure along the Norwegian coast.

Dimosthenis Peftitsis

Department of Electric Energy
Faculty of Information Technology and Electrical Engineering

Contact information

dimosthenis.peftitsis@ntnu.no

Provided expertise

- Power electronics
- Power semiconductor devices
- Electrical energy conversion

Provided expertise in relation to this topic:

- Design and operation of charging infrastructure for electrified transportation

Relevant projects

- Adaptive Silicon Carbide Electrical Energy Conversion Technologies for Medium Voltage Direct Current Grids (ASiCC) project. ASiCC is funded by the Research Council of Norway programme FRINATEK during 2019-2023.
- Modularized, Reconfigurable and Bidirectional Charging Infrastructure for Electric Vehicles with Silicon Carbide Power Electronics (MoReSiC) project. MoReSiC is funded by the EEA POLNOR Research programme during 2020-2024.
- Optimized Battery Energy Storage Systems (ORBES) project. ORBES was funded by the EEA Grants/Baltic Research programme during 2020-2023.
- Reliability and Ruggedness of High Power, High Voltage Power Electronics (ReliPE) funded by the Research Council of Norway

Sebastien Gros

Department of Engineering Cybernetics
Faculty of Information Technology and Electrical Engineering

Contact information

sebastien.gros@ntnu.no
- 459 17 969

Relevant links outside academia

- DNV
- Equinor
- Prediktor
- ABB
- Aneo
- Volvo

Provided expertise in relation to this topic:

- Mobility and energy management

Relevant projects

- E.g. projects AWESCO & Eco4Wind on wind energy
- CEGUM & OPNET on green mobility
- SARLEM on Explainable
- Safe AI for decision making.

Provided expertise

- Optimization
- AI-driven and formal decision making
- Reinforcement Learning, stochastic processes
- Energy in buildings
- Energy storage management
- Renewable energy
- Energy markets
- Electric transportation.

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Project ZeroCoast, features multiple innovations within energy and other fields, and developing a cohesive plan for hydrogen supply and charging infrastructure along the Norwegian coast.

HORIZON-MISS-2024-CIT-02-01: SUPPORTING NATIONAL, REGIONAL AND LOCAL AUTHORITIES ACROSS EUROPE TO PREPARE FOR THE TRANSITION TOWARDS CLIMATE NEUTRALITY WITHIN CITIES

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

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+47 40389387

Relevant links outside academia

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- Stakeholders dealing with natural hazards and management of critical infrastructures such as NVE, NPRA, BaneNor

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- Nature-based solutions
- Decision-making

Relevant projects

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- KlimaDigital

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- Water smart industrial symbiosis https://ultimatewater.eu/the-project/
- Biosmart- how to manage the transition into a smart bioeconomy? https://biosmart.no/?lang=en

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Faculty of Information Technology and Electrical Engineering

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+48 508251

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- Digital Power System Protection and Control
- Flexibility for Resilience studies.

Relevant projects

Project HONOR - Holistic flexibility market integration of cross-sectoral energy sources, ERA-Net Smart Energy Systems. The project develop and evaluate a trans-regional flexibility market mechanism, integrating cross-sectoral energy flexibility at a community-wide level.

Project ASAP - Advanced system protection schemes applied in the power grid, focused on the design the next generation of system protection through the development of new methods for risk control, optimization and automation, and an intelligent interface with the control centers' operators.

Project ZeroCoast, features multiple innovations within energy and other fields, and developing a cohesive plan for hydrogen supply and charging infrastructure along the Norwegian coast.

ASSOCIATED RESEARCHERS

Mission - Adaption to Climate change

Here you can find potential NTNU professors and employees that are interested in collaborations on mission Adaption to Climate change. The following pages are sorted into the calls for the mission. To simplify your navigation among available expertise per topic, the list of topics have been made clickable.

MISSION - ADAPTION TO CLIMATE CHANGE - CALLS

DISCLAIMER: Please notice that the Topics list is clickable to allow you to immediately reach the one for which you could be intersted to open a collaboration dialogue with NTNU

Call - Mission Adaption to Climate Change

HORIZON-MISS-2024-CLIMA-01-01: Bringing available and actionable solutions for climate adaptation to the knowledge of the regions and local authorities

HORIZON-MISS-2024-CLIMA-01-02: Bringing together the national level with the engaged regional and local levels (multi-level governance)

HORIZON-MISS-2024-CLIMA-01-03: Develop and refine outcome indicators to measure progress on climate resilience at national, regional and local levels, including knowledge and feedback developed from the Mission

HORIZON-MISS-2024-CLIMA-01-04: Research the complex interplay between the climate and biodiversity crises towards more systemic approaches and solutions

HORIZON-MISS-2024-CLIMA-01-05: Improve design for transformative approaches and build local capacity for implementation of available solutions focused on climate adaptation

HORIZON-MISS-2024-CLIMA-01-06: Demonstration of approaches to improve bankability of solutions by design, addressing the co-benefits (mitigation and adaptation) to improve revenues streams

HORIZON-MISS-2024-CLIMA-01-08: Demonstration of approaches by regions and local authorities focused on increasing climate resilience of the most vulnerable social groups (just climate resilience)

HORIZON-MISS-2024-CLIMA-01-09: Systemic and cross-sectoral solutions for climate resilience, tailored to the local needs of regions and local authorities

HORIZON-MISS-2024-CLIMA-01-01: BRINGING AVAILABLE AND ACTIONABLE SOLUTIONS FOR CLIMATE ADAPTATION TO THE KNOWLEDGE OF THE REGIONS AND LOCAL AUTHORITIES

Sikunder Ali

Teacher Education
Social and Educational Sciences

Contact information

sikunder.ali@ntnu.no
+47 97391070

Relevant links outside academia

- With schools and other teacher education institutions (both nationally and internationally).

Provided expertise

- Critical Mathematics Education and Social Justice through Educational Actions as Teacher Education
  - That is how to develop deeper engagement with sustainability issues as climate change with critical mathematics education.

Relevant projects

- I along with my colleagues are developing the idea of Sustainability Lab for schools with focus on social framing of sustainability issues in order to secure democratic and critical dispositions through educational processes at schools.
  - Sustainability lab will serve a meeting point for different stockholders to create ownership of the sustainability issues and take active actions through collective critical engagements.
  - We are planning to develop this idea into a Center of Excellence and Innovation (as long term goal) involved in making current and new generations as ethical citizens with strong concerns to achieve a sustainable societies based on social justice principles.

Ashkan Jahanbani Ghahfarokhi

Geoscience and Petroleum (IGP)
Faculty of Engineering

Contact information

ashkan.jahanbani@ntnu.no
+47 90367701

Relevant links outside academia

- Contacts in the Norwegian energy companies (e.g., Equinor) and research organizations (e.g., SINTEF)

Provided expertise

- Geological CO2 storage
- Numerical reservoir simulation
- fluid flow in porous media
- data-driven modeling (AI/ML)
- optimization strategies
- energy field development planning
- thermodynamic modeling

Relevant projects

- Smart Digital Solution for Field Development Planning Optimization (Smart_FDP)- 2023-2025 (HORIZON-MSCA-2022-PF-01, 101111369).
- Another EU project was Smart Proxy Models for Reservoir Simulation (H2020-MSCA-2019, project SPM-RS 895406) which was terminated due to COVID19.
- Several other projects (funded by NTNU, SINTEF, Research Council of Norway, VISTA, and industry) were mostly related to CO2 and H2 Storage Modeling, Sustainable Utilization of the Subsurface, and Fluid Model Development.

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Links to stakeholders in Norway managing natural hazards and critical infrastructures such as NVE, NPRA and BaneNor

Provided expertise

- Natural hazards
- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Climate-impact
- Multi-hazard analysis
- Critical infrastructure

Relevant projects

- SNFR projects SFI Klima 2050
- KlimaDigital

Yabin Wang

Department of Economics
Economics and Management

Contact information

yabin.wang@ntnu.no
+4746282679

Provided expertise

- Social and economic impact analysis
- Banking
- Government financing
- Financial market ESG and gender

David Emberson

Department of Marine Technology (IMT)
Faculty of Engineering (IV)

Contact information

david.r.emberson@ntnu.no
+4798152966

Relevant links outside academia

- Some links with Bergen Engines, some with Equinor.

Provided expertise

- Alternative, low carbon and zero carbon fuels use in engines.
- Combustion, experimental and some numerical.

Relevant projects

- Bio4Fuels
- ACTIVATE-ammonia fuelled engine
- AMAZE- ammonia marine engine

Provided expertise in relation to this topic

- Decisions around which alternative fuels to use

Fufen Jin

Industrial Economics and Technology Management
Facutly of Economics and Management

Contact information

fufen.jin@ntnu.no
+47 95860192

Provided expertise

- Entrepreneurship education
- innovation

Relevant projects

- ISSA-Internationalisation for Social and Innovative Start Up's and Entrepreneurs
- CHIC-Creating Holistic Innovation Capacity

Relevant links outside academia

- Sparebank1 SMN
- DNB
- Trondheim Municipality

Provided expertise in relation to this topic

- Leveraging technology and innovation to support climate adaptation efforts, such as climate-smart agriculture, renewable energy solutions, and early warning systems.

Sangita Singh Tomar

Department of Geography
Faculty of Social and Educational Sciences

Contact information

sangita.s.tomar@ntnu.no
+47 94715200

Provided expertise

- Satellite remote sensing
- Digital Image analysis
- Cartography
- Understanding cryosphere (snow and ice) changes under the changing climate using remote sensing
- Physics based modelling and field measurements.

Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
- How accurate are estimates of glacier ice thickness? Results from ITMIX, the Ice Thickness Models Intercomparison eXperiment
- Modelling Glacier stored volume in Eastern Himalaya
- Remote Sensing based hydro-meteorological data assimilation in the hydrological and weather forecasting models.

Jan Ketil Rød

Department of Geography
Faculty of Social and Educational Sciences

Contact information

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+47 99556432

Relevant links outside academia

- I have a 20% position for Western Norway Research Institute where I am involved in a number of projects in close collaboration with local government (county and municipality level)
- the Norwegian Environmental Agency, the Norwegian Mapping Authority
- the Norwegian Water Resources and Energy Directorate (NVE) who is responsible for flood and landslide risks in Norway as well as a number of private companies.

Provided expertise

- Professor in Geographic Information Science. Long experience in applying Geographic Information Systems (GIS) for numerous areas but very much related to climate change in general. More specific to issues related to climate change adaptation, natural hazards, vulnerability and exposure. Typically my aims have been to identify WHERE the most exposed or vulnerable areas are, as these may be the places most in need for adaptation measures.

- Have much experience in creating indicators that express the four components of IPCCs framework for Risk: Hazards, Exposure, Vulnerability and Inadequate Response. These results are communicated through narratives using StoryMaps and web-mapping.

- Familiar with ESRI software (e.g., ArcGIS Pro), QGIS as well as using Python to handle complex processing and / or dealing with large datasets.

Relevant projects

- ImagiNation. Mapping the Imagined Geographies of Norwegian Literature from 1814 to 1905. Funded by RCN/FINNUT-Forskning og innovasjon i utdanningssektoren. 2021 - 2027.
- Participation methods for climate change adaptation. Funded by NRC/Innovation project for the public sector. 2021 - 2024.
- +CityxChange. Positive City ExChange. Funded by H2020. 2019 - 2023.
- INSITU - Sharing incident and threat information for common situational understanding. . Funded by NRC/SAMRISK. 2019-2022.
- Citizen Sensing – Urban Climate Resilience through Participatory Risk Management Systems (CitisenSensing). Funded by European Research Area for Climate Services. 2017 - 2020.
- The geography of vulnerability and health service access in southern Africa. Funded by NRC/FRIPRO. 2016 - 2019.
- FUTURUM – the museum of the future. Funded by NRC/ KLIMAFORSK - Climate change communication. 2019.
- Climate change and natural hazards: The geography of community resilience in Norway (ClimRes). Funded by NRC/KLIMAFORSK. 2014 - 2018.
- Nordic Strategic Adaptation Research (NORD-STAR). Nordic Centre of Excellence (NCoE). Leading project 1: 'Interactive land-use modelling, visualisation and decision support'. Funded by Norden Top-level Research Initiative. 2011 – 2016.
- The geography of social vulnerability, environmental hazards and climate change (VulClim). Funded by NRC/NORKLIMA. 2007 - 2011.

HORIZON-MISS-2024-CLIMA-01-02: BRINGING TOGETHER THE NATIONAL LEVEL WITH THE ENGAGED REGIONAL AND LOCAL LEVELS (MULTI-LEVEL GOVERNANCE)

Yabin Wang

Department of Economics
Economics and Management

Provided expertise

- Social and economic impact analysis
- Banking
- Government financing
- Financial market ESG and gender

Contact information

yabin.wang@ntnu.no
+4746282679

Sangita Singh Tomar

Department of Geography
Faculty of Social and Educational Sciences

Provided expertise

- Satellite remote sensing
- Digital Image analysis
- Cartography
- Understanding cryosphere (snow and ice) changes under the changing climate using remote sensing
- Physics based modelling and field measurements.

Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
- How accurate are estimates of glacier ice thickness? Results from ITMIX, the Ice Thickness Models Intercomparison eXperiment
- Modelling Glacier stored volume in Eastern Himalaya
- Remote Sensing based hydro-meteorological data assimilation in the hydrological and weather forecasting models.

Contact information

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+47 94715200

HORIZON-MISS-2024-CLIMA-01-03: DEVELOP AND REFINE OUTCOME INDICATORS TO MEASURE PROGRESS ON CLIMATE RESILIENCE AT NATIONAL, REGIONAL AND LOCAL LEVELS, INCLUDING KNOWLEDGE AND FEEDBACK DEVELOPED FROM THE MISSION

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Links to stakeholders in Norway managing natural hazards and critical infrastructures such as NVE, NPRA and BaneNor

Provided expertise

- Natural hazards
- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Climate-impact
- Multi-hazard analysis
- Critical infrastructure

Relevant projects

- SNFR projects SFI Klima 2050
- KlimaDigital

Yabin Wang

Department of Economics
Economics and Management

Contact information

yabin.wang@ntnu.no
+4746282679

Provided expertise

- Social and economic impact analysis
- Banking
- Government financing
- Financial market ESG and gender

Jan Ketil Rød

Department of Geography
Faculty of Social and Educational Sciences

Contact information

Relevant links outside academia

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- the Norwegian Environmental Agency, the Norwegian Mapping Authority
- the Norwegian Water Resources and Energy Directorate (NVE) who is responsible for flood and landslide risks in Norway as well as a number of private companies.

Provided expertise

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- The geography of social vulnerability, environmental hazards and climate change (VulClim). Funded by NRC/NORKLIMA. 2007 - 2011.

Sangita Singh Tomar

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Contact information

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Provided expertise

- Satellite remote sensing
- Digital Image analysis
- Cartography
- Understanding cryosphere (snow and ice) changes under the changing climate using remote sensing
- Physics based modelling and field measurements.

Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
- How accurate are estimates of glacier ice thickness? Results from ITMIX, the Ice Thickness Models Intercomparison eXperiment
- Modelling Glacier stored volume in Eastern Himalaya
- Remote Sensing based hydro-meteorological data assimilation in the hydrological and weather forecasting models.

HORIZON-MISS-2024-CLIMA-01-04: RESEARCH THE COMPLEX INTERPLAY BETWEEN THE CLIMATE AND BIODIVERSITY CRISES TOWARDS MORE SYSTEMIC APPROACHES AND SOLUTIONS

Elli Verhulst

Industrial Economics and Technology Management,Academic Section Experts in Teamwork
Economics and Management

Contact information

elli.verhulst@ntnu.no

Provided expertise

- Sustainable innovation (design and entrepreneurship)
- interdisciplinary collaboration, human factors sustainable/circular business models
- integration processes
- systems thinking
- method and tool development.

Relevant projects

- Integration of sustainability in innovation processes at SMEs - different projects
- Tools and method development for sustainable innovation and entrepreneurship - different projects
- Digifab, supporting SMEs to move towards Industry 4.0 (NFR funding) Prisms Practical and Innovative Solutions for Manufacturing Sustainability (University of Cambridge, IfM ECS)
- HolE-LIB – Developing a Holistic Ecosystem for Sustainable Repurposing and/or Recycling of Lithium-ion Batteries (LIBs) in Norway and EU (NTNU Sustainability)
- MINDER - Methodologies for Improvement of Non-residential buildings' Day-to-day Energy efficiency Reliability (NFR funding)
- SFU Engage – Entrepreneurship education for educators (HKdir)
- ISE Toolkit - Integration of sustainability in engineering education

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Sangita Singh Tomar

Department of Geography
Faculty of Social and Educational Sciences

Contact information

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+47 94715200

Provided expertise

- Satellite remote sensing
- Digital Image analysis
- Cartography
- Understanding cryosphere (snow and ice) changes under the changing climate using remote sensing
- Physics based modelling and field measurements.

Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
- How accurate are estimates of glacier ice thickness? Results from ITMIX, the Ice Thickness Models Intercomparison eXperiment
- Modelling Glacier stored volume in Eastern Himalaya
- Remote Sensing based hydro-meteorological data assimilation in the hydrological and weather forecasting models.

Jan Ketil Rød

Department of Geography
Faculty of Social and Educational Sciences

Contact information

Relevant links outside academia

- I have a 20% position for Western Norway Research Institute where I am involved in a number of projects in close collaboration with local government (county and municipality level)
- the Norwegian Environmental Agency, the Norwegian Mapping Authority
- the Norwegian Water Resources and Energy Directorate (NVE) who is responsible for flood and landslide risks in Norway as well as a number of private companies.

Provided expertise

- Professor in Geographic Information Science. Long experience in applying Geographic Information Systems (GIS) for numerous areas but very much related to climate change in general. More specific to issues related to climate change adaptation, natural hazards, vulnerability and exposure. Typically my aims have been to identify WHERE the most exposed or vulnerable areas are, as these may be the places most in need for adaptation measures.

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- Familiar with ESRI software (e.g., ArcGIS Pro), QGIS as well as using Python to handle complex processing and / or dealing with large datasets.

Relevant projects

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- The geography of social vulnerability, environmental hazards and climate change (VulClim). Funded by NRC/NORKLIMA. 2007 - 2011.

HORIZON-MISS-2024-CLIMA-01-05: IMPROVE DESIGN FOR TRANSFORMATIVE APPROACHES AND BUILD LOCAL CAPACITY FOR IMPLEMENTATION OF AVAILABLE SOLUTIONS FOCUSED ON CLIMATE ADAPTATION

Contact information

sikunder.ali@ntnu.no
+47 97391070

Relevant links outside academia

- With schools and other teacher education institutions (both nationally and internationally).

Sikunder Ali

Teacher Education
Social and Educational Sciences

Provided expertise

- Critical Mathematics Education and Social Justice through Educational Actions as Teacher Education
  - That is how to develop deeper engagement with sustainability issues as climate change with critical mathematics education.

Provided expertise in relation to this topic

- I am leader of the Research Group Inclusive Mathematics Education and Democracy (IMED). Through this group, we adopt transdisciplinary approach address the challenges of diversity and inclusion within mathematics education.
- We consider that through engagement with sustainability in a transdisciplinary approach will bring room for us to create sustainable societies based on social justice principles.

Relevant projects

- I along with my colleagues are developing the idea of Sustainability Lab for schools with focus on social framing of sustainability issues in order to secure democratic and critical dispositions through educational processes at schools.
  - Sustainability lab will serve a meeting point for different stockholders to create ownership of the sustainability issues and take active actions through collective critical engagements.
  - We are planning to develop this idea into a Center of Excellence and Innovation (as long term goal) involved in making current and new generations as ethical citizens with strong concerns to achieve a sustainable societies based on social justice principles.

Contact information

ashkan.jahanbani@ntnu.no
+47 90367701

Relevant links outside academia

- Contacts in the Norwegian energy companies (e.g., Equinor) and research organizations (e.g., SINTEF)

Ashkan Jahanbani Ghahfarokhi

Geoscience and Petroleum (IGP)
Faculty of Engineering

Provided expertise

- Geological CO2 storage
- Numerical reservoir simulation
- fluid flow in porous media
- data-driven modeling (AI/ML)
- optimization strategies
- energy field development planning
- thermodynamic modeling

Relevant projects

- Smart Digital Solution for Field Development Planning Optimization (Smart_FDP)- 2023-2025 (HORIZON-MSCA-2022-PF-01, 101111369).
- Another EU project was Smart Proxy Models for Reservoir Simulation (H2020-MSCA-2019, project SPM-RS 895406) which was terminated due to COVID19.
- Several other projects (funded by NTNU, SINTEF, Research Council of Norway, VISTA, and industry) were mostly related to CO2 and H2 Storage Modeling, Sustainable Utilization of the Subsurface, and Fluid Model Development.

Jan Ketil Rød

Department of Geography
Faculty of Social and Educational Sciences

Contact information

Relevant links outside academia

- I have a 20% position for Western Norway Research Institute where I am involved in a number of projects in close collaboration with local government (county and municipality level)
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Provided expertise

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Relevant projects

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Elli Verhulst

Industrial Economics and Technology Management,Academic Section Experts in Teamwork
Economics and Management

Contact information

elli.verhulst@ntnu.no

Provided expertise

- Sustainable innovation (design and entrepreneurship)
- interdisciplinary collaboration, human factors sustainable/circular business models
- integration processes
- systems thinking
- method and tool development.

Relevant projects

- Integration of sustainability in innovation processes at SMEs - different projects
- Tools and method development for sustainable innovation and entrepreneurship - different projects
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- SFU Engage – Entrepreneurship education for educators (HKdir)
- ISE Toolkit - Integration of sustainability in engineering education

---

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Links to stakeholders in Norway managing natural hazards and critical infrastructures such as NVE, NPRA and BaneNor

Provided expertise

- Natural hazards
- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Climate-impact
- Multi-hazard analysis
- Critical infrastructure

Relevant projects

- SNFR projects SFI Klima 2050
- KlimaDigital

Sangita Singh Tomar

Department of Geography
Faculty of Social and Educational Sciences

Contact information

sangita.s.tomar@ntnu.no
+47 94715200

Provided expertise

- Satellite remote sensing
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- Cartography
- Understanding cryosphere (snow and ice) changes under the changing climate using remote sensing
- Physics based modelling and field measurements.

Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
- How accurate are estimates of glacier ice thickness? Results from ITMIX, the Ice Thickness Models Intercomparison eXperiment
- Modelling Glacier stored volume in Eastern Himalaya
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Yutao Pan

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

yutao.pan@ntnu.no
+47 92046973

Relevant links outside academia

- NGI; local consultants

Provided expertise

- ground improvement
- numerical simulation
- reliability analysis
- groundwater seepage
- offshore wind turbine foundations

Provided expertise in relation to this topic:

- ground improvement
- numerical modelling
- ground water seepage

HORIZON-MISS-2024-CLIMA-01-06: DEMONSTRATION OF APPROACHES TO IMPROVE BANKABILITY OF SOLUTIONS BY DESIGN, ADDRESSING THE CO-BENEFITS (MITIGATION AND ADAPTATION) TO IMPROVE REVENUES STREAMS

Yabin Wang

Department of Economics
Economics and Management

Contact information
yabin.wang@ntnu.no
+4746282679

Provided expertise
- Social and economic impact analysis
- Banking
- Government financing
- Financial market ESG and gender

Ashkan Jahanbani Ghahfarokhi

Geoscience and Petroleum (IGP)
Faculty of Engineering (IV)

Contact information
ashkan.jahanbani@ntnu.no
+47 90367701

Relevant links outside academia
- Contacts in the Norwegian energy companies (e.g., Equinor) and research organizations (e.g., SINTEF)

Provided expertise
- Geological CO2 storage
- Numerical reservoir simulation
- fluid flow in porous media
- data-driven modeling (AI/ML)
- optimization strategies
- energy field development planning
- thermodynamic modeling

Relevant projects
- Smart Digital Solution for Field Development Planning Optimization (Smart_FDP)- 2023-2025 (HORIZON-MSCA-2022-PF-01, 101111369).
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Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
- How accurate are estimates of glacier ice thickness? Results from ITMIX, the Ice Thickness Models Intercomparison eXperiment
- Modelling Glacier stored volume in Eastern Himalaya
- Remote Sensing based hydro-meteorological data assimilation in the hydrological and weather forecasting models.

HORIZON-MISS-2024-CLIMA-01-08: DEMONSTRATION OF APPROACHES BY REGIONS AND LOCAL AUTHORITIES FOCUSED ON INCREASING CLIMATE RESILIENCE OF THE MOST VULNERABLE SOCIAL GROUPS (JUST CLIMATE RESILIENCE)

Sikunder Ali

Teacher Education
Social and Educational Sciences

Contact information
sikunder.ali@ntnu.no
+47 97391070

Relevant links outside academia

- With schools and other teacher education institutions (both nationally and internationally).

Provided expertise

- Critical Mathematics Education and Social Justice through Educational Actions as Teacher Education
  - That is how to develop deeper engagement with sustainability issues as climate change with critical mathematics education.

Relevant projects

- I along with my colleagues are developing the idea of Sustainability Lab for schools with focus on social framing of sustainability issues in order to secure democratic and critical dispositions through educational processes at schools.
  - Sustainability lab will serve a meeting point for different stockholders to create ownership of the sustainability issues and take active actions through collective critical engagements.
  - We are planning to develop this idea into a Center of Excellence and Innovation (as long term goal) involved in making current and new generations as ethical citizens with strong concerns to achieve a sustainable societies based on social justice principles.

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information
ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Links to stakeholders in Norway managing natural hazards and critical infrastructures such as NVE, NPRA and BaneNor

Provided expertise

- Natural hazards
- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Climate-impact
- Multi-hazard analysis
- Critical infrastructure

Relevant projects

- SNFR projects SFI Klima 2050
- KlimaDigital

Yabin Wang

Department of Economics
Economics and Management

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+4746282679

Provided expertise

- Social and economic impact analysis
- Banking
- Government financing
- Financial market ESG and gender

Sangita Singh Tomar

Department of Geography
Faculty of Social and Educational Sciences

Contact information

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+47 94715200

Provided expertise

- Satellite remote sensing
- Digital Image analysis
- Cartography
- Understanding cryosphere (snow and ice) changes under the changing climate using remote sensing
- Physics based modelling and field measurements.

Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
- How accurate are estimates of glacier ice thickness? Results from ITMIX, the Ice Thickness Models Intercomparison eXperiment
- Modelling Glacier stored volume in Eastern Himalaya
- Remote Sensing based hydro-meteorological data assimilation in the hydrological and weather forecasting models.

HORIZON-MISS-2024-CLIMA-01-09: SYSTEMIC AND CROSS-SECTORAL SOLUTIONS FOR CLIMATE RESILIENCE, TAILORED TO THE LOCAL NEEDS OF REGIONS AND LOCAL AUTHORITIES

Sikunder Ali

Teacher Education
Social and Educational Sciences

Contact information
sikunder.ali@ntnu.no
+47 97391070

Relevant links outside academia

- With schools and other teacher education institutions (both nationally and internationally).

Provided expertise

- Critical Mathematics Education and Social Justice through Educational Actions as Teacher Education
  - That is how to develop deeper engagement with sustainability issues as climate change with critical mathematics education.

Relevant projects

- I along with my colleagues are developing the idea of Sustainability Lab for schools with focus on social framing of sustainability issues in order to secure democratic and critical dispositions through educational processes at schools.
  - Sustainability lab will serve a meeting point for different stockholders to create ownership of the sustainability issues and take active actions through collective critical engagements.
  - We are planning to develop this idea into a Center of Excellence and Innovation (as long term goal) involved in making current and new generations as ethical citizens with strong concerns to achieve a sustainable societies based on social justice principles.

Ashkan Jahanbani Ghahfarokhi

Geoscience and Petroleum (IGP)
Faculty of Engineering (IV)

Contact information
ashkan.jahanbani@ntnu.no
+47 90367701

Relevant links outside academia

- Contacts in the Norwegian energy companies (e.g., Equinor) and research organizations (e.g., SINTEF)

Provided expertise

- Geological CO2 storage
- Numerical reservoir simulation
- fluid flow in porous media
- data-driven modeling (AI/ML)
- optimization strategies
- energy field development planning
- thermodynamic modeling

Relevant projects

- Smart Digital Solution for Field Development Planning Optimization (Smart_FDP)- 2023-2025 (HORIZON-MSCA-2022-PF-01, 101111369).
- Another EU project was Smart Proxy Models for Reservoir Simulation (H2020-MSCA-2019, project SPM-RS 895406) which was terminated due to COVID19.
- Several other projects (funded by NTNU, SINTEF, Research Council of Norway, VISTA, and industry) were mostly related to CO2 and H2 Storage Modeling, Sustainable Utilization of the Subsurface, and Fluid Model Development.

Ivan Depina

Department of Civil and Environmental Engineering
Faculty of Engineering

Contact information

ivan.depina@ntnu.no
+47 40389387

Relevant links outside academia

- Links to stakeholders in Norway managing natural hazards and critical infrastructures such as NVE, NPRA and BaneNor

Provided expertise

- Natural hazards
- Geohazards
- Landslides
- Debris flow
- Nature-based solutions
- Risk analysis
- Climate adaptation
- Climate-resilience
- Climate-impact
- Multi-hazard analysis
- Critical infrastructure

Relevant projects

- SNFR projects SFI Klima 2050
- KlimaDigital

Sangita Singh Tomar

Department of Geography
Faculty of Social and Educational Sciences

Contact information

sangita.s.tomar@ntnu.no
+47 94715200

Provided expertise

- Satellite remote sensing
- Digital Image analysis
- Cartography
- Understanding cryosphere (snow and ice) changes under the changing climate using remote sensing
- Physics based modelling and field measurements.

Relevant projects

- Glacier impacts On The Hydrological systems in Europe, Central Asia.
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- Remote Sensing based hydro-meteorological data assimilation in the hydrological and weather forecasting models.

Jan Ketil Rød

Department of Geography
Faculty of Social and Educational Sciences

Contact information

Relevant links outside academia

- I have a 20% position for Western Norway Research Institute where I am involved in a number of projects in close collaboration with local government (county and municipality level)
- the Norwegian Environmental Agency, the Norwegian Mapping Authority
- the Norwegian Water Resources and Energy Directorate (NVE) who is responsible for flood and landslide risks in Norway as well as a number of private companies.

Provided expertise

- Professor in Geographic Information Science. Long experience in applying Geographic Information Systems (GIS) for numerous areas but very much related to climate change in general. More specific to issues related to climate change adaptation, natural hazards, vulnerability and exposure. Typically my aims have been to identify WHERE the most exposed or vulnerable areas are, as these may be the places most in need for adaptation measures.

- Have much experience in creating indicators that express the four components of IPCCs framework for Risk: Hazards, Exposure, Vulnerability and Inadequate Response. These results are communicated through narratives using StoryMaps and web-mapping.

- Familiar with ESRI software (e.g., ArcGIS Pro), QGIS as well as using Python to handle complex processing and / or dealing with large datasets.

Relevant projects

- ImagiNation. Mapping the Imagined Geographies of Norwegian Literature from 1814 to 1905. Funded by RCN/FINNUT-Forskning og innovasjon i utdanningssektoren. 2021 - 2027.
- Participation methods for climate change adaptation. Funded by NRC/Innovation project for the public sector. 2021 - 2024.
- +CityxChange. Positive City ExChange. Funded by H2020. 2019 - 2023.
- INSITU - Sharing incident and threat information for common situational understanding. . Funded by NRC/SAMRISK. 2019-2022.
- Citizen Sensing – Urban Climate Resilience through Participatory Risk Management Systems (CitisenSensing). Funded by European Research Area for Climate Services. 2017 - 2020.
- The geography of vulnerability and health service access in southern Africa. Funded by NRC/FRIPRO. 2016 - 2019.
- FUTURUM – the museum of the future. Funded by NRC/ KLIMAFORSK - Climate change communication. 2019.
- Climate change and natural hazards: The geography of community resilience in Norway (ClimRes). Funded by NRC/KLIMAFORSK. 2014 - 2018.
- Nordic Strategic Adaptation Research (NORD-STAR). Nordic Centre of Excellence (NCoE). Leading project 1: 'Interactive land-use modelling, visualisation and decision support'. Funded by Norden Top-level Research Initiative. 2011 – 2016.
- The geography of social vulnerability, environmental hazards and climate change (VulClim). Funded by NRC/NORKLIMA. 2007 - 2011.

COLLABORATING WITH NTNU

As the largest Norwegian university with high multidisciplinary nature, NTNU offers a wide range of expertise and competences. Specific mapping of available researchers willing to collaborate on Horizon Europe have been performed for all missions.

A similar mapping have been done in relation to interests in the clusters, click here to download the latest version of the Cluster Brochures

Should you be interested to explore collaboration opportunities in areas not present in any of these brochures, you can get in touch with the institutional entry points of the university.

ENTRY POINTS

DISCLAIMER: Please notice that the names in the list is clickable to allow you to immediately reach the entry point of your interest.

NTNU Brussels Office

Faculty EU advisors:

AD - Faculty of Architecture and Design

- Tone Woie Alstadheim and Srutarshi Pradhan

HF - Faculty of Humanities

- Chamila Thushari Attanapola

IE - Faculty of Information Technology and Electrical Engineering

- Nathalie Søyseth and Filip Jessen

IV - Faculty of Engineering

- Gina Bjelland, Maria Letizia Potenza and Miriam K. Khider, in addition: Sonja Marie Ekrann Hammer (IV-IBM) and Camilla Ackermann (IV-EPT)

MH - Faculty of Medicine and Health Sciences

- Ayeshat Ibitoye

NV - Faculty of Natural Sciences

- Thais Mothe-Diniz

SU - Faculty of Social and Educational Sciences

- Bård Li and Jens Rohloff

ØK - Faculty of Economics and Management

- Thomas Aarnseth

VM - NTNU University Museum

- Astrid Johansen

NTNU in Gjøvik

- Anne Hilde Ruen Nymoen

NTNU in Ålesund

- Kirsti Brekke

Division for research, innovation and external relations (FIE):

- Hilde Røysland

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