AALBORG UNIVERSITET

HORIZON EUROPE 2025/2026 CALLS
MISSIONS AND CROSS-CUTTING ACTIVITIES

AAU Fundraising & Project Management Office
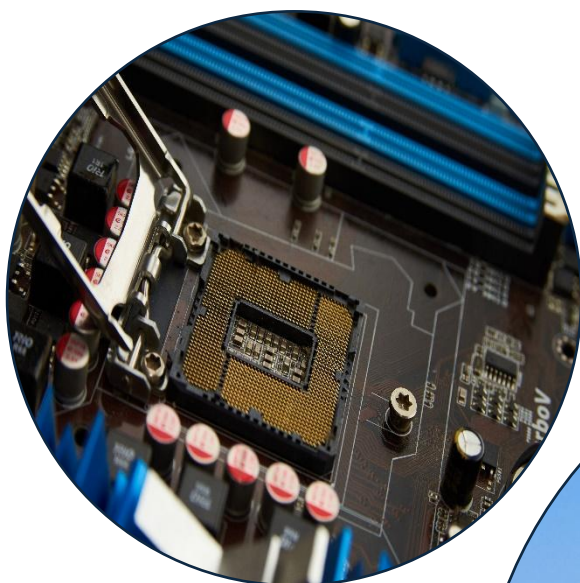
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INTRODUCTION

AAU HORIZON EUROPE COMPENDIUM

Interested in finding academic partners for the upcoming Horizon Europe calls? At AAU, we have collected, mapped, and showcased AAU researchers' interest in collaborating on specific topics within the six clusters of Pillar 2 (including EU Missions & Cross-cutting activities). Each compendium displays our showcased researcher's relevant expertise within each identified topic, which makes it easy to locate AAU researchers who are interested in collaborating and providing their expertise in your next Horizon Europe proposal.

ABOUT AAU

AAU has campuses in Aalborg, Copenhagen, and Esbjerg, as well as an EU office in Brussels. We have 3.700 staff, 18.000 students and an annual turnover of DKK 3 billion.

AAU is a comprehensive university covering <u>four faculties and 18 departments</u>, such as Sustainability and Planning, Energy, Health Science and Technology, Computer Science, Built Environment, Politics and Society, Culture and Learning.

With problem-based learning at the heart of educational programs, AAU researchers and students are well-equipped to take on current and future societal, environmental and economic challenges.

OUR PROFILE AND DNA – WHY SHOULD YOU PARTNER WITH US?

Collaboration is heavily embedded in the DNA of AAU. We have a strong and natural collaboration with industry and the surrounding society – thus our current strategy is labeled "<u>Knowledge for the World 2.0</u>".

We are a mission-oriented university, with three identified <u>AAU Missions</u>:
1. A Sustainable Danish Energy System
2. Improved Wellbeing Among Children and Youth in Denmark
3. Improving Health Through Coherence and Individualisation

As the second best ranked engineering university in Europe, and being no. 16 globally <u>(ranking from the U.S. News & World Report)</u>, as well as being in top 5 of universities pursuing the UN sustainable development goals (<u>THE University Impact Rating</u>), we are a very capable partner and collaborator.

AAU has contributed as coordinator or partner in close to 200 projects in the EU Horizon 2020 Framework Programme. For Horizon Europe we have – so far – contributed to more than 150 projects. We are setting even more ambitious targets for Horizon Europe in 2025 and going forward.

CHAPTER 1

EU MISSION: RESTORE OUR OCEAN AND WATERS

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CALLS FOR EU MISSION: RESTORE OUR OCEAN AND WATERS

HORIZON-MISS-2025-03-OCEAN-02: A toolbox for public authorities to address marine plastics and litter from river-to-ocean

HORIZON-MISS-2025-03-OCEAN-04: Restoring Ocean and Waters in Regions

HORIZON-MISS-2025-03-OCEAN-02: A TOOLBOX FOR PUBLIC AUTHORITIES TO ADDRESS MARINE PLASTICS AND LITTER FROM RIVER-TO-OCEAN

Carolijn van Noort

Department of Sustainability and Planning
The Technical Faculty of IT and Design

CONTACT INFORMATION
Carolijn van Noort
Carolinaevannoort@plan.aau.dk
+45 61967414
https://vbn.aau.dk/en/persons/carolinaevannoort

RELEVANT LINKS OUTSIDE ACADEMIA
Maritime sector, research institutions, public sector

AREA OF EXPERTISE
Marine governance
Ocean governance
International collaboration
International relations
Integrated AI /AI and society
Science-policy
Strategic communication
Maritime sector
Theory and conceptual development
Foreign policy
Security
Ocean infrastructure
Green transition
Blue economy
Marine biodiversity

RELEVANT EXPERTISE/PROJECTS
Organizational change: identify enabling conditions for public authorities and relevant stakeholders to adopt a novel toolbox.
Behavioral change: identify strategies co-designed with the fishing industry to uptake innovative solutions.
Theory: theorize an integrated and coherent governance approach that is fit-for-purpose for a land-to-river-to-sea ecosystem which is anchored in cross-border cooperation and coordination at different levels, national, regional, local.
Capacity building through co-design of knowledge and solutions: develop innovative pathways for public authorities and relevant stakeholders to contribute to knowledge and solutions about marine plastic litter.

HORIZON-MISS-2025-03-OCEAN-04: RESTORING OCEAN AND WATERS IN REGIONS

Carolijn van Noort

Department of Sustainability and Planning
The Technical Faculty of IT and Design

CONTACT INFORMATION
Carolijn van Noort
Carolinaevannoort@plan.aau.dk
+45 61967414
https://vbn.aau.dk/en/persons/carolinaevannoort

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Maritime sector, research institutions, public sector

AREA OF EXPERTISE
Marine governance
Ocean governance
International collaboration
International relations
Integrated AI /AI and society
Science-policy
Strategic communication
Maritime sector
Theory and conceptual development
Foreign policy
Security
Ocean infrastructure
Green transition
Blue economy
Marine biodiversity

RELEVANT EXPERTISE/PROJECTS
Organizational change: improve the involvement and increased readiness of regional and local authorities by identifying conditions to test, deploy and upscale systematic innovative solutions.
Action research: develop place-based and people-centered actions that are effective and well-managed (e.g. organization of living labs).
Framework: develop a sustainable development of the blue economy framework that integrates nature-based solutions, land-sea interactions, and transboundary actions.
Digitalization/AI: support the digital transition in fisheries and aquaculture by identifying pathways to improve the adoption of AI (and digital tools more broadly) – with a long-term goal to make the blue economy carbon-neutral and circular.

CHAPTER 2

HORIZON-SESAR-2025

CHAPTER 2

CALLS FOR HORIZON-SESAR-2025

HORIZON-SESAR-2025-DES-ER-03-WA1-3: Investigate quantum sensing and computing applied to ATM

HORIZON-SESAR-2025-DES-IR-02-WA1-1: Transformation to trajectory-based operations

HORIZON-SESAR-2025-DES-IR-02-WA2-1: Transition towards high performance of air-ground connectivity (Multilink)

HORIZON-SESAR-2025-DES-IR-02-WA4-1: Next generation ATS platform for airport operations

HORIZON-SESAR-2025-DES-ER-03-WA1-3: INVESTIGATE QUANTUM SENSING AND COMPUTING APPLIED TO ATM

Mustafa Özger

Department of Electronic Systems
The Technical Faculty of IT and Design

CONTACT INFORMATION
Mustafa Özger
mozger@es.aau.dk
+45 52818218
https://vbn.aau.dk/da/persons/mozger

HIGHLIGHTED AAU RESEARCH GROUPS
Member of Edge Computing and Networking (ECN) research group

RELEVANT LINKS OUTSIDE ACADEMIA
https://www.nordforsk.org

AREA OF EXPERTISE
Wireless Networks; non-terrestrial networks
Wireless Communications
Machine Learning
Edge computing

RELEVANT PROJECTS
Celtic Next 6G-SKY

HORIZON-SESAR-2025-DES-IR-02-WA1-1: TRANSFORMATION TO TRAJECTORY-BASED OPERATIONS

Tianyi Li

Department of Computer Science
The Technical Faculty of IT and Design

CONTACT INFORMATION
Tianyi Li
tianyi@cs.aau.dk
+45 71682193
https://vbn.aau.dk/en/persons/tianyi

HIGHLIGHTED AAU RESEARCH GROUPS
Member of Data Engineering, Science and Systems (DESS) group

MEMBERSHIP OF EU PARTNERSHIPS
Associate Editor
IEEE Network
IEEE Transactions on Intelligent Vehicles

AREA OF EXPERTISE
Data management and analytics
Intelligent transportation
Artificial intelligence and machine learning
Digital twin
Internet of Things
Edge and distributed computing
Autonomous vehicles

Expertise specific to this call: data integration, data analytics, intelligent transportation

RELEVANT PROJECTS
Project co-investigator, HORIZON, MobiSpaces: New Data Spaces for Green Mobility

Project co-investigator, DIREC, Multimodal Data Processing of Earth Observation Data

HORIZON-SESAR-2025-DES-IR-02-WA2-1: TRANSITION TOWARDS HIGH PERFORMANCE OF AIR-GROUND CONNECTIVITY (MULTILINK)

Mustafa Özger

Department of Electronic Systems
The Technical Faculty of IT and Design

CONTACT INFORMATION
Mustafa Özger
mozger@es.aau.dk
+45 52818218
https://vbn.aau.dk/da/persons/mozger

HIGHLIGHTED AAU RESEARCH GROUPS
Member of Edge Computing and
Networking (ECN) research group

RELEVANT LINKS OUTSIDE ACADEMIA
https://www.nordforsk.org

AREA OF EXPERTISE
Wireless Networks; non-terrestrial networks
Wireless Communications
Machine Learning
Edge computing
Reinforcement learning

RELEVANT PROJECTS
Celtic Next 6G-SKY
Self Learning Drone
Detection System

HORIZON-SESAR-2025-DES-IR-02-WA4-1: NEXT GENERATION ATS PLATFORM FOR AIRPORT OPERATIONS

Mustafa Özger

Department of Electronic Systems
The Technical Faculty of IT and Design

CONTACT INFORMATION
Mustafa Özger
mozger@es.aau.dk
+45 52818218
https://vbn.aau.dk/da/persons/mozger

HIGHLIGHTED AAU RESEARCH GROUPS
Member of Edge Computing and Networking (ECN) research group

RELEVANT LINKS OUTSIDE ACADEMIA
https://www.nordforsk.org

AREA OF EXPERTISE
Wireless Networks; non-terrestrial networks
Wireless Communications
Machine Learning
Edge computing

RELEVANT PROJECTS
Celtic Next 6G-SKY

CHAPTER 3

THE NEW EUROPEAN BAUHAUS FACILITY

CHAPTER 3

CALLS FOR THE NEW EUROPEAN BAUHAUS FACILITY

HORIZON-NEB-2025-01-PARTICIPATION-01: the impact of common space on neighbourhood communities

HORIZON-NEB-2025-01-PARTICIPATION-04: Network of neighbourhoods for innovative policies on gentrification

HORIZON-NEB-2025-01-REGEN-04: Innovative approaches for sustainable, inclusive and beautiful social and affordable housing

HORIZON-NEB-2025-01-PARTICIPATION-01: THE IMPACT OF COMMON SPACE ON NEIGHBOURHOOD COMMUNITIES

Rikke Skovgaard Nielsen

Department of the Built Environment
The Faculty of Engineering and Science

CONTACT INFORMATION
Rikke Skovgaard Nielsen
Risn@build.aau.dk
+45 29100285
https://vbn.aau.dk/da/persons/risn

HIGHLIGHTED AAU RESEARCH GROUPS
Transformation of Housing and Places Research Group

MEMBERSHIP OF EU PARTNERSHIPS
ENHR (European Network on Housing Research); have worked on several occasions as an international expert on Danish housing policy, e.g. through a Dutch project on Vulnerable Neighbourhoods and a German project on European Housing Policy in preparation for the German Presidency of the EU.

RELEVANT LINKS OUTSIDE ACADEMIA
Wide network amongst social housing organisations, municipalities and in the housing sector in general

AREA OF EXPERTISE
Spatial segregation
Diversity
Social cohesion
Migration and integration
Social mobility
Deprived Neighbourhoods
Social housing
Affordable housing
Urban regeneration
Quantitative Methods
Qualitative Methods
Mixed Methods Research

Has worked extensively on inclusion, social interaction, social cohesion and neighbourhood diversity e.g. in the EU FP7-project DIVERCITIES, focusing amongst other things on the importance of diverse meeting places for fostering social interaction in diverse neighbourhoods.

Was a Sub-area expert for the Sub-area Neighbourhood in the Main area of Diversity and Equality within the Dimension of Inclusiveness as part of the preparatory action (PA) "New European Bauhaus Knowledge Management Platform"

NEB-HORIZON-NEB-2025-01-PARTICIPATION-04: NETWORK OF NEIGHBOURHOODS FOR INNOVATIVE POLICIES ON GENTRIFICATION

Rikke Skovgaard Nielsen

Department of the Built Environment
The Faculty of Engineering and Science

CONTACT INFORMATION
Rikke Skovgaard Nielsen
Risn@build.aau.dk
+45 29100285
https://vbn.aau.dk/da/persons/risn

HIGHLIGHTED AAU RESEARCH GROUPS
Transformation of Housing and Places Research Group

MEMBERSHIP OF EU PARTNERSHIPS
ENHR (European Network on Housing Research); have worked on several occasions as an international expert on Danish housing policy, e.g. through a Dutch project on Vulnerable Neighbourhoods and a German project on European Housing Policy in preparation for the German Presidency of the EU.

RELEVANT LINKS OUTSIDE ACADEMIA
Wide network amongst social housing organisations, municipalities and in the housing sector in general

AREA OF EXPERTISE
Spatial segregation
Diversity
Social cohesion
Migration and integration
Social mobility
Deprived Neighbourhoods
Social housing
Affordable housing
Urban regeneration
Quantitative Methods
Qualitative Methods
Mixed Methods Research

Has worked extensively on gentrification, segregation, diversity and forced relocation in a Danish as well as an international context, including state-led gentrification through policy programmes such as the Danish Parallel Society legislation; focusing on mitigating the negative consequences for exiting residents while supporting positive consequences through involvement of residents in local communities. Can draw on an extensive network across Denmark for relevant cases of gentrification.

Was a Sub-area expert for the Sub-area Neighbourhood in the Main area of Diversity and Equality within the Dimension of Inclusiveness as part of the preparatory action (PA) "New European Bauhaus Knowledge Management Platform"

HORIZON-NEB-2025-01-REGEN-04: INNOVATIVE APPROACHES FOR SUSTAINABLE, INCLUSIVE AND BEAUTIFUL SOCIAL AND AFFORDABLE HOUSING

Rikke Skovgaard Nielsen

Department of the Built Environment
The Faculty of Engineering and Science

CONTACT INFORMATION
Rikke Skovgaard Nielsen
Risn@build.aau.dk
+45 29100285
https://vbn.aau.dk/da/persons/risn

HIGHLIGHTED AAU RESEARCH GROUPS
Transformation of Housing and Places Research Group

MEMBERSHIP OF EU PARTNERSHIPS
ENHR (European Network on Housing Research); have worked on several occasions as an international expert on Danish housing policy, e.g. through a Dutch project on Vulnerable Neighbourhoods and a German project on European Housing Policy in preparation for the German Presidency of the EU.

RELEVANT LINKS OUTSIDE ACADEMIA
Wide network amongst social housing organisations, municipalities and in the housing sector in general

AREA OF EXPERTISE
Spatial segregation
Diversity
Social cohesion
Migration and integration
Social mobility
Deprived Neighbourhoods
Social housing
Affordable housing
Urban regeneration
Quantitative Methods
Qualitative Methods
Mixed Methods Research

Has worked extensively on social housing, affordable housing, segregation and regeneration for several years. Currently part of the DASH-project, a Horizon Europe MSCA Staff Exchange program on delivering safe and social housing. Has worked in several international projects with affordability and availability of housing for vulnerable groups under FP7, Horizon 2020 and Horizon Europe as well as worked with energy consumption as part of the ERC-project eCape. Main relevance for the NEB-HORIZON-NEB-2025-01-REGEN-04 is in relation to affordability, vulnerable groups and well-being as well as minimizing disruptions for residents.

Was a Sub-area expert for the Sub-area Neighbourhood in the Main area of Diversity and Equality within the Dimension of Inclusiveness as part of the preparatory action (PA) "New European Bauhaus Knowledge Management Platform"

CHAPTER 4

HORIZON-JU-IHI-2025-SINGLE-STAGE

DESTINATION 4: CALLS

CALLS FOR HORIZON-JU-IHI-2025-SINGLE-STAGE

HORIZON-JU-IHI-2025-09-01-SINGLE-STAGE: Boosting innovation for a better understanding of the determinants of health

HORIZON-JU-IHI-2025-09-03-SINGLE-STAGE: Boosting innovation for peopled centred integrated healthcare solutions

HORIZON-JU-IHI-2025-09-04-SINGLE-STAGE: Boosting innovation through exploitation of digitalization and data exchange in healthcare

HORIZON-JU-IHI-2025-09-01-SINGLE-STAGE: BOOSTING INNOVATION FOR A BETTER UNDERSTANDING OF THE DETERMINANTS OF HEALTH

Sabata Gervasio

Head of the PhD Program in Biomedical Engineering and Neuroscience
Department of Health Science and Technology

CONTACT INFORMATION
Sabata Gervasio
saba@hst.aau.dk
+45 99403743
https://vbn.aau.dk/da/persons/saba

HIGHLIGHTED AAU RESEARCH GROUPS
Member of the Neural Engineering and Neurophysiology research group
Head of the Laboratory for Sensory-Motor Control and Plasticity
Head of the PhD program in Biomedical Engineering and Neuroscience

RELEVANT LINKS OUTSIDE ACADEMIA
Associate Editor for IEEE Transactions on Neural Systems & Rehabilitation Engineering
Member of the Education and Training Committee (ETC) for the Neuroscience Academy Denmark (NAD)
Senior Research Expert, Inventor's Way ApS

AREA OF EXPERTISE
My research focus is to understand how sensory feedback is processed in normal or pathological situations, and to identify and treat sensory-motor impairments and disorders. I have been working on several projects investigating, for instance, the role of crossed spinal reflexes in interlimb coordination, the use of nociceptive withdrawal reflex in stroke rehabilitation and the effect of neurofeedback on musculoskeletal pain. Recently, I have been working on methods to improve diagnosis and interventions for children with sensory motor impairments, including Sensory Processing Disorders, Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD) and Cerebral Palsy. I am currently working on the development of a protocol to identify and assess the mechanism behind sensory processing anomalies in children with ASD and ADHD.

A direct measure of sensory processing anomalies. In this project we investigate sensory processing anomalies in children with neurodevelopmental disorder, as autism and ADHD. We use measure as EEG and evoked potentials and psychophysics.

HORIZON-JU-IHI-2025-09-03-SINGLE-STAGE BOOSTING INNOVATION FOR PEOPLED CENTRED INTEGRATED HEALTHCARE SOLUTIONS

Niels van Berkel

Department of Computer Science
The Technical Faculty of IT and Design

CONTACT INFORMATION
Niels van Berkel
nielsvanberkel@cs.aau.dk
+45 52169449
https://vbn.aau.dk/da/persons/nielsvanberkel

HIGHLIGHTED AAU RESEARCH GROUPS
Research lead Human-Centred Computing
(Department of Computer Science)

AREA OF EXPERTISE
Human-Centred AI
Trustworthy AI
Human-Computer Interaction
Decision support
Wellbeing

Expertise in the design of digital systems,
particular focus on collaborative and
intelligent decision support systems.

RELEVANT PROJECTS
Algorithmic Explainability for Everyday
Citizens
Carlsberg Foundation: Semper Ardens
Accelerate
Learning to Collaborate via Explainable AI in
Medical Education.
Digital Research Centre Denmark (EXPLAIN-
ME)

HORIZON-JU-IHI-2025-09-04-SINGLE-STAGE: BOOSTING INNOVATION THROUGH EXPLOITATION OF DIGITALISATION AND DATA EXCHANGE IN HEALTHCARE

Niels van Berkel

Department of Computer Science
The Technical Faculty of IT and Design

CONTACT INFORMATION
Niels van Berkel
nielsvanberkel@cs.aau.dk
+45 52169449
https://vbn.aau.dk/da/persons/nielsvanberkel

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Human-Centred AI
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particular focus on collaborative and
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RELEVANT PROJECTS
Algorithmic Explainability for Everyday
Citizens
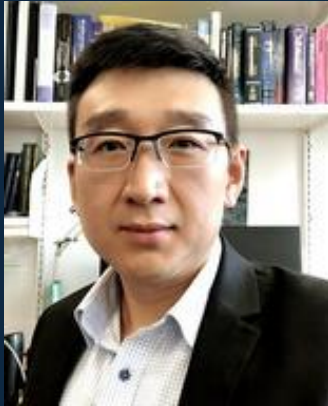Carlsberg Foundation: Semper Ardens
Accelerate

CHAPTER 5

EU4HEALTH

CHAPTER 5

EU4HEALTH

EU4H-2024-PJ-04-01

EU4H-2024-PJ-04-01

Ming Shen

Department of Electronic Systems
The Technical Faculty of IT and Design

CONTACT INFORMATION
Ming Shen
mish@es.aau.dk
+45 42591688
https://vbn.aau.dk/da/persons/mish

HIGHLIGHTED AAU RESEARCH GROUPS
AI RF Sensors

AREA OF EXPERTISE
Experimental datasets (e.g. RIS, active phased arrays, power amplifiers, filters)
AI for communication systems (e.g. sensing and localization, AI for satellite communication, AI aided generative design of RF hardware)
Healthcare (e.g. wound infection detection, bone fracture monitoring, nano robot for cancer)
Nano robots and AI for targeted cancer treatment