

AARHUS INSTITUTE OF ADVANCED STUDIES
AIAS ANNUAL REPORT
2019/20





Photo: Ida Marie Jensen.

► CONTENTS

- 4** Why AIAS? The Director's Account 2019-2020
- 6** Advanced Studies and the Life of the Mind
- 8** Interdisciplinary Perspectives
- 10** Disentangling the causes of cardiovascular diseases in obese patients to develop new therapies
- 12** Cultural heritage protection – Investigating the illicit trade of antiquities
- 14** Studying the European Single Market in Turbulent Times
- 16** Wastewater treatment – Using recycled agricultural biomass in constructed wetlands for sustainable high-rate nitrogen removal
- 20** Fellows
- 36** Fellows' Publications and Activities
- 48** Events at AIAS
- 54** Organization, staff and funding

Published by Aarhus Institute of Advanced Studies

AIAS Editor: Lena Bering, AIAS

Graphic Design: Hreinn Gudlaugsson, AU

Photo: AU Events and External Relations

Print: vahle+ nikolaisen

ISBN: 978-87-92829-27-6

ISSN: 2246-6533



WHY AIAS? THE DIRECTOR'S ACCOUNT 2019-2020

Each year, a large number of researchers throughout the world apply for fellowships at the Aarhus Institute of Advanced Studies. The total number of applicants since our first COFUND Marie Skłodowska-Curie fellowship program started in 2014 is now close to 1,800. The applications we receive contain, as most other applications for fellowships or research grants, a project description and the applicant's CV. The quality of both projects and applicants is generally overwhelming, and we are sad that we are only able to award fellowships to less than 8% of the applicants.

In addition to describing their projects and their CV's, applicants are also asked "Why AIAS?". For us at AIAS, this provides an invaluable insight into the mindset and challenges of modern researchers. What is on their mind, what are their concerns, and why choose an Institute of Advanced Study, rather than a traditional university department?

THE DRIVE OF JUNIOR FELLOWSHIP APPLICANTS

The answers to the "Why AIAS" question depend to some extent on the seniority of the applicants. For the junior fellowship applicants, who have obtained their PhDs within 8 years, the ability to work in a truly inter- and multidisciplinary research environment is a very strong driver. As one applicant puts it, it is the "pursuit of intellectual engagement beyond disciplines". Interestingly, most of the applicants who emphasize interdisciplinary research link this closely to the development of new research directions. In other words, if you wish to advance research within biology, political science, physics, sociology, philosophy, etc. you must apparently first leave your field and explore its outskirts - and AIAS is indeed a well-suited place to do so.

In addition to breaking out from the rules and norms of the traditional research fields, junior fellows state that AIAS will be an ideal place for them to develop and hone their independent research profile. As many young scientists, perhaps mostly in the technical and natural sciences, often do their graduate and post-doctoral work in large research groups, their scientific contributions face the risk of being overshadowed by for example the group leader or just by the fact that there are numerous co-authors on their scientific papers. At AIAS, they are given the opportunity to step out of the shadows of their research pasts and take their first step as independent research leaders, and thereby paving their way towards a permanent research posi-

tion at a university. The "Why AIAS?" is, thus, very often answered with a clearly stated career ambition; to provide the academic freedom and intellectual space to lay the foundation for a permanent research position.

SENIOR FELLOWS' MOTIVATION

Interestingly, the main motivation for the applicants for senior fellowships seems to be to escape from the everyday life of exactly the professorships that the younger fellows are striving for! It seems like a paradox, that AIAS is actually providing space for both those who are working hard to become professors and, at the same time, those who are trying to be relieved from the implicit 'burdens' of modern academic life. The senior fellows are thus seeking coherent and uninterrupted time to write up a book, finish analyzing large sets of data or preparing review articles or other academic endeavors that require time, and lots of it.

As director of AIAS, it is my privilege to both ask the applicants the question "Why AIAS?" and to read the many different accounts. The answers we receive also provide a set of high expectations that we at AIAS strive to live up to, to create an optimum intellectual workspace for both junior and senior fellows.

TABLES ARE TURNED - A MUTUAL BENEFIT?

The question "Why AIAS?" is actually also put to AIAS, namely by the university senior management. Following an external evaluation in 2017, a new governance structure in 2019, and the pending question, "What should happen to AIAS after 2022?", we have repeatedly been asked: "Why AIAS, and how does Aarhus University benefit from having an Institute of Advanced Study?"

Well, we know that AIAS brings an exceptional number of talented international researchers to Aarhus, and we know that AIAS is the melting pot where they meet Aarhus University and establish long lasting collaborations. Some have chosen to stay on in Denmark, and by staying in contact with these fellows, we can see how they excel. Others return to the international academic world, but retain their connections to Aarhus University through networks created during their fellowships at AIAS. If we ensure a strong academic connection to Aarhus University, we also ensure that what is good for the fellows at AIAS is also good for Aarhus University.



“

We know that AIAS brings an exceptional number of talented international researchers to Aarhus, and we know that AIAS is the melting pot where they meet Aarhus University and establish long lasting collaborations.



Photo: AIAS Acting Director Søren Keiding at the weekly AIAS Monday Lunch in the Hall. By: Melissa Bach Yildirim.

ADVANCED STUDIES AND THE LIFE OF THE MIND

By: Anne Marie Pahuus, philosopher, and vice-dean for research, the Faculty of Arts, Aarhus University

THE USE OF REFLECTION

Understanding the life of the mind in psychological terms is characteristic of our time. We talk, for instance, about children, who are resilient, or particularly sensitive, about adults, who are either introvert or extrovert. All of this is an attempt to describe, by way of psychological concepts, the ways in which people cope with situations and deal with things, whether they take things personally, thrive best in social exchange situations, or prefer thoroughness before making final decisions about things. However, what may be more important than these psychological scales, ranging from robust to sensitive and from extrovert to introvert, is to understand the life of the mind as a life of thinking, willing, and judging. And this again is of course a life made up of thoughts, emotions, and judgments, and therefore belonging to a life of someone's mind, yet related to the situation and the world on which we reflect.

ACCELERATION AND TIME

Reflection is much needed in times that are deeply influenced by what the German sociologist Hartmut Rosa calls 'acceleration' - in reference to the tempo of modern social life evident in transportation, communication, and production, i.e. the technological changes that should increase an individual's free time end up increasing the pace of life.

Reflection – including shared reflection on urgent matters, such as climate change and social transformation – should be dear to us, particularly at universities. And it should not be ousted by the pace of a working life with interesting and important tasks, yet still a busy life full of tasks. The life of the mind is, first and foremost, a way in which we point out the fact that there is a time for action, and a time for reflection. This does not mean that we do not reflect in action, but that not all thoughts necessarily lead to decisions or actions, i.e. a life dedicated to theories, studies, and shared reflection. The result and value of this life is nothing but thinking.

TIME FOR STUDIES IN ANCIENT GREECE

AIAS is intended as a centre for advanced studies, i.e. studies when they are refined, and pursued to the highest level. Studies do not characterize a personality but a situation, in which you can be fortunate to find yourself, because you were given the opportunity, and because reflection is worshipped. In ancient times, the situation is what was referred to as *skholé* (σχολή), hence the term 'school' in English. *Skholé* means undisturbed or free from obligation, i.e. it characterizes the situations where you withdraw from the parts of your life that demand action. It is the free life, leisure time, quiet time – the Romans translated it into *otium*, but they may well have been more preoccupied with old age than with youth. They even contrived an

“

AIAS is intended as a place somewhat outside of the busy and important life of the university. AIAS is *skholé* by definition. This does not mean that it is a place best suited for the introvert, well-reflected, and quiet people. Many thoughts – and shared thoughts on common themes – are articulated and refined in dialogues. Yet, it means that people are put in a situation suitable for free time.



Photo: Vice-dean of the Faculty of Arts Anne Marie Pahuus. By: Lars Kruse.

entire counsel for the wisdom and counselling of the ageing, the senate. However, *skholé* denotes the time you have to yourself and to reason with peers, where you are uninterrupted and unobligated. School is a kind of suspension from the world of moral action. The world of moral action is a world, where you have to be up to the task and acting responsibly, by stepping in, lending a hand, and assisting when needed. Those, who attend school, living a life of uninterrupted *skholé* are not free from responsibility, however, they have been permitted to arrange themselves in a world where they are not expected to be prepared to intervene in terms of action. Even philosophy is a *skholé* activity in the sense that it does not need to result in something specific. It is a free time activity, which is made available to a group of people, provided that they can depend on someone else to act, while they are granted the opportunity to devote their time, and having the time, for hours and hours of reflection.

THE RARE MOMENTS IN LIFE

AIAS is intended as a place somewhat outside of the busy and important life of the university. AIAS is *skholé* by definition. This does not mean that it is a place best suited for the introvert, well-reflected, and quiet people. Many thoughts – and shared thoughts on common themes – are articulated and refined

in dialogues. Yet, it means that people are put in a situation suitable for free time. Teaching and supervising responsibilities are consciously lifted off peoples' shoulders. Most people enjoy this responsibility, if they are employed at a university. These tasks are not burdens; by contrast, they are what we care about in our working lives at the university. However, they also entail a responsibility for other peoples' lives, implying that most often you prepare for your teaching first, and then sit down and write, if time allows. You are action demanded by your students who deserve good teaching.

However, when opening up to reflection, the way is paved for a quite different frame of mind in which you may read, discuss, contemplate, dive deeper, remember, recall, imagine, try out new ideas, and curiously be led forward, advance and keep advancing for even longer, and more continuously, than your usual opportunity to do so. Forward without pace, but not without purpose. The life of the mind equals studies where you advance by dwelling in absent realities; let them become present and alive, when engaging in thinking and dialogue. ■

INTERDISCIPLINARY PERSPECTIVES

By: Cici Alexander, AIAS Fellow and Jennifer Galloway, AIAS Former Fellow, Research Scientist at Geological Survey of Canada, Canada

Putting their minds together, Fellows Jennifer Galloway, a palaeontologist from Canada and Cici Alexander, a geospatial analyst from India, reflect on the complexity of the interdisciplinary meeting at AIAS.

IT ALL STARTED WITH THE...

Big Bang. Neutron Stars. Parallel Universes. Art. Destiny. ... Conversations with fellow Thomas Tauris at AIAS Monday Lunches could move from one topic to another, but were definitely inspiring. So, it didn't come as a surprise when Thomas sent an invitation to interested Fellows to meet and discuss the possibility of organising a workshop on 'The Origin and Destiny of Life' at AIAS. We met in Thomas's office and saw that Sâmia Joca had also responded to the invitation. Thomas is a theoretical astrophysicist from Denmark, Sâmia is a behavioural pharmacologist from Brazil, Jennifer is a palaeontologist from Canada and Cici is a geospatial analyst from India. Although it would have been good to have representation from humanities/social sciences, we thought that the composition of the group was sufficiently diverse.

We agreed that despite the many opportunities offered by AIAS for interdisciplinary collaborations, we were often caught up in our own little worlds, projects and perceived disciplinary constraints. Although Monday seminars suck us into a different 'universe' and joint research presentations offer us a glimpse for 6 short minutes into the passions and interests of other Fellows, a platform for interdisciplinary discussions on a particular topic was lacking. Thomas had already discussed this with Morten Kyndrup, our former director, and had taken the initiative to try and fill this gap.

WHAT IS LIFE?

'How did life originate? Does life exist elsewhere in the Universe? Evidence for and against a divine Creator; Can our planet survive population development? Can different religions co-exist side by side? Will the spread of nuclear weapons lead to Ragnarok? Can technological development save humanity or will it destroy us? And what does it do to our brains? Can we

cope with the huge flow of information now, and in the future?' These were some of the questions that Thomas wanted to discuss at the workshop.

We wanted to provide a 'safe space' where Fellows could share ideas and perspectives from their respective disciplines, and cultures. Perhaps this would lead to joint projects, inspirations, and strengthen the AIAS community. A one-day internal workshop on 'The Origin and Destiny of Life' was decided on, and held on 29 November 2019. Nine Fellows, including our new Director, Søren Rud Keiding, shared their views on the topic of Life, and more attended the talks and participated in the after-lunch discussions.

SIX BLIND (WO)MEN AND AN ELEPHANT

AIAS has managed to attract researchers from diverse disciplines from all over the world, and in doing so, provide Fellows with an environment that supports and encourages interdisciplinary collaborations. But often, like the blind men in the Eastern parable, who encounter an elephant for the first time, we try to understand the 'truth' from the confines of our disciplines and entrenched perspectives. We touch the side, tusk, trunk or leg of an 'elephant' and feel confident that an elephant is like a wall, a spear, a snake or a tree. In addition to the workshop, we started thinking of a Fellows' magazine to bring together these disparate parts of the Elephant to help us to see the whole. At the workshop, we presented the idea of a magazine (*Interdisciplinary Perspectives*) written by current and former AIAS Fellows. And the first 'elephant' would be 'LIFE', the theme of the workshop.



IPERSPECTIVES – A FELLOWS' DRIVEN E-MAGAZINE

Most Fellows treasure their time at AIAS and are keen to maintain their connection, which was evident from the responses to our invitation to former Fellows to contribute to the rechristened *iPerspectives*. Five current and four former Fellows contributed to the first issue. None of us are permanent at AIAS, and new Fellows may not be interested in, or may be unaware of, initiatives by former Fellows. We are currently putting together the second issue of *iPerspectives*, including new editorial team members. More information on the interdisciplinary workshop and *iPerspectives* is available at aias.au.dk/research/iperspectives-magazine/.

The one-day workshop on *The Origin and Destiny of LIFE* was an inspiring way to spend the day. The talks offered diverse perspectives on this truly inter-disciplinary subject. The discussions that followed were equally inspiring, and offered an opportunity for open discussion and questions. We hope that the LIFE workshop can set the stage for future workshops where similar interdisciplinary subjects can be openly deliberated from the various disciplines, perspectives, and backgrounds of Fellows. ■

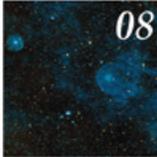
iPerspectives

An interdisciplinary bi-annual magazine edited by Fellows at AIAS, with contributions from both current and former AIAS Fellows.

> aias.au.dk/research/iperspectives-magazine

ISSUE 1-2020

CONTENTS

- | | | |
|---|----|--|
|  | 04 | Foreword
<i>Søren Rud Keiding</i> |
| | 07 | Editors' Note
<i>Cici Alexander, Jennifer Galloway, Sâmia Joca, Thomas Tauris</i> |
| | 08 | Life in Space
<i>Thomas Tauris</i> |
|  | 12 | The Destiny of Humankind
<i>Christos Tsirogiannis</i> |
| | 15 | A Brief History of Geological Time
<i>Jennifer Galloway</i> |
| | 22 | Being Human
<i>Samuel McCormick</i> |
|  | 24 | Maths Actually
<i>Doug Speed</i> |
| | 26 | The Origin or Destiny of Life, or what does it mean to be alive?
<i>Joshua Nash</i> |
| | 29 | Life: an ongoing geological process
<i>Alfonso Blázquez-Castro</i> |
|  | 34 | How clocks shape our lives
<i>Lisa M. Wu</i> |
| | 38 | Temporal Entanglements: How Pasts, Presents, and Futures Interlock in Niger
<i>Adeline Masquelier</i> |

DISENTANGLING THE CAUSES OF **CARDIOVASCULAR DISEASES** IN OBESITY TO DEVELOP NEW THERAPIES

By: Joanna Kalucka, AIAS Fellow and Assistant Professor, previously VIB Center for Cancer Biology, Belgium

Well-functioning blood vessels are critical for human health. During obesity, the blood vessels become dysfunctional and contribute to a cascade of events that are detrimental to our health. In her project at AIAS, fellow Joanna Kalucka is mapping the processes underlying the pathfinding of blood vessels during tissue expansion to address one of the growing worldwide health problems.

While single cell organisms, as for instance: an amoeba, rely on the diffusion of oxygen and nutrients to maintain their metabolic needs, multi-cellular organisms are equipped with an internal circulatory system – a vascular network – which can distribute oxygen and nutrients throughout the body. The importance of the vascular system was acknowledged already by Greek pioneers like Aristotle. Although a tremendous progress has been made in the field of blood vessel formation, *angiogenesis* (“*angio*” in Greek meaning “vessel,” and “*genesis*”, an origin), the details on the processes underlying the pathfinding of blood vessels during tissue expansion remain not fully understood.

“

It was important to me to execute this ambitious research proposal within a stimulating, international and open environment, to maximize the chances of achieving success. AIAS offers a multidisciplinary research platform and creates a unique opportunity for researchers to gain freedom and independence to further advance their own ideas.

FOCUSING ON A WORLDWIDE HEALTH ISSUE

In adults, blood vessels remain inactive and the vascular network will only expand when it is triggered by growth factors. For instance, during the expansion of every tissue including fat tissue, blood vessels also grow in order to provide oxygen and nutrients to the newly generated cells. When food intake is uncontrolled, fat cells start to grow and either increase their cell size and/or the cell number. When the growth of fat cells exceeds the growth of blood vessels, the tissue becomes deprived of oxygen, which can further trigger inflammation and a cascade of events that are detrimental to our health. Therefore, obesity is a growing worldwide health problem, and as its occurrence increases, so does the burden of suffering from obesity-associated diseases like type 2 diabetes, cardiovascular diseases, and cancer.

A BLOOD VESSEL BIOLOGY SPECIALIST IN AN MULTIDISCIPLINARY SETTING

Numerous studies have shown that dysfunctional blood vessels contribute to the development – “the pathogenesis” – of obesity. Consequently, investigating the precise relationship between obesity and vascular dysfunction is important to define the pivotal pathophysiological aspects of the disease, with potential therapeutic implications. Based on my personal interest and expertise within the field of blood vessel biology, I applied to Aarhus Institute of Advanced Studies (AIAS) and proposed a project to examine these aspects of vasculature in obese patients.

It was important to me to execute this ambitious research proposal within a stimulating, international and open environment,



Photo: AIAS Fellow Joanna Kalucka in the lab at Biomedicine at Aarhus University. By: Lars Kruse.

to maximize the chances of achieving success. AIAS offers a multidisciplinary research platform and creates a unique opportunity for researchers to gain freedom and independence to further advance their own ideas. It is difficult to imagine a better place than AIAS and the Department of Biomedicine at Aarhus University to fulfil the aims of the proposed research plan.

A WARM HUMAN WELCOME AND STATE-OF-THE-ART TECHNOLOGIES

The warm welcome, mentorship and support that I have received from my AIAS and departmental colleagues: Rasmus O. Bak (AIAS-COFUND Fellow), Martin Thomsen and Jens Leipziger (Jens Christian Skou Fellows at AIAS) have facilitated my tran-

sition to a new role of group leader. Thanks to the support from the Steno Diabetes Center and Aarhus University Hospital, I have access to human material that will allow me to analyze the blood vessels from lean compared to obese patients in greater detail. Using the *state-of-the-art* technologies available within Aarhus University, my group aims to disentangle the causes of cardiovascular disease in obesity and develop new therapies for affected patients. ■

CULTURAL HERITAGE PROTECTION

– INVESTIGATING THE ILLICIT TRADE OF ANTIQUITIES

By: Christos Tsirogiannis, AIAS Fellow and previously Antiquities Unit, University of Cambridge, UK

Fellow Christos Tsirogiannis is AIAS's forensic archeologist. In his research, he is investigating the trade of antiquities and the trafficking of ancient artefacts, and seeks to develop a new method for identifying these objects to protect our cultural heritage.

My research explores the ways in which international trafficking networks supply looted, smuggled and stolen antiquities to their various clients. Case-by-case, I am mapping the paths that are used and record the individuals (looters, middlemen, dealers, collectors), companies (auction houses, galleries) and institutions (museums) participating in this criminal trade. My aim is to help the authorities to understand the problem better on an international scale in order to protect what has not yet been looted and to help the market, the museums and the private collectors to become more ethical.

COLLABORATION BETWEEN ACADEMIA, THE POLICE, COURTS AND CULTURAL AUTHORITIES

I have the privilege to be the only academic who has official access to photographic and documentary archives confiscated from dealers, due to my cooperation with the Italian and Greek police, judicial and cultural authorities since early 2000s. As a result, I have identified more than 1,100 illicit antiquities so far, contributing to the repatriation of several dozens to various countries such as Greece, Italy and Egypt. However, the challenge for me has always been how to enable other researchers to identify unprovenanced or illicit antiquities without the use of the confiscated archives – a challenge that I will address in my AIAS project.

Before a Christie's auction in London in October 2015, I demonstrated that the names of illicit dealers were disguised and/or omitted in the provenance of a certain antiquity on sale. As a

result, this antiquity was withdrawn before the auction. Although there is still no conclusive evidence of its illicit origin, the auction house has thereby silently admitted that the object is problematic, at the least, by this withdrawal.

DEVELOPING NEW IDENTIFICATION METHOD

Last October with my commencement of my AIAS fellowship, AIAS and Aarhus University have provided me with the chance to focus on creating a method with which potentially illicit antiquities could be identified not from the confiscated archives, but, rather, from the publicly available evidence that the market itself has produced. Although I was delayed by the COVID-19 crisis that is affecting us all, during the phase of gathering the needed material, I have already identified eight similar cases, multiplying the original results.

Additionally, since October 2018, I have been contributing to research on ways in which fragmented Apulian vases were trafficked, before their repatriation to Italy. The relevant material is on loan to the Aarhus University Museum of Ancient Art (Figs. 1-2), and this unprecedented project is run by Associate Professor and Director of the museum Dr Vinnie Nørskov, to whom I am particularly grateful to collaborate with. ■



Photo: Dr Christos Tsirogiannis examining the fragmented repatriated Apulian vases at the Aarhus University Museum of Ancient Art. © Dr Vinnie Nørskov and the Aarhus University Museum of Ancient Art.

“

I have identified more than 1,100 illicit antiquities so far, contributing to the repatriation of several dozens to various countries such as Greece, Italy and Egypt. However, the challenge for me has always been how to enable other researchers to identify unprovenanced or illicit antiquities without the use of the confiscated archives – a challenge that I will address in my AIAS project.

STUDYING THE EUROPEAN SINGLE MARKET IN TURBULENT TIMES

By: Sandra Eckert, AIAS Fellow and Associate Professor, Goethe University Frankfurt – Main, Germany

Political scientist Sandra Eckert takes us on a journey through the European Single Market. Her research agenda has been dramatically altered during the COVID-19 pandemic.

When I joined the wonderful Institute of Advanced Studies in Aarhus (AIAS) as of October 2019, my plan was to embark on an intellectual journey that would help me understand how consumers perceive of the European Single Market as the core of the European integration process. Trained as a political scientist with a specialization in European politics, I had studied in detail how European rules governing the common market had been produced, fought through politically, and implemented. While I had acquired a solid understanding of how all of this happened in a rather complex, multi-layered institutional context, I remained puzzled by the fact that radically different images of these European rules coexisted.

DISPARATE IMAGES OF EUROPEAN RULES

Several disparate images occur. First, one where people were bullied by an arrogant Brussels-based elite, producing unneeded and unsolicited rules. Second, one presenting Brussels as a bubble of powerful business lobbyists, as a Europe of corporations. Third, a positive image portraying the supranational polity as a Europe that protects, in areas such as consumer rights, data protection or environmental policy. This is what I was after: Why would Europe have such a different meaning to different people?

RESEARCH AGENDA ALTERED BY THE PANDEMIC

The research goal was set, and by the spring of 2020 I was ready to throw myself into fieldwork. My fellowship at AIAS gave me the time and resources to develop the skill set necessary to conduct focus group interviews, a qualitative technique which was new to me. In March 2020, I was invited as a guest professor to SciencesPo Lyon in France, where I wanted to build up a local network of researchers and have access to the focus group participants required to implement this type of research. By the time I reached the city, Europe was already overshadowed by the outbreak of COVID-19. Most countries in Europe subsequently moved towards a national lockdown and border closures, and my stay in France ended there.

It was not only that the realisation of my research agenda came to an abrupt halt with Europe being hit by the pandemic. Even more so, it was substantially altered. The functioning of the Single Market in many ways was suspended in this turbulent time. New and fascinating research questions arise from this dramatic change. How should the Single Market agenda facilitate economic recovery? To what extent shall the Single Market that we reconstruct be a green one? Holding a fellowship at AIAS allows me to reflect upon these questions and reposition my research agenda. ■

DRAWING EUROPE TOGETHER

18 freelance illustrators have put their enthusiasm, ideas and concerns about Europe into art works at the initiative of Pulse of Europe and Markus Weber, Moritz Verlag Frankfurt am Main. The art works, "Drawing (for) Europe", are now on an exhibition tour through major European cities, and on 17 September 2020, the drawings will be exhibited in the Hall of AIAS, accompanied by a panel discussion around Europe

Upcoming exhibition and panel discussion

Date: 17 September 2020



and its role – that is definitely more relevant than ever in times of a pandemic. The exhibition and panel is organised by Sandra Eckert.

For the program, please visit:

aias.au.dk/events/drawing-europe-together



Photo: Sandra Eckert in her office at AIAS.
By: Lars Kruse, AU Foto.

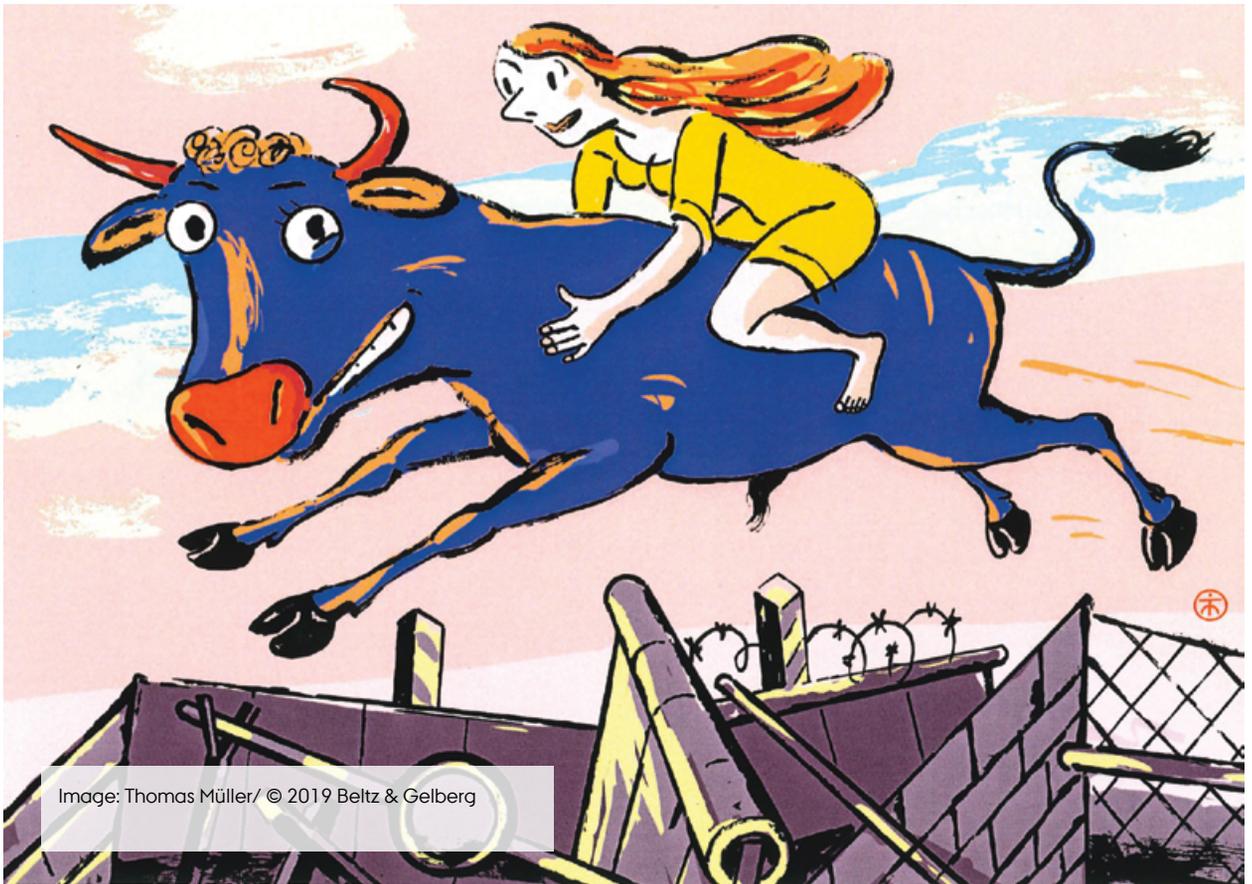


Image: Thomas Müller/ © 2019 Beltz & Gelberg

WASTEWATER TREATMENT – USING RECYCLED AGRICULTURAL BIOMASS IN CONSTRUCTED WETLANDS FOR SUSTAINABLE HIGH-RATE NITROGEN REMOVAL

By: Shubiao Wu, AIAS Fellow and Associate Professor, previously China Agricultural University, China

Constructed wetlands are a sustainable and cost-efficient way of treating wastewater. During his 3-year fellowship at AIAS, Dr Shubiao Wu has been working intensively on developing new methods for recycling agricultural biomass in constructed wetlands for wastewater treatment.

Due to the intensive urbanization and rapid industrialization, the issue of poor water quality has been getting increasing attention worldwide, in recent years. Particularly, improper treatment of various drainages with low carbon/nitrogen ratios, such as agricultural runoff from highly fertilized areas, has become a serious concern.

THE KIDNEYS OF THE EARTH

Constructed wetlands are environmentally sustainable engineered systems that can successfully polish numerous types of wastewater, such as domestic sewage. However, an effective and sustainable nitrogen removal, particularly from carbon-limited wastewaters, as for instance agricultural runoff, is identified as one of the major problems for a widespread application of the wetland technology.

Nitrification and denitrification are considered to be the key nitrogen removal processes via biodegradation in constructed wetlands. Despite that, the amount of internal and/or external carbon sources from rhizospheres and influents is not enough to drive the significant denitrification processes in constructed wetlands. The addition of chemical organic carbon sources is necessary to complete denitrification, but usually it increases the operational costs, and the risk of secondary pollution from overdosing.

ENHANCEMENT OF NITROGEN REMOVAL

In my AIAS project, in collaboration with Professor Hans Brix from the Department of Biology at Aarhus University, and Associate Professor Haiming Wu from Northwest A&F University, China, we have explored the feasibility of enhancing the nitrogen removal performance by applying typical agricultural biomass, such as wheat straw, apricot pit, and walnut shell, as carbon sources in constructed wetlands.

We have conducted a series of leaching experiments by exploiting advanced technologies as fluorescence excitation-emission

spectrophotometry and parallel factor analysis combined with UV-Visible spectroscopy. The results have revealed that wheat straw material had the highest capability of releasing carbon. The release of the dissolved organic matter from wheat straw was much faster than that from apricot pit and walnut shell. This implies that wheat straw has a shorter functioning time in constructed wetlands.

A COMPLICATED AND MOSAIC ENVIRONMENT

Moreover, constructed wetlands are also considered an important source of nitrous oxide (N₂O) emission due to the incomplete nitrification and denitrification processes. The variation of nitrous oxide emission in different constructed wetlands added with different agricultural biomass materials was also investigated in our project.

The current results have shown that the experimental wetland systems with the addition of agricultural biomass emitted higher nitrous oxide than the control system (without adding any biomass materials). Since the release and accumulation of nitrous oxide in the complicated and mosaic environment of constructed wetlands involves multiple processes, the current results are still not providing a full understanding of the mechanisms at work, so further research is still needed.

DEVELOPMENT OF A HIGHLY PROSPECTIVE METHOD

My project at AIAS has demonstrated the mechanism of an intensified nitrogen removal process in wastewater treatment by using new agricultural biomass-based constructed wetlands. The application of this method is highly prospective for treating low carbon/ nitrogen wastewater and has several advantages, such as using materials that are readily available, economic sustainability, and better treatment efficiency. Some potential issues associated with this technology, including the lifespan of the agricultural wastes in constructed wetlands, should be further considered. ■

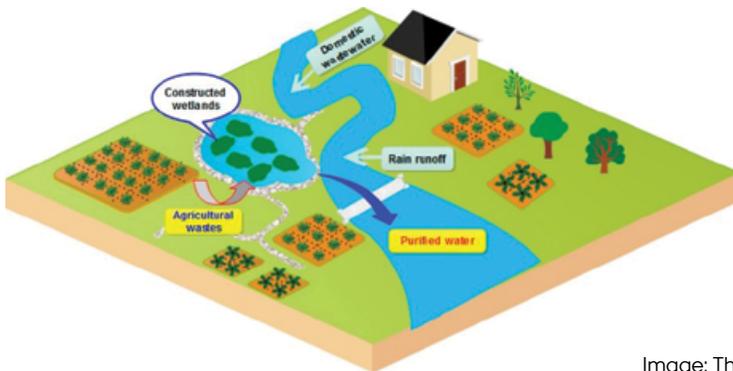


Image: The process of constructed wetlands. By: Shubiao Wu.

“

My project at AIAS has demonstrated the mechanism of an intensified nitrogen removal process in wastewater treatment by using new agricultural biomass-based constructed wetlands. The application of this method is highly prospective for treating low carbon/ nitrogen wastewater and has several advantages.



Photo: Shubiao Wu
By: Anders Trærup, AU Foto.

FELLOWS 2019-2020



In the academic year of 2019-20, AIAS has hosted **41 fellows** who have arrived at AIAS from **35 different research institutions** from around the globe. In this group of fellows, more than **36 different academic research areas** and **20 nationalities** are present, shaping the international and multi-disciplinary environment of AIAS.


ANNA B. NEUHEIMER

AIAS COFUND Fellow

Associate Professor, Department of Oceanography, University of Hawaii at Manoa, USA

Area of research: Marine Ecology

Project title: 'Timing is everything: Developing a mechanistic understanding of fish timing strategies and their role as conduits of climate change (FutureFish)'

Timing is everything in seasonal environments, with a predator's success depending on how they match their prey in space and time. This is thought to be particularly true for fish early life stages, where limited parental investment means survival depends on how well larvae match food timing. I have developed a "biological theory of relativity" that characterizes relevant biological time-scales to (i) estimate how fish timing controls abundance, (ii) estimate the adaptive potential of fish timing, and (iii) predict the influence of timing on future fish production.


BOGDAN C. IACOB

AIAS COFUND Fellow

Assistant Professor, Institute of History, Romanian Academy, Romania

Area of research: European History in Global Context

Project title: 'Balkan Imaginations, UNESCO, and the Global Cold War (1960s-1990s)'

I explore the cultural and political emancipation of Southeast Europe within global institutional and symbolic hierarchies in times of decolonization and Cold War. My research focuses on the contributions of Balkan scholars to projects created by the UNESCO aiming to democratise world cultural representations. I connect these academic transnational engagements to agendas of regional and European cooperation as well as to local governments' relations with the Global South. By connecting multiple, intersecting geographies of humanities and politics, I am reconstituting the Balkans' trajectories of Europeanization and globalization before 1989.


CHRISTIAN BENDIXEN † (Deceased on 28 April 2020)

Jens Christian Skou Fellow

Professor, Department of Molecular Biology and Genetics, Aarhus University, Denmark

Area of research: Molecular Genetics

Project title: 'Epigenetics and Imprinted loci in Amyotrophic Lateral Sclerosis'

The main part of Bendixen's research was within the area of genetics, with projects that have aimed at identifying and characterizing the molecular basis causative of disease resistance, genetic defects and other phenotypic traits. The toolbox that Bendixen has used included large-scale association studies, genome sequencing, gene-expression analysis and epigenetics. Bendixen has worked on the development of new ways to produce transgenic animals that has led to the generation of porcine animal models for neurodegenerative diseases that was a major research focus for Bendixen during his time at AIAS.



CHRISTINA KKONA

AIAS COFUND Fellow

Associate Professor, previously Department of English, Hellenic American University, Greece

Area of research: Comparative literature and Cultural Theory

Project title: 'The unexpected: toward a politics and aesthetics of discontinuity'

Examining different literary and cinematic works, the project challenges dominant discourses depicting the past and the present in terms of a future proclaimed as determinate, such as the promissory political narratives of a better world displaced onto a continually deferred future. Alternatively, a politics that is no longer a future-oriented promise, but a present-oriented action embracing unpredictable events is theorized. The project approaches social exclusion from the perspective of temporal consciousness and posits the unexpected as the locus from which the present is organized as space-time of openness to the other.



CHRISTOS TSIROGIANNIS

AIAS COFUND Fellow

Associate Professor, previously Antiquities Unit, University of Cambridge, UK

Area of research: Forensic Archaeology

Project title: 'Monitoring the Trade in Illicit Antiquities'

By monitoring the publications and websites of companies proven to have handled illicit archaeological material from Europe, North Africa and the Middle East, I am recording the appearances of cultural objects in the market over the last decade. Comparing such records with 'provenances' given at the latest point of sale, significant omissions become apparent, and patterns in the collecting histories of unprovenanced/ illicit material. All these are, importantly, proofs of malpractice created by the market itself and, through them, I am mapping the interactions of those involved in international antiquities trafficking.



CICI ALEXANDER

AIAS COFUND Fellow

Associate Professor, previously Department of Life and Environment Sciences, Bournemouth University, UK

Area of research: Remote Sensing

Project title: 'Innovative remote sensing techniques for developing green infrastructure strategies to support biodiversity conservation and carbon sequestration'

My project at AIAS will use innovative, and complementary, remote sensing techniques for assessing and monitoring green infrastructure. Airborne Laser Scanning, using the technique of Light Detection and Ranging (LiDAR), has advantages over other remote sensing techniques for characterising the three-dimensional structure of vegetation. The main objectives are to develop indices for the quality of urban green networks, methods for the rapid assessment of changes in woody vegetation cover and for the identification of forests of High Nature Value, using multi-spectral imagery in addition to the Danish national LiDAR datasets.



CRISTINA ESTEVA FONT

AIAS COFUND Fellow

Postdoc, previously University of California – San Francisco, USA

Area of research: Health and medical sciences

Project title: 'Targeting prostaglandins in chronic kidney disease'

PGE2 regulates the kidney function through its four receptors: EP1-EP4. The main aim of this project is to elucidate the role of PGE2 receptors on chronic kidney disease (CKD). Since I started my AIAS fellowship, I have been developing a novel knockout mouse model where the EP4 receptor is deleted specifically in the kidney. Ongoing I am validating a CKD model using adenine on the diet for 4 weeks that causes kidney fibrosis. This model will be used on the EP knockout mice, once they are fully characterized.



DENNIS KONNERUP

AIAS COFUND Fellow

Assistant Professor, previously School of Agriculture and Environment, University of Western Australia, Australia

Area of research: Plant Physiology

Project title: 'Surviving saline floods – salinity and submergence tolerance of wild rice'

Some plants, e.g. rice and floating sweet-grass, possess hydrophobic leaves that retain a thin layer of air when submerged. This air layer is called a gas film, and the aim of my project is to elucidate how this mechanism enhances oxygen and carbon dioxide exchange with the floodwater under different floodwater conditions. In my project, I will use species of wild rice as these possess higher genetic diversity compared to cultivated rice. Submergence experiments will be conducted to assess how the species differ in their ability to retain gas films under water, and studies with microelectrodes will be used to examine how the internal aeration of the plants depends on the gas film retention time.



DOUG SPEED

AIAS COFUND Fellow

Assistant Professor, previously UGL Genetics Institute, University College London, UK

Area of research: Genetics

Project title: 'Developing statistical tools to analyze large-scale genetic datasets and improve our understanding of complex diseases'

There is an ever-increasing amount of genetic data available, but we lack tools to efficiently analyze these data; my work focuses on developing the statistical tools we require. One of my focuses is personalized medicine: the high heritability of many human diseases means that in theory it should be possible to accurately predict an individual's risk of disease from their DNA; my novel methods will help make this a reality. I will make my tools freely available to other researchers through my software package LDAK (www.ldak.org).



FREDRIK CHRISTIANSEN

AIAS COFUND Fellow

Assistant Professor, previously School of Veterinary and Life Sciences, Murdoch University, Australia

Area of Research: Bioenergetics/ Ecophysiology

Project title: 'Understanding the population consequences of human disturbance on baleen whales'

With human-wildlife interactions becoming increasingly frequent around the world, I am interested in how human disturbance can affect wildlife populations. In particular, I am interested in how changes in individual behaviour (caused by human disturbance) can lead to changes in energy consumption and expenditure, and how this can influence an animal's body condition, survival and reproductive success, and ultimately population dynamics. Focusing on baleen whales, I use a combination of research techniques, including drones and small archival tags, to determine these relationships.



HALE GÜNEY

AIAS COFUND Fellow

Postdoc, previously Institute of History, Dept. of Ancient History, University of Cologne, Germany

Area of research: Ancient History, Ancient Economy, Ancient Numismatics, Greek Epigraphy

Project title: 'The Economy and Connectivity of Central Anatolia during the Roman Period'

The issue of the economic behaviour of ancient cities has been a controversial subject within the field of ancient economics. In the past three decades, only a small number of ancient cities have been studied to question the old and new approaches and determine the dynamics of the urban economy in the Roman World. Therefore, this project intends to give an account of the old and new approaches to the ancient economy to delineate an appropriate perspective on the cases of the Galatian cities in Central Anatolia during the Roman period.



HERMAN M. SCHWARTZ

AIAS COFUND Fellow

Professor, Department of Politics, University of Virginia, USA

Area of research: Political economy

Project title: 'Patently Unequal: Intellectual Property, Inequality and Secular Stagnation in the Information Economy'

I examine the relationship between changes in corporate strategy and structure and the rise of anti-establishment politics in the rich OECD countries from the 1960s to the 2010s. Firms shifted from vertically integrated oligopolies controlling physical capital to disintegrated corporate structures with monopolies based on intellectual property rights (patent, copyright, trademark and brand). This shift concentrated profits and high quality employment into a handful of firms, causing slower growth and less social mobility. The firms capturing the bulk of profits don't invest; firms that might invest are starved of profits.



ISABELLE TORRANCE

AIAS COFUND Fellow

Associate Professor, previously Department of Classics, University of Notre Dame, USA

Area of Research: Classical Reception and Irish Studies

Project Title: 'Greek Tragedy and Irish Politics'

My research at AIAS demonstrates how Irish politics are deeply embedded in what may appear to be simple retellings of Greek tragedy over the course of the 20th and 21st centuries, from the beginnings of the Irish independence movement to current Brexit concerns over the Irish border. This year, I have been awarded a Consolidator Grant from the ERC to fund a further five years of research with a team to examine Irish appropriations of classical models more broadly from the medieval period to the present day. The project is hosted in the English Department at Aarhus University where I was appointed a Professor from 1 October 2020.



IWONA JANICKA

AIAS COFUND Fellow

Associate Researcher, Centre Marc Bloch, Berlin, Germany

Area of research: Philosophy and Literature

Project title: 'How to Build a Common World? Contemporary Continental Philosophy and the Question of World Formation'

The project's point of departure is an assumption that philosophy has difficulty conceptualising possible alternatives to the status quo. It is also challenged by envisioning alternative futures. In the context of recent ecological and technological developments, this research examines how selected 21st thinkers move from social diagnostics and critique towards gestures of affirmation and construction in philosophy. Furthermore, it investigates the implications of this shift for concrete political and social practices. At the heart of this project lies the question of habitation, co-habitation and habitability in the world today.



JEFFREY KERBY

AIAS COFUND Fellow

Postdoc, previously Environmental Studies, Dartmouth College, USA

Area of research: Ecology & Geography

Project title: 'The many scales of Arctic ecological dynamics: confronting contradictions and gaps with new tech'

The Arctic is warming at twice the global average, yet our fundamental understanding of the speed, intensity, and causes of widespread ecological changes in northern tundra landscapes remains limited. At AIAS, I explore how scale, and its pervasive influence on pattern, influences how we perceive and understand plant and animal life history expression (i.e. when to grow, reproduce, recover) in response to climatic or biological disturbances. Using computational approaches and drone/time-lapse camera imagery, my work in the Arctic and beyond explores classic ecological questions at little-studied but ecologically meaningful scales.



JENNIFER GALLOWAY

AIAS COFUND Fellow

Research Scientist, Geological Survey of Canada, Calgary, Canada

Adjunct Research Professor, Department of Earth Sciences, Carleton University, Ottawa

Adjunct Assistant Professor, Department of Geosciences, University of Calgary, Calgary

Adjunct Professor, Department of Geology, Brandon University, Brandon, Manitoba

Area of research: Earth Sciences, micropaleontology, paleoclimatology, paleoecology

Project title: 'Arctic Terrestrial ecosystem functioning during the dynamic Early Cretaceous Greenhouse World Arctic'

My research at AIAS focuses on geological methods to better understand drivers and consequences of global climate change during relatively warm intervals in Earth's history. Using the study of pollen and spores integrated with organic, element, and isotope geochemistry, I will study the role of climate variability on terrestrial ecosystem functioning of the extinct polar biome during a time when the Arctic was covered with lush vegetation despite the long polar night and summers with continuous sunlight.



JENS GEORG LEIPZIGER

Jens Christian Skou Fellow

Professor of Renal Physiology, Department of Biomedicine, Aarhus University, Denmark

Area of research: Medicine, Physiology, Nephrology

Project title: 'The discovery, relevance and application of the Cystic Fibrosis Urine Test'

I am a medical doctor and a physiologist interested in how the kidneys work. Many years of research made us aware that something is missing in our understanding of this organ. One key to progress are the talented students in our laboratory that make extraordinary and surprising experimental observations. For us this led to the discovery that the anion channel CFTR, that is defective in Cystic Fibrosis (CF), plays a decisive role in our kidneys, allowing us to excrete bicarbonate in the urine when needed. We are now working on a urine test to help the caretaking of CF patients.



JESSIE FILLERUP

AIAS COFUND Fellow

Associate Professor, Department of Music, University of Richmond, USA

Area of research: Musicology

Project title: 'Enchanted: Music and Conjuring in the Long Nineteenth Century'

My project focuses on uses of music in nineteenth-century theatrical magic shows performed in Europe and North America. I use a range of archival sources for three purposes: 1) to document the musical styles, genres and performers involved in stage magic; 2) to interpret the structural and affective function of music in specific conjuring effects, and 3) to create new interpretations of conjurer figures in classical ballets and operas. The historical account of nineteenth-century performance and media that I'm writing interweaves magic, music, spectacle, and popular entertainment.



JOANNA KALUCKA

AIAS COFUND Fellow

Assistant Professor, previously VIB/KU Leuven Center for Cancer Biology, Leuven, Belgium

Area of research: Biomedicine, Cell biology

Project title: 'Endothelial cell heterogeneity during obesity'

As a molecular biologist, my primary research goals are directed towards understanding metabolic and molecular drivers of the process of new blood vessel formation and how it is regulated by the tissue microenvironment. Ultimately, my aim is to broaden our understanding of blood vessel dysfunction in obesity and its role in the development of obesity-related metabolic syndrome. Given the emerging importance of understanding the heterogeneity of blood vessel cells, using a multidisciplinary approach (e.g. single cell RNA-sequencing), I currently characterize how blood vessels of adipose tissue obtained from obese patients can modulate immune reactions. The ultimate goal is to find a way of reducing the risks of obesity-mediated organ dysfunction via, for example, inhibiting mechanisms leading to blood vessel dysfunction.



KEES VAN KERSBERGEN

Jens Christian Skou Fellow

Professor, Department of Political Science, Aarhus University, Denmark

Area of research: Comparative political science

Project title: 'High Speed Society, Slow Motion Democracy: Assessing why and how social acceleration is impairing the problem-solving capacity of liberal democracy and what to do about it'

Social acceleration – defined as the progressively faster rate of technological, social and life-pace change – presents a dilemma for democratic problem solving: Either the political system speeds up decision-making processes by toning down, circumventing or downright eliminating slow democratic procedures, or democratic procedures are unbendingly held on to at the cost of effective and swift problem solving. At AIAS, I am developing a research programme to assess empirically whether, to what extent, why and how social acceleration is impairing the problem-solving capacity of liberal democracy – and what to do about it.



KEI HIRUTA

AIAS COFUND Fellow

Assistant Professor, previously Eurias Fellow, Paris Institute for Advanced Study, France

Area of research: Political Theory

Project title: 'Responses to Democratic Crisis'

What does it mean for democracy to fail? How can trust in democratic government be restored and malfunctioning democratic institutions be repaired? And what should one do if a democratic system breaks down and one finds oneself in a non-democratic society? My research considers this set of questions by re-examining the works of mid-20th-century thinkers, including Hannah Arendt, Isaiah Berlin, Albert Camus, Judith Shklar and Masao Maruyama. I hope to show that their ideas remain pertinent today, when democracies across the world are confronted with a new series of crises.



LAURE GUIRGUIS

AIAS COFUND Fellow

Associate Professor, Institute for Research on the Arab and Muslim World, Aix-Marseilles, France

Area of research: Social History, Cultural History, Transnational History

Project title: 'The New Left in the Arab East: Entangled Histories of Revolutionary Hopes and Violence (1956-1979)'

My research on the New Left in the Arab East aims at shedding new light on the resilience of Arab radical and democratic traditions. I came to AIAS with the aim to wrap up a collective volume on the Arab Lefts 1950s – 1970s under contract with Edinburgh University Press (done!); to write three scholarly pieces and to finish writing my third book as an author, which will also be part of the application to obtain the Habilitation à diriger les recherches (HDR) at Paris-1 Sorbonne University.



LISA M. WU

AIAS COFUND Fellow

Associate Professor, Northwestern University Feinberg School of Medicine, USA

Area of research: Biobehavioral medicine, psychosocial oncology, neuropsychology

Project title: 'The Role of Light and Circadian Rhythms in Cancer- and Cancer Treatment-Related Symptoms: A Prospective Controlled Study of Breast Cancer Patients During Treatment'

Circadian rhythms are the approximate 24-hour biological and behavioral rhythms important for our bodily functions. Cancer patients often experience circadian disruption, as well as significant side effects and symptoms due to cancer and its treatment. These symptoms may be driven by circadian disruption. Light exposure happens to be the strongest entrainer of circadian rhythms, and could also be important to our understanding of cancer symptoms. This project is a transdisciplinary collaboration that seeks to determine whether circadian rhythms underlie cancer symptoms, and whether light exposure plays a role.



LUCIA ANGELINO

AIAS COFUND Fellow

Assistant Professor, previously University Paris 1 Pantheon - Sorbonne, France

Area of research: Philosophy

Project title: 'The phenomenology of acting in synchrony with others: towards the bodily roots and sensorimotor foundations of the sense of we-agency in musical joint action'

How do individuals come to act, feel and think qua members of a team without a prior plan? In this project, I will address this question by looking at the kind of collective improvisation attained by the "free jazz" at the beginning of sixties. Combining theoretical work on the concept of collective intentionality with phenomenological analysis of a few study-cases my aim is to outline a refined notion of singular-yet-plural intentionality — beyond current thinking in analytic philosophy — by drawing on the rich and sophisticated insights offered by the phenomenological tradition.



MARTIN THOMSEN

Jens Christian Skou Fellow

Associate Professor, Dept. of Clinical Medicine and Dept. Biomedicine, Aarhus University, Denmark

Area of research: Medical Sciences

Project title: 'In vivo cancer models based on CRISPR/Cas9'

The focus of my research is tumor biology and the molecular mechanism in tumor progression. In my group we have established in vivo tumor models in mice and mini pigs, with the use of CRISPR technology. Hereby, disease models can be generated rapidly with genetic alterations. The model can target different organs and multiple candidate genes simultaneously and therefore specific biological questions can be addressed in an in vivo setting. Currently, projects are ongoing related to glioblastoma, lung and prostate cancer.



MICAH G. ALLEN

AIAS COFUND Fellow

Associate Professor, Cambridge Psychiatry, Cambridge University, UK

Area of research: Cognitive neuroscience, computational psychiatry

Project title: 'The Visceral Brain: A Computational Approach to the Embodied Mind'

Psychiatric illnesses impact one in four Europeans, resulting in extensive suffering and billions in economic loss. Thus far, psychiatric research has investigated the causes of mental illness by focusing on mechanisms solely 'within the head'. However, many illnesses are characterised and compounded by disruptions in bodily experiences and function. Indeed, I have found that signals from the heart and other organs influence how we perceive the world and make decisions. These so-called 'gut-feelings' are critical for healthy cognition; yet current models largely ignore their impact on the brain. Until we understand the mechanisms governing these brain-body interactions, our ability to both identify mental illness risk factors and develop effective treatments will be incomplete. To overcome this limitation, this project will combine innovative methods for manipulating gut feelings with computational neuroimaging of brain-body interaction, revealing new targets for embodied psychiatric treatment.



MICHAEL VOLDSGAARD CLAUSEN

AIAS COFUND Fellow

Assistant Professor, previously Department of Physics, University of Oxford, UK

Area of research: Biophysics

Project title: 'How do we sense touch, sound, balance and force?'

Many forms of sensory perception in higher organisms depend upon the rapid conversion of mechanical and physical stimuli into the electrochemical language of nerve and muscle cells. These transduction mechanisms often involve mechanosensitive ion channels that are able to convert physico-mechanical responses into the electrical signals required for the control of complex physiological responses e.g. touch, pain, hearing and proprioception. The goal of my project is to decipher the exact molecular mechanisms that underlie this translation of physical force into ion-channel gating.



NIELS CHR. HANSEN

AIAS COFUND Fellow

Assistant Professor, previously MARCS Institute, Western Sydney University, Australia

Area of research: Psychology, Empirical Musicology, Cognitive Neuroscience

Project title: 'Why humans make music: uncovering missing links in the behavioural and neurohormonal underpinnings of musical evolution'

Despite its cross-cultural omnipresence with evolutionary origins far beyond 40,000 years of archaeological evidence, it remains a mystery why humans invest vast resources on creating and listening to music. I conduct corpus studies, brain scans, and behavioural experiments with oxytocin nasal sprays and advanced computer models to investigate how music induces social cohesion, attracts mates, and helps us cope emotionally in crisis times such as the COVID-19 pandemic. This contributes crucial evidence for music as a complex, socially embedded, biologically underpinned, and cross-culturally universal behaviour, distinguishing humans from other species.



NIKOLAJ T. ZINNER

Jens Christian Skou Fellow

Associate Professor, Department of Physics and Astronomy, Aarhus University, Denmark

Area of research: Physics

Project title: 'Quantum few-body networks with superconducting circuits'

My research goal in this project is to produce a prototype of a fully quantum mechanical network that can perform non-trivial quantum tasks. It hinges on a new class of quantum spin transistor that my collaborators and I are now working closely with experimentalists to realize. Building on these ideas, I want to take the next step of building a quantum network that can classify or manipulate quantum information in an autonomous manner, and provide a blueprint for how this can be realized in superconducting quantum circuits.



PARASKEVI MANOLAKI

AIAS COFUND Fellow

Postdoc, previously Environmental Conservation and Management, Open University of Cyprus

Area of research: Stream Ecology

Project title: 'Effects of global changes on river ecosystem functioning: Understanding underlying mechanisms of multiple stressors using aquatic plant traits'

Most of the global changes in rivers occur as multiple interacting stressors and lead to a chain of effects on the ecosystem structure and functioning. My AIAS project studies how aquatic plants respond through their biological traits to multiple stressors, and seeks to determine how response traits affect stream functioning. My project follows the scaling approach from individual to ecosystem dynamics through the community level, and tests 1) how a community response to a change and 2) how a changed community affects ecosystem process. I am currently working on the meso-cosm experiments using the experimental field facilities at Aarhus University.



PETER DALSGAARD

Jens Christian Skou Fellow

Professor, School of Communication and Culture, Aarhus University, Denmark

Area of Research: Interaction design

Project title: 'Digital Idea Archives in Creative Work'

Creative processes revolve around fostering, synthesising, exploring, communicating, transforming, and externalising ideas. The process of capturing ideas in idea archives, e.g. notebooks and digital repositories of sources of inspiration, is therefore a central component in creative work. In my AIAS project, I study idea archives "in the wild" among skilled creative practitioners, including architects and designers. The aim is to uncover how idea archives help them revisit, reuse, and combine ideas, and to figure out if we can better support the practices around idea archives with digital systems.



PETER R. ANDERSEN

AIAS COFUND Fellow

Assistant Professor, previously Institute of Molecular Biotechnology (IMBA), Austria.

Area of research: Molecular innovation in genetic conflicts

Project title: 'Innovation of genome regulation through arms race evolution in animals'

All life forms exist in constant conflict. Not just externally with other life forms trying to eat or out-compete it, but also within their DNA where genetic parasites populate their genomes. To protect their DNA, all organisms continuously evolve improved molecular defenses to suppress parasite proliferation. My project at AIAS aims to investigate how the innovation of the molecular arms race between host organisms and genetic parasites contribute to the general regulation of host cell biology – the spoils of war in genetics.



RASMUS O. BAK

AIAS COFUND Fellow

Associate Professor, previously Stanford University, USA

Area of research: Biomedicine

Project title: 'Precise CRISPR-mediated genomic integration of large transgenes in human cells'

My research project focuses on editing the human genome for therapeutic purposes. Numerous genetic diseases are caused by an error in a single gene. Using newly developed gene editing technologies (like the CRISPR system), I hope to be able to correct these disease-causing mutations and cure patients definitively. This project addresses the challenge when patients suffering from the same disease display different mutations scattered within the same gene. To make a universal gene editing cure that would apply to all patients, one would need to insert the full functional gene into the genome. For large genes, this poses a unique technical challenge that I hope to overcome.



RENEE VAN DER SLUIS

AIAS COFUND Fellow

Assistant Professor, previously the Department of Microbiology and Immunology, University of Melbourne, Australia

Area of research: HIV, dendritic cells, immunomodulation, therapeutic vaccine

Project title: 'Evaluating the effect of genetically engineered human plasmacytoid dendritic cells to induce specific anti-HIV responses and kill HIV-infected cells'

Antiretroviral therapy (ART) has revolutionized the treatment of infection with human immunodeficiency virus (HIV) but ART needs to be taken life-long and has side effects. Therefore, there is a need to cure HIV infection or induce virus "remission" so that ART can be stopped. The aim for my research at AIAS is to evaluate the potential of stem-cell-generated plasmacytoid dendritic cells (pDC) to induce new and enhance existing immune responses to target HIV infected cells. This is challenging because HIV possess mechanisms to evade immune recognition, but if this approach is successful, it could lead to a personalized cell-based therapeutic vaccine treatment for people living with HIV.



RUBEN PAUWELS

AIAS COFUND Fellow

Associate Professor, Department of Mechanical Engineering, Catholic University of Leuven, Belgium

Area of research: Medical Imaging

Project title: "'DEEP-CBCT" - Next-Generation Dental Cone-beam Computed Tomography: Artefact Reduction and Bone Quality Assessment through Deep Learning'

Cone-beam computed tomography (CBCT) is a radiographic imaging technique that has become the modality of choice for several clinical applications. However, CBCT images are highly susceptible to aberrations ('artefacts') e.g. due to X-ray scatter and beam hardening. My project aims to develop, train and apply convolutional neural networks (i.e. a type of deep learning) for artefact correction in CBCT. The resulting improvements in image quality will improve diagnostic efficacy and allow for the development of novel, automated bone quality assessment techniques.



SANDRA ECKERT

AIAS COFUND Fellow

Associate Professor, Faculty of Social Sciences, Institute for Political Science, Goethe-Universität Frankfurt, Germany

Area of research: Business and Social Sciences

Project title: 'Everyday Life in the Single European Market: Consumer and Business Perceptions'

This project examines the role of consumers and business actors in the Single European Market. How do these actors perceive European regulation, and by which means do they seek to influence evolving policies? Through its qualitative, in-depth analysis that draws on computer assisted analysis of documents and interview data, it generates new insights into how diverging strategies in and perceptions of regulation originate. A topical question in this context is how the COVID-1



SÂMIA JOÇA

AIAS COFUND Fellow

Associate Professor, School of Pharmaceutical Sciences of Ribeirão Preto, University of São Paulo, Brazil

Area of research: Behavioral pharmacology

Project title: 'Investigation on the rapid and sustained antidepressant-like effects of Cannabidiol (CBD) and its mechanisms'

Research into new antidepressants is needed since the available drugs present several limitations. Our group is interested in investigating the potential antidepressant effect induced by Cannabidiol (CBD), a non-psychotomimetic cannabinoid present in the Cannabis sativa plant, in different animal models. Our main goal is to characterize the molecular mechanisms induced by CBD, using state of the art preclinical techniques, molecular and pharmacological tools. The study of its complex molecular properties can pave the way for a better understanding of depression neurobiology and the development of the next generation of antidepressants.



SHUBIAO WU

AIAS COFUND Fellow

Associate Professor, previously Department of Agricultural Engineering, China Agricultural University, China

Area of research: Environmental science

Project title: 'Intensified Constructed Wetlands for Treatment of Ammonia Stripped Effluent: Nitrogen Transformations and Removal Pathways'

Wastewater is often discriminated because of its negative impact on the environment, since it often contains various contaminants such as organic matter, N and P, which can result in eutrophication of water systems. However, these compounds cannot only be seen as waste, which is just not handled properly in the right place, but are also valuable nutrients to the plants. Therefore, my project at AIAS is trying to investigate the possibility of using constructed wetlands as a low cost but effective technique for nutrients recovery and bioremediation of polluted waters.



THOMAS TAURIS

AIAS COFUND Fellow

Professor, previously Astronomical Institute, University of Bonn, Germany

Area of research: Astrophysics

Project title: 'Binary Compact Objects as Gravitational Wave Sources'

The detection of gravitational waves (GWs) from extra-galactic merging binary black holes and neutron stars has opened a new major branch of research in modern astrophysics and fundamental physics. In my AIAS project, I am focusing on Galactic tight binaries of two compact objects which can be detected continuously at low-frequency GWs, up to millions of years before they collide, using the upcoming space-borne laser interferometer LISA, to be launched in 2032. The goal is to be top-prepared for this billion euro mission in order to optimize the scientific yield.



TIJEN TUNALI

AIAS COFUND Fellow

Postdoc, previously Le Studium/ Marie Skłodowska Curie Postdoctoral Fellow, University of Tours, France

Area of research: Visual Sociology and Cultural Criticism

Project title: 'Art and Gentrification in the Changing Neoliberal Landscape'

My project examines the multifaceted relationship of gentrification and art. It focuses on Barcelona, Istanbul and Berlin – the three large global cities with international artistic hubs and a growing immigrant population. The aim of the project is twofold, namely: (1) to rethink the changing and dialectical roles of the art and artists in "new urbanism" that puts the interests of capital over the interests of ordinary inhabitants, (2) to reveal the potential of aesthetics in the critically reflecting formation of agonistic experience that constitutes democratic political culture in the urban space.



TON OTTO

Jens Christian Skou Fellow

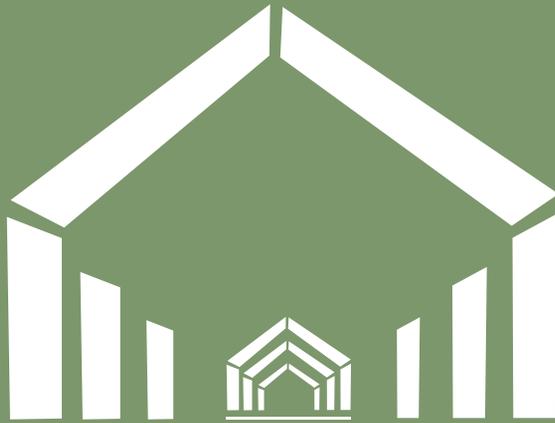
Professor, Department of Anthropology, Aarhus University, Denmark

Area of research: Cultural and social change

Project title: 'Navigating the present. An anthropological study of human agency and temporality'

I am interested in how human beings understand social change and design their future. A key hypothesis for my project is that humans, when imagining their future, explicitly and/or implicitly invoke visions of the past. This orientation in time, called historicity, is known to be culturally variable and is important for the experience and execution of human agency. We know very little about the details of the relationship between social agency and historicity and the aim of my case study of a Melanesian movement for social change, the Paliau Movement from 1946 to the present, is to develop a model for the comparative study of this universal but culturally variable mechanism.

FELLOWS' PUBLICATIONS AND ACTIVITIES



FELLOWS' PUBLICATIONS AND ACTIVITIES

PUBLICATIONS: BOOKS, BOOK CHAPTER

Sâmia Joca is author of the book chapter 'Cannabidiol in mental health disorders' in: *Cannabis as Medicine* by Wedman-St Louis, B (ed.). CRC Press, 2019.

Bogdan C. Iacob is co-author of the book chapter 'Agents of Decolonization? Romanian Activities in Mozambique's Oil and Healthcare Sectors, 1976–1984' in: *Between East and South: Spaces of Interaction in the Globalizing Economy of the Cold War* by Anna Calori et al (eds.). Berlin: de Gruyter, 2019.

Joshua Nash is co-author of the book chapter 'Religion as conceptual scaffolding for architecture' in the book: *Religion Matters: The Contemporary Relevance of Religion*, by Babie et al (eds). Singapore: Springer Nature, 2019.

Bogdan C. Iacob is author of the book chapter 'Southeast by Global South: Balkans, UNESCO and the Cold War' in: *Alternative Globalizations. Eastern Europe and the Postcolonial World* by James Mark et al (eds.). Bloomington: Indiana University Press, 2020.

Michael G. Flaherty is co-editor of the book *Time Work: Studies of Temporal Agency*. New York: Berghan, 2020.

Michael G. Flaherty is author of the book chapter 'The Lathe of Time: Some Principles of Temporal Agency' in: *Time Work: Studies of Temporal Agency* by Flaherty et al (eds). New York: Berghan, 2020.

Joshua Nash is co-author of the book chapter 'The Outremer of Europe's Outremer: Pitcairn Island, Mangareva and the Persistence of Interaction between Îles Oubliées' in the book: *L'Europa d'Oltremare* by Adriano Favole (ed.). Milan: Raffaello Cortina Editore, 2020.

Bogdan C. Iacob is co-author of the book chapter 'The Struggle over 1989 The Rise and Contestation of Eastern European Populism' in: *The Legacy of Division. East and West after 1989* by Ferenc Laczó et al (eds.). Baltimore: CEU Press, 2020.

Laure Guirguis is editor of the book *The Arab Lefts. Histories and Legacies, 1950s–1970s*. Edinburgh: University Press, 2020.

Iwona Janicka is author of the book chapter 'Nonhuman Politics and its Practices' in: *The Bloomsbury Handbook of Posthumanism* by Mads Rosendahl Thomsen and Jacob Wamberg (eds.). London: Bloomsbury Academic, 2020.

PUBLICATIONS – JOURNAL ARTICLES

Rasmus O. Bak is co-author of the article 'Human genome-edited hematopoietic stemcells phenotypically correct Mucopolysaccharidosis type I' in: *Nature Communications*, 6 September 2019.

Peter Teglbjerg Madsen is co-author of the article 'Drivers of the dive response in trained harbour porpoises (*Phocoena phocoena*)' in: *Journal of Experimental Biology*, 10 September 2019.

Peter Dalsgaard is co-author of the article 'How Time Constraints in a Creativity Support Tool Affect the Creative Writing Experience' in: *ECCE, Proceedings of European Conference on Cognitive Ergonomics 2019*, Association for Computing Machinery (ACM), 10 September 2019.

Nikolaj T. Zinner and **David Petrosyan** and co-authors have published the article 'Realization of efficient quantum gates with a superconducting qubit-qutrit circuit' in: *Nature Scientific Reports*, 16 September 2019.

Yonghui Zeng is the co-corresponding author of the paper 'Genomics of Aerobic Photoheterotrophs in Wheat Phyllosphere Reveals Divergent Evolutionary Patterns of Photosynthetic Genes in *Methylobacterium* spp' in: *Genome Biology and Evolution*, 17 September 2019.

Sâmia Joca is co-author of the article 'Antidepressant-like effect induced by P2X7 receptor blockade in FSL rats is associated with BDNF signalling activation' in: *Journal of Psychopharmacology*, 17 September 2019.

Doug Speed is co-author of the article 'Summary statistic analyses can mistake confounding bias for heritability' in: *Genetic Epidemiology*, 20 September 2019.

Fredrik Christiansen is co-author of the article 'Estimating body mass of free living whales using aerial photogrammetry and 3D volumetrics' in: *Methods in Ecology and Evolution*, 1 October 2019.

Jennifer M. Galloway is co-author of the article 'Lake-specific controls on the long-term stability of mining-related, legacy arsenic contamination and geochemical baselines in a changing northern environment, Tundra Mine, Northwest Territories, Canada' in: *Applied Geochemistry*, October 2019.

Lucia Angelino is author of the article 'A frame of analysis for collective free improvisation on the bridge between Husserl's phenomenology of time and some recent readings of the predictive coding model' in: *Phenomenology and the Cognitive Sciences*, 2 October 2019.

Sãmia Joca is co-author of the article 'Reduced P2X receptor levels are associated with antidepressant effect in the learned helplessness model' in: *PeerJ*, 21 October 2019.

Jennifer M. Galloway is co-author of the article 'Widespread drying of European peatlands in recent centuries' in: *Nature Geoscience*, 21 October 2019.

Peter Teglberg Madsen is co-author of the article 'Behavioural development in southern right whale calves' in *Marine Ecology Progress Series*, 24 October 2019.

Shubiao Wu is co-author of the article 'Probing the efficiency of magnetically modified biomass-derived biochar for effective phosphate removal' in: *Journal of Environmental Management*, 24 October 2019.

Isabel Kusche and **Jessica L. Barker** are co-authors of the article 'Pathogens and Immigrants: A Critical Appraisal of the Behavioral Immune System as an Explanation of Prejudice Against Ethnic Outgroups' in: *Frontiers in Psychology*, 25 October 2019.

Magnus Kjærgaard is co-author of the article 'Effective concentrations enforced by intrinsically disordered linkers are governed by polymer physics' in: *PNAS*, 28 October 2019.

Peter Teglberg Madsen is co-author of the article 'Recreational vessels without Automatic Identification System (AIS) dominate anthropogenic noise contributions to a shallow water soundscape' in: *Nature*, 29 October 2019.

Peter Teglberg Madsen is co-author of the article 'Deep-diving pilot whales make cheap, but powerful, echolocation clicks with 50 µL of air' in: *Nature*, 31 October 2019.

Shubiao Wu is co-author of the article 'Interactions of high-rate nitrate reduction and heavy metal mitigation in iron-carbon-based constructed wetlands for purifying contaminated groundwater' in: *Water Research*, 5 November 2019.

Frants H. Jensen is co-author of the article 'Signal-specific amplitude adjustment to noise in common bottlenose dolphins (*Tursiops truncatus*)' in: *the Journal of Experimental Biology*, 8 November 2019.

Luis P. Viegas is co-author of the article 'What Electronic Structure Method Can Be Used in the Global Optimization of Nanoclusters?' in: *Journal of Physical Chemistry*, 8 November 2019.

Thomas Tauris is co-author of the article 'J0453+1559: A Neutron Star-White Dwarf Binary from a Thermonuclear Electron-capture Supernova?' in: *The Astrophysical Journal Letters*, 20 November 2019.

Peter Teglberg Madsen is co-author of the article 'Whistling is metabolically cheap for communicating bottlenose dolphins (*Tursiops truncatus*)' in: *Journal of Experimental Biology*, 26 November 2019.

Cici Alexander is author of the article 'Normalised difference spectral indices and urban land cover as indicators of land surface temperature (LST)' in: *International Journal of Applied Earth Observation and Geoinformation*, 26 November 2019.

Joshua Nash is author of the article 'Linguistics and architecture: A re-review' in: *KÁRK* (Copenhagen and Aarhus Architecture School Journal), 29 November 2019.

Joshua Nash is co-author of the article 'On languages on islands' in: *Acta Linguistica Hafniensia*, 29 November 2019.

Frants H. Jensen is co-author of the article 'Signal-specific amplitude adjustment to noise in common bottlenose dolphins (*Tursiops truncatus*)' in: *Journal of Experimental Biology*, 3 December 2019.

Joshua Nash is author of the article 'The Afghan Cameleers in the Australian Outback: a case of toponymic absence?' in: *Placenames Australia*, 6 December 2019.

Isabel Kusche is author of the article 'What Difference Does It Make? Gendered Campaigning in the 2016 Irish General Election' in: *the Cambridge Journal: Politics & Gender*, 12 December 2019.

Frants H. Jensen and **Peter Teglberg Madsen** are co-authors of the article 'Why whales are big but not bigger: Physiological drivers and ecological limits in the age of ocean giants' in: *Science*, 13 December 2019.

Sãmia Joca is co-author of the article 'A valepotriate-enriched fraction from *Valeriana glechomifolia* decreases DNA methylation and up-regulate TrkB receptors in the hippocampus of mice' in: *Behavioural Pharmacology*, 18 December 2019.

Thomas Tauris is co-author of the article 'On the weak magnetic field of millisecond pulsars: does it decay before accretion?' in: *ADS Harvard*, 20 December 2019.

Jennifer Galloway is corresponding author of the article 'Finding the VOICE: organic carbon isotope chemostratigraphy of Late Jurassic – Early Cretaceous Arctic Canada' in: *Geological Magazine*, Cambridge University Press, 20 December 2019.

Jan Asad is co-author of the article 'Gene Transfer in Rodent Nervous Tissue Following Hindlimb Intramuscular Delivery of Recombinant Adeno-Associated Virus Serotypes AAV2/6, AAV2/8, and AAV2/9' in: *Neuroscience Insights*, 31 December 2019.

Hale Güney is author of the article 'A New Dedication to Potamos from Parsibey in Northeast Phrygia' in: *Philia. International Journal of Mediterranean Studies*, Vol. V, December 2019.

Christos Tsirogiannis is author of the article 'Nekyia - Woman on a Balcony at the Jean Paul Getty Museum' in: *Journal of Art Crime*, January 2020.



Photo: Welcome Lunch in the AIAS Hall, October 2019. By: Ida Marie Jensen.

Frants H. Jensen is co-author of the article 'Whistling is metabolically cheap for communicating bottlenose dolphins (*Tursiops truncatus*)' in: *Journal of Experimental Biology*, 6 January 2020.

Sandra Eckert is corresponding-author of the article 'Private authority in tackling cross-border issues. The hidden path of integrating European energy markets' in: *Journal of European Integration*, 11 January 2020.

Paraskevi Manolaki is co-author of the article 'Towards implementing Mapping and Assessment of Ecosystems and their Services in Cyprus: A first set of indicators for ecosystem management' in: *One Ecosystem*, 15 January 2020.

Doug Speed and **Søren Dinesen Østergaard** are co-authors of the article 'Genome wide association study of the sensitivity to environmental stress and adversity (SESA) neuroticism cluster' in: *Acta Psychiatrica Scandinavica*, 23 January 2020.

Sâmia Joca is co-author of the article 'Ketamine effects on anxiety and fear-related behaviors: Current literature evidence and new findings' in: *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 23 January 2020.

Dorothee Birke is co-editor of the special issue journal on 'Imaginative Geographies of Home: Ambivalent Mobility in Twenty-First Century Literature and Culture' in: *Literary Geographies*, 23 January 2020.

Renée van der Sluis is co-author of the article 'Combination Immune Checkpoint Blockade to Reverse HIV Latency' in: *The Journal of Immunology*, 27 January 2020.

Lucia Angelino is the author of the article 'Collective intentionality and the further challenge of collective free improvisation' in: *Continental Philosophy Review*, 27 January 2020.

Peter Teglberg Madsen is co-author of the article 'Energy compensation and received echo level dynamics in constant-frequency bats during active target approaches' in: *The Journal of Experimental Biology*, 28 January 2020.

Jeffrey Kerby is co-author of the article 'Leopard predation on gelada monkeys at Guassa, Ethiopia' in: *American Journal of Primatology*, 29 January 2020.

Jens Leipziger is co-author of the article 'Renal Autocrine and Paracrine Signaling -A Story of Self-Protection' in: *Physiol Review*, 30 January 2020.

Thomas Tauris is co-author of the article 'Lense-Thirring frame-dragging induced by a fast rotating white dwarf in a binary pulsar system' in: *Science*, 31 January 2020.

Frants Jensen is co-author of the article 'Dynamic biosonar adjustment strategies in deep-diving Risso's dolphins driven partly by prey evasion' in: *Journal of Experimental Biology*, 3 February 2020.

Peter Teglberg Madsen is co-author of the article 'An autonomous hydrophone array to study the acoustic ecology of deep-water toothed whales' in: *Deep Sea Research*, 7 February 2020.

Borbála Kovács is author of the article 'ANALIZĂ Impozitarii veniturilor salariale în România post-decembristă' on: *contributors.ro*, 19 February 2020.

Joanna Kalucka is co-author of the article 'Single-Cell Transcriptome Atlas of Murine Endothelial Cells' in: *Cell*, 20 February 2020.

Lisa M. Wu is co-author of the article 'Feasibility and Preliminary Efficacy of a Bright Light Intervention in Ovarian and Endometrial Cancer Survivors' in: *International Journal of Behavioral Medicine*, 20 February 2020.

Micah G. Allen is author of the review article 'Unravelling the Neurobiology of Interoceptive Inference' in: *Trends in Cognitive Sciences*, 24 February 2020.

Sandra Eckert is author of the article 'Beyond legislation: reconsidering the locus of power in EU regulatory governance' in: *The Theory and Practice of Legislation*, 27 February 2020.

Jens Leipziger is co-author of the article 'How Does Aldosterone Work in the -Intercalated Cell?' in: *The Journal of the American Society of Nephrology*, 28 February 2020.

Renée M. Van der Sluis is first-author of the article 'Diverse effects of interferon alpha on the establishment and reversal of HIV latency' in: *PLoS Pathogens*, 28 February 2020.

Bogdan C. Iacob is author of the review of *The Great Cauldron: A History of Southeastern Europe* by Marie-Janine Calic (Harvard University Press 2019) in: *International Affairs*, March 2020.

Lucia Angelino is author of the article 'Aux limites du reel: renversements perceptifs et reversibilité entre registres auditifs et visuels à l'oeuvre dans les promenades sonores *in situ*' in: *Nouvelle revue d'esthétique, Presses Universitaires de France*, 10 March 2020.

Peter Teglbjerg Madsen is co-author of the article 'Energetic and physical limitations on the breaching performance of large whales' in: *Deep Sea Research*, 11 March 2020.

Thomas Tauris is co-author of the article 'Early neutron star evolution in high-mass X-ray binaries' in: *Monthly Notices of the Royal Astronomical Society*, 13 March 2020.

Doug Speed is first-author of the article 'Evaluating and improving heritability models using summary statistics' in: *Nature Genetics*, 23 March 2020.

Lisa Wu is co-author of the article 'Cognitive impairment following radiation to hippocampus and other brain structures in adults with primary brain tumours' in: *Radiotherapy and Oncology*, 28 March 2020.

Ruben Pauwels is author of the review paper 'History of dental radiography: evolution of 2d and 3d imaging modalities' in: *Medical Physics International Journal*, 31 March 2020.

Lucia Angelino is author of the article 'A frame of analysis for group improvisation on the bridge between Husserl's phenomenology and some recent readings of the predictive coding model' in: *Phenomenology and the Cognitive Sciences*, April 2020

Rasmus O. Bak is co-author of the article 'Genome editing of donor-derived T-cells to generate allogenic chimeric antigen receptor-modified T cells: Optimizing $\alpha\beta$ T cell-depleted haploidentical hematopoietic stem cell transplantation' in: *Haematologica*, 2 April 2020.

Luis P. Viegas is first-author of the article 'Reactivity of α,ω -Dihydrofluoropolyethers toward OH Predicted by Multiconformer Transition State Theory and the Interacting Quantum Atoms Approach' in: *J. Phys. Chem.*, 3 April 2020.

Joanna Kalucka is co-author of the article 'Single-Cell RNA Sequencing Maps Endothelial Metabolic Plasticity in Pathological Angiogenesis' in: *Cell Metabolism*, 7 April 2020.

Niels Chr. Hansen is co-author of the article 'Decomposing Neural Responses to Melodic Surprise in Musicians and Non-Musicians: Evidence for a Hierarchy of Predictions in the Auditory System' in: *Neuroimage*, 8 April 2020.

Anna Neuheimer is co-author of the article 'Match-mismatch dynamics in the Norwegian-Barents Sea system' in: *Marine Ecology Progress Series*, 9 April 2020.

Doug Speed is co-author of the article 'Estimating narrow-sense heritability using family data from admixed populations' in: *Nature Heredity*, 9 April 2020.

Fredrik Christiansen is first-author of the article 'A population comparison of right Fin whale body condition reveals poor state of the North Atlantic right whale' in: *Marine Ecology Progress Series*, 23 April 2020.

Bogdan C. Iacob is author of the article 'From Africa to the World: Romania's Global Turn in the 1970s' in: *Journal of Studies and Materials of Contemporary History*, 28 April 2020.

Thomas Tauris is co-author of the comment 'Comment on "A noninteracting low-mass black hole-giant star binary system"' in: *Science*, 8 May 2020.

Hale Güney is author of the article 'Phrygia'dan Tanrı Apollon'a sunulan Yeni Bir Altar Adaçığı' [A new votive altar to Apollo from Phrygia] in: *Colloquium Anatolicum*, 13 May 2020.

Fredrik Christiansen is first-author of the article 'Southern right whales show no behavioral response to low noise levels from a nearby unmanned aerial vehicle' in: *Mammal Marine Science*, 13 May 2020.

Joanna Kalucka is co-author of the article 'Role of the GLUT1 Glucose Transporter in Postnatal CNS Angiogenesis and Blood-Brain Barrier Integrity' in: *Circulation Research*, 14 May 2020.

Kei Hiruta is author of the article 'Value Pluralism, Realism and Pessimism' in: *Res Publica: A Journal of Moral, Legal and Political Philosophy*, 20 May 2020.

Renée M. Van Der Sluis is first-author of the article 'Plasmacytoid dendritic cells as cell-based therapeutics: A novel immunotherapy to treat human immunodeficiency virus infection?' in: *Frontiers in Cellular and Infection Microbiology*, 26 May 2020.

Sandra Eckert is author of the article 'EU Agencies in Banking and Energy between Institutional and Policy Centralisation', a *SAFE Working Paper No. 278*, on: *SSRN*, 28 May 2020.

Ruben Pauwels is co-author of the review article 'Cone-beam computed tomography in dentomaxillofacial radiology: a two-decade overview' in: *Dentomaxillofacial Radiology*, 5 June 2020.

Hale Güneý is author of the article 'New Funerary Inscriptions from Northeast Phrygia' in: *Zeitschrift fuer Papyrologie Und Epigraphik*, 9 June 2020.

Thomas Tauris is co-author of the article 'Properties of OB star-black hole systems derived from detailed binary evolution models' in: *Astronomy & Astrophysics*, 10 June 2020.

Dennis Konnerup is co-author of the review article 'Constructed Wetlands in Latin America and the Caribbean: A Review of Experiences during the Last Decade' in: *Water*, 18 June 2020.

Jens Leipziger is co-author of the article 'Viewing Cortical Collecting Duct Function Through Phenotype-guided Single-Tubule Proteomics', in: *Function*, 2 July 2020.

Jeffrey Kerby is co-author of the article 'Aboveground biomass corresponds strongly with drone-derived canopy height but weakly with greenness (NDVI) in a shrub tundra landscape' in: *Environmental Research Letters*, 10 July 2020.

Ramus O. Bak is co-author of the article 'STEEP mediates STING ER exit and activation of signaling' in: *Nature Immunology*, 20 July 2020.

Cici Alexander is co-author of the article 'Sleeping trees and sleep-related behaviours of the siamang (*Symphalangus syndactylus*) in a tropical lowland rainforest, Sumatra, Indonesia' in: *Primates*, 27 July 2020.

Anna Neuheimer is co-author of the article 'Evidence for long-term seamount-induced chlorophyll enhancements' in: *Scientific Reports - Nature*, 29 July 2020.

Jens Leipziger is co-author of the article 'Impaired Renal HCO₃ - Excretion in Cystic Fibrosis' in: *the Journal of American Society of Nephrology*, 31 July 2020.

Magnus Kjærgaard is co-author of the article 'Intrinsically disordered linkers control tethered kinases via effective concentration' in: *The Proceedings of the National Academy of Sciences*, 18 August 2020.

EXTERNAL ACADEMIC ACTIVITIES

Jessie Fillerup co-presented the paper 'Hearing Borderline Personality Disorder in *Crazy Ex-Girlfriend*' at the conference *Music and Sound Design for the Screen*, Maynooth, Ireland, 7 September 2019.

Jessie Fillerup gave the talk 'Heller's Wonders: Virtuoso Pianism as a Conjuring Effect' at the *Royal Musical Association Annual Conference*, Manchester, UK, 12 September 2019.

Rasmus O. Bak gave the invited talk 'Genetic engineering of hematopoietic stem cells with CRISPR/Cas' at the Center for Molecular Medicine (CMM), Karolinska University Hospital, Stockholm, Sweden, 12 September 2019.

Rasmus O. Bak gave the talk 'Genmanipulation - fremtidens børn?' at the popular science festival entitled 'Hearts & Minds', Folkeuniversitetet Copenhagen, 14 September 2019.

Shubiao Wu gave the invited talk 'Interactions of nanoparticles in wastewater treatment processes' at the *Environmental Engineering, Photogrammetry and Geoinformatics* conference, Lublin, Poland, 17-21 September 2019.

Sâmia Joca gave the invited talk 'Antidepressant-like effects of cannabidiol' at the *Nordic Drug Information Meeting*, Odense, Denmark, 23-24 September 2019.

Rasmus O. Bak gave the talk 'Genmanipulation - fremtidens børn?' at the popular science festival entitled 'Hearts & Minds', Folkeuniversitetet Aarhus, 27 September 2019.

Lucia Angelino gave the talk 'Perceptual shifts and binding processes within and across sensory modalities in *Remote X* audio tours: what can phenomenology bring to these debates?' at the *5th conference of the Central and East European Society for Phenomenology*, Bucharest, Romania, 28 September 2019.

Sandra Eckert gave the talk 'Regulation in Europe. A political science perspective' at the conference *Regulation in Germany*, Frankfurt School of Finance & Management, Germany, 1 October 2019.

Sandra Eckert gave the talk 'The Transition towards a Circular Economy in the EU. The Plastics Challenge and Beyond' at the International Symposium *Nature and Normativity*, Johanna Quandt Young Academy (JQYA) at Goethe University, Germany, 2 October 2019.

Rasmus O. Bak gave the invited talk 'Genetic engineering of hematopoietic cells with CRISPR/Cas' at the Department of Pediatrics, Rigshospitalet, Copenhagen, Denmark, 3 October 2019.

Peter Dalsgaard gave the public talk 'Media Architecture for Community Building', Amsterdam, the Netherlands, 10 October 2019.

Thomas Tauris gave the invited talk 'Formation and Properties of Neutron Star Mergers' at the conference on *Black Holes and Neutron Stars with Gravitational Waves*, Yukawa Institute for Theoretical Physics, Kyoto University, Japan, 10 October 2019.

Iwona Janicka co-organized the interdisciplinary Franco-German workshop 'Accueil, Hospitalité, Espace(s) Politiques' at *Centre Marc Bloch* in Berlin, Germany, 25 October 2019.

Bogdan C. Iacob gave the talk 'The Democratization of Eastern Europe in Global Context', at *Myths, Memories and Economies: Post-Socialist Transformations in Comparison*, the annual conference of the European Network Remembrance and Solidarity, Warsaw, Poland, 28-30 October 2019.

Sandra Eckert gave the invited talk 'Corporate Power in Regulating the Circular Economy' at the *Colloquium of the Sociology Department*, invited by the ERC project 'Toxic Expertise: Environmental Justice and the Global Petrochemical Industry', University of Warwick, UK, 30 October 2019.

Lucia Angelino gave the talk 'Free jazz improvisation and the riddle of group improvised action: what can Phenomenology bring to these debates?' at the 58th Meeting of the Society for phenomenology and existential philosophy (SPEP), Pittsburgh, USA, 1 November 2019.

Lisa Wu gave the invited talk 'Systematic light exposure to treat cancer- and cancer treatment-related symptoms' at the *Cancer Survivorship Symposium*, Northwestern Medicine, Chicago, IL, 8 November 2019.

Rasmus O. Bak gave the invited talk 'Towards potent CRISPR-based gene editing in human T cells' at the Inaugural seminar for adjunct professor Marcela V. Maus (Harvard Medical School) at the *Faculty of Health Sciences, University of Southern Denmark (SDU)*, 14 November 2019.

Laure Guirguis gave the talk 'Excavating the past. New-left militants' Archival practices and Contemporary Challenges in the Arab East' at the *Annual Meeting of the Middle East Studies Association*, New Orleans, USA, 14-17 November 2019.

Thomas Tauris gave the talk 'Neutronstjerner og sorte huller' at *Folkeuniversitetet*, Aarhus University, 20 November 2019.

Sandra Eckert gave the talk 'Economic Interests and Law? Protecting Consumers and the Environment at EU level' at the Annual meeting of the working group on Organised Interests and the section on Policy Analysis and Public Administration of the *German Political Science Association*, Ruhr University Bochum, 28-29 November 2019.

Sandra Eckert gave the talk 'The politics of banking and energy regulation between agencification and private governance' at the conference *EU Agencies as 'Inbetweens'? The Relationship between EU Agencies and Member States* organized by TARN (The Academic Research Network on Agencification of EU Executive Governance), University of Maastricht, 4-5 December 2019.

Nikolaj T. Zinner organized the conference *Quantum Community DK*, AIAS, Aarhus University, 9-10 January 2020.

Sandra Eckert gave the talk 'Is Brexit leadership impossible? Theresa May's difficult mission as a negotiator' at the workshop *Pathways to Power: Female Leadership and Women Empowerment in the European Union*, University Osnabrueck, Germany, 9-11 January 2020.

Sâmia Joca gave the talk 'Effect of cannabidiol on depression' at the *12th Annual Meeting for the Danish Society for Pharmacology*, University of Southern Denmark, 15 January 2020.

Thomas Tauris co-organized and contributed a talk at *DKGWEM-2020: Gravitational Wave Science in Denmark* at the Niels Bohr International Academy, Copenhagen, Denmark, 31 January 2020.

Thomas Tauris gave an invited talk at *Compact Objects for All*, Lund University, Sweden, 11 February 2020.

Rasmus O. Bak gave an invited talk at the *4th Bone Marrow Transplantation Forum*, London, UK, 11 February 2020.

Thomas Tauris gave the talk 'Neutronstjerner og sorte huller' at *Folkeuniversitetet*, Aarhus University, 19 February 2020.

Rasmus O. Bak gave the talk 'Gene technology – How much can we do today?' at *Folkeuniversitetet*, 20 February 2020.

Kei Hiruta gave the invited talk 'The Legacy of 1956: Hannah Arendt and Isaiah Berlin on the Hungarian Revolution' in the Research Unit for the History of Political and Economic Ideas, *the Department of Philosophy and the History of Ideas*, Aarhus University, 26 February 2020.

Sandra Eckert gave the invited talk and roundtable 'Corporate Power and Regulation', *Max-Po Impromptu & CEE Seminar Perspectives on Corporate Power*, Center for European Studies and Comparative Politics, Sciences Po Paris, France, 2 March 2020.

Kei Hiruta gave an invited talk on 'Value Pluralism, Realism and Pessimism' in the Research Unit for Ethics, Legal, and Political Philosophy, *the Department of Philosophy and the History of Ideas*, Aarhus University, 2 March 2020.

Jeffrey Kerby gave a streamed talk 'The changing Arctic' to several thousand of school kids for the *National Geographic Explorer Classroom*, 26 March 2020.

Niels Chr. Hansen gave the online talk 'Musical escapisms and a crowd-sourced database of #coronamusic' at the online *MUSICOVID* network event, 19 May 2020.

Niels Chr. Hansen gave the online poster presentation 'The lontano effect: affective connotations of offstage instrumentation in orchestral music' at the online conference *Brain. Cognition. Emotion. Music*. Kent, UK, 20-21 May 2020.

Christos Tsirogiannis gave the online talk 'Legal and Ethical Problems on Selected Illicit Antiquities Cases', Trafficking of cultural properties (II): *the International, European and Italian perspective and the judicial cooperation*, University of Palermo, 29 May 2020.

Christos Tsirogiannis gave the online talk 'Ethical Dilemmas about Illicit Antiquities', International Committee on Ethical Dilemmas, ICOM, organized by *IC ETHICS – ICOM International Committee on Ethical Dilemmas*, 1 June 2020.

Thomas Tauris gave the online seminar 'Radio Pulsars' at Hebrew University, Jerusalem, 1 June 2020.

Joanna Kalucka gave the online talk 'Metabolic and Transcriptomic Heterogeneity of Endothelial Cells' for Universitätsklinikum Bonn & Universität Bonn, online, 5 June 2020.

Doug Speed gave the online talk 'Flexible Heritability Estimation from Summary Statistics' at the *European Human Genetics Virtual Conference, ESHG 2020.2*, online, 6-9 June 2020.

Lisa M. Wu gave the online talk 'Opening the borders of symptom management: Investigating circadian rhythms and light exposure in cancer patients' at *The European NetIAS Lecture Series*, 25 June 2020

Thomas Tauris gave an invited online review of 'Formation of Binary Neutron Stars' at *The European Astronomical Society – EAS2020*, Leiden, NL, 3 July 2020.

Tijen Tunali co-organized the conference *Urban Creativity -User Experience Online Conference*, gave the Opening Speech and moderated the panel 'Urban Creativity and Everyday Resistance', held online, 9-11 July 2020.

Lucia Angelino gave the online talk 'Thinking of the genesis of a group behaviour and of group thoughts. Sartre's alternative framework' at the *Social Ontology – 12th Biennial Collective Intentionality Conference*, 13 July 2020.

AWARDS, APPOINTMENTS AND GRANTS

Micah G. Allen was awarded the 'Early Career Prize' by The British Association for Cognitive Neuroscience (BACN) for his contribution of high-standard and pioneering work to the field of cognitive neuroscience. Cambridge, 2 September 2019.

Yonghui Zeng has received a Villum Experiment grant of DKK 2 million for the project entitled 'Link Phototrophy and Methanotrophy in Glacial Bacteria' by the Villum Foundation Experiment Programme that rewards scientists who question conventional thinking. Awarded on: 11 September 2019.

Joanna Kalucka has received a Lundbeck Foundation Fellowship grant of DKK 10 million to boost her research in obesity and vascular dysfunction even further. The grant supports her project entitled 'Endothelial cell heterogeneity during obesity' and will enable her to build up her own research group. Duration: 2019-2024. Awarded on: 7 November 2019.

Peter Refsing Andersen has received a Sapere Aude DFF Starting Grant of DKK 6,175,545 from The Independent Research Fund Denmark (DFF) for his four-year project entitled 'Molecular mechanisms of genetic conflicts'. The project runs from 1 July 2020 to 1 July 2024. Awarded on: 18 November 2019.

Rasmus O. Bak has been selected as an associate editor on the editorial board of the scientific journal *Frontiers in Genome Editing*, November 2019.

Joanna Kalucka was awarded a Carlsberg Foundation Young Researcher Fellowship grant of DKK 2,919,800 from the Carlsberg Foundation for her research project 'Exploring the heterogeneity of splenic vasculature - is it more than a sieve?'. Awarded on: 25 November 2019.

Rasmus O. Bak has received a research grant of DKK 554,400 from the Independent Research Fund Denmark for the project 'DFF – Danish ERC Programme 2019'. Awarded on: 28 November 2019.



Photo: AIAS Fellow Michael Voldsgaard giving the 5-minute talk at Monday Lunch, October 2019. By: Ida Marie Jensen.

Rasmus O. Bak has received a research grant of DKK 1,700,000 from the Novo Nordisk Foundation for the project 'Genetic programming of chimeric antigen receptor T cells using CRISPR/Cas'. Awarded on: 10 December 2019.

Doug Speed has received a LF Experiment grant by the Lundbeck Foundation of DKK 1,855,000 to attempt to develop a model which, based on an individual's DNA, will provide a clinically useful prognosis for the person's risk of developing various diseases. The model is based on artificial intelligence. Awarded on: 11 December 2019.

Peter R. Andersen was awarded a 'Research Infrastructure' grant from the Carlsberg Foundation of DKK 350,000 for cell culture of germline cells. Awarded on: 16 January 2020.

Fredrik Christiansen was awarded the 2019 Curt & Micheline Jenner Award for his dedication and excellence in cetacean research by Whale Watch Western Australia, 2 February 2020.

Niels Chr. Hansen received an IMC Seed Funding grant of DKK 29,700 from the Interacting Minds Centre for the project on 'Music for social convergence in times of spatial distancing'. Awarded in: May 2020.

Rasmus O. Bak has been awarded a grant of DKK 2.9 mill from the Independent Research Fund Denmark for the project entitled 'Generating a new class of cancer immunotherapy with genetically engineered plasmacytoid dendritic cells'. A project that aims to generate a new class of cancer immunotherapy using CRISPR/Cas gene technologies to deliver a new, advanced treatment of cancer and potentially other serious illnesses. Awarded on: 17 May 2020.

Renée M. van der Sluis was invited to join the editorial board as a topic editor for the journal *Vaccines* and as guest editor of the Special Issue 'Dendritic Cells of the Future - What is Necessary to Make DC-based Vaccination a Clinical Success?'. August 2020.

IN THE MEDIA

Rasmus O. Bak is author of the popular science article 'Fra Genterapi til Designerbaber' for the thematic magazine on 'Generations', published in relation to the popular science festival entitled *Hearts & Minds*. Published by Folkeuniversitetet, September 2019.

Fredrik Christiansen gave an interview to *The British Ecological Society* for the article 'Researchers use drones to weigh whales', online at: britishecologicalsociety.org, 2 October 2019.

Fredrik Christiansen gave an interview to *BBC News* about his research on the right whale body mass for the article 'How to weigh a whale without a scale' on: *BBC News, Science & Environment*, 2 October 2019.

Fredrik Christiansen gave an interview to the magazine *The Conversation* about his research on the right whale body mass for the article 'How do you weigh a live whale?' on: theconversation.com/uk, 2 October 2019.

Fredrik Christiansen gave an interview to the newspaper *The Telegraph* for the article 'Whales weighed for first time with drones, as scientists hope to save them from fishing nets' on: telegraph.co.uk, 2 October 2019.

Fredrik Christiansen gave an interview to the newspaper *The Daily Mail* about his research on the right whale body mass for the article 'Wild whales can now be 'weighed' with DRONE footage: Scientists use flying cameras to measure the ocean giants to study their health and diets' on: dailymail.co.uk, 2 October 2019.

Fredrik Christiansen gave an interview to the French *Sciences et Avenir* for the article 'Des chercheurs développent une nouvelle méthode pour peser des baleines' on: sciencesetavenir.fr, 2 October 2019.

Fredrik Christiansen gave an interview to *Smithsonian Magazine* for the article 'How Drones Are Helping Scientists Figure Out Whales' Weight' on: smithsonianmag.com, 3 October 2019.

Fredrik Christiansen gave an interview to the German *Der Standard WissenSchaft* for the article 'Wie man Wale auf die Waage legt' on: derstandard.at/wissenschaft, 7 October 2019.

Sâmia Joca gave an interview about her research to *The New York Times* for the article 'What Are the Benefits of CBD?' in: *The New York Times*, 16 October 2019.

Christos Tsirogiannis gave an interview on his research into the illicit trade of antiquities from Egypt to the Dutch newspaper *NRC Handelsblad* for the article 'De illegale handel in de grafjiften van Ny- Kau- Ptah' in: *NRC Handelsblad*, 1 November 2019.

Christos Tsirogiannis gave an interview on his research into the illicit trade of antiquities to the newspaper *The Guardian* for the article about a first-century Eros marble statue: 'Christie's urged to pull sale of Roman statue 'linked to illicit dealers'' in: *The Guardian*, 24 November 2019.

Christos Tsirogiannis gave an interview on his research into the illicit trade of antiquities to the newspaper *ARTnews* for the article about a first-century Eros marble statue: 'Expert Urges Christie's to Cancel Sale of Roman Statue, Citing Potentially Faulty Provenance' on: artnews.com, 25 November 2019.

Christos Tsirogiannis gave an interview on his research into the illicit trade of antiquities to the newspaper *Il Giornale del' Arte* for the article about a first-century Eros marble statue: 'Giorno per giorno nell'arte' in: *Il Giornale del' Arte*, 25 November 2019.

Rasmus O. Bak gave an interview for the *CRISPR Medicine Blog*: 'Using CRISPR to cure severe hereditary immunodeficiencies', 8 December 2019.

Rasmus O. Bak gave an interview about his research into gene editing for the article 'Forskerne sliber saksen: Nye værktøjer skal gøre genredigering mere sikkert' in: *Ingeniøren*, 9 December 2019

Christos Tsirogiannis gave an interview on his research into the illicit trade of antiquities for the newspaper article 'Die Dateien des Dr. Tsirogiannis' to German *Die Frankfurter Allgemeine Zeitung (F.A.Z.)*, 9 January 2020.

Thomas Tauris gave an interview on his research for the news article 'Ein schnell rotierender Weißer Zwerg verwirbelt die Raumzeit in einem kosmischen Tanz' online at: *idw - Informationsdienst Wissenschaft*, 30 January 2020.

Thomas Tauris gave an interview on his research for the news article 'Bizarre Cosmic Dance Offers Fresh Test for General Relativity' in: *Scientific American*, 31 January 2020.

Thomas Tauris gave an interview on his research for the news article 'Igen har Einstein ret: Hvid dværg rykker rumtiden rundt' online at: *Videnskab.dk*, 31 January 2020.

Thomas Tauris gave an interview on his research for the news article 'Astronomers witness the dragging of space-time in stellar cosmic dance' online at *Phys.org*, 31 January 2020.

Jeffrey Kirby gave an interview to *Wired* for the article 'The Arctic Is Getting Greener. That's Bad News for All of Us' online at: *Wired.com*, 18 February 2020.

Micah G. Allen gave an interview to *Weekendavisen* for the article 'Maveformelse' online at: *Weekendavisen.dk*, 28 February 2020.

Christos Tsirogiannis gave an interview on his research into the illicit trade of antiquities for the newspaper article 'Twijfels bij Tefaf: zijn oudheden op kunstbeurs legaal?' in: *NRC Handelsblad*, 9 March 2020.

Christos Tsirogiannis gave an interview on his identification of illicit antiquities to the newspaper *NRC Handelsblad* for the article 'Twee oudheden in beslag genomen op kunstbeurs Tefaf' in: *NRC Handelsblad*, 17 March 2020.

Jeffrey Kerby gave an interview on his research to the *New Hampshire Public Radio podcast, Outside/In*, 'Kettle Bog' episode, 19 March 2020.

Fredrik Christiansen gave an interview on his global right whale study to *Science Magazine* for the article 'North Atlantic Right Whales Are In Much Poorer Condition Than Southern Right Whales' on: scienmag.com, 23 April 2020.

Fredrik Christiansen gave an interview on his global right whale study to *The Boston Globe* for the article 'North Atlantic right whales are in far worse condition than other right whales, new study finds' on: bostonglobe.com, 23 April 2020.

Fredrik Christiansen gave an interview on his global right whale study to *The National Geographic* for the article 'These endangered whales are disturbingly thin—why that matters' on: *nationalgeographic.com*, 20 May 2020.

Christos Tsirogiannis gave an interview on his research into the illicit trade of antiquities for the article 'A Double Seizure of Antiquities at EFAF 2020. An Interview with the Experts, Officer Bouwknecht and Professor Tsirogiannis' in: *The Journal of Cultural Heritage Crime*, 21 May 2020.

Niels Chr. Hansen gave an interview about the global research project on music during the time of the corona to the Danish newspaper *Politiken* for the article 'Derfor er folk vilde med Phillip Faber: Folk hører happy-go-lucky-musik fra deres unge år som aldrig før' in: *Politiken*, 22 May 2020.

Niels Chr. Hansen gave an interview about the global research project on music during the time of the corona to radio *P4 Østjylland*, 22 May 2020.

Niels Chr. Hansen gave a live interview about the global research project on music during the time of the corona to the Danish national TV broadcast *TV2 News*, 22 May 2020.

Niels Chr. Hansen gave an interview on music and COVID-19 to the national radio *P2 Klassisk Formiddagsradio*, May 29, 2020.

Christos Tsirogiannis gave an interview on an illicit trade case of a bronze horse to the Greek newspaper *Kathimerini* for the article 'Η επίμονη διεκδίκηση του χάλκινου αλόγου' ['The persistent claim of the bronze horse'], 12 June 2020.

Christos Tsirogiannis gave an interview on his identification of four illicit antiquities' objects at Christie's, New York, to the newspaper *The Guardian* for the article 'Christie's withdraws 'looted' Greek and Roman treasures' in: *The Guardian*, 15 June 2020.

Christos Tsirogiannis gave an interview on his identification of four illicit antiquities' objects at Christie's, New York, to *ArtNet* for the article 'Christie's Quietly Pulls Greek and Roman Antiquities From an Online Auction After Evidence Suggests They May Have Been Looted' on: *artnet.com*, 15 June 2020.

Christos Tsirogiannis gave an interview on his identification of four illicit antiquities' objects at Christie's, New York, to the *The Times* for the article 'Auction Houses accused of listing looted treasures after Christie's withdraws lots' in: *The Times*, 16 June 2020.

Christos Tsirogiannis gave an interview on his identification of four illicit antiquities' objects at Christie's, New York, to the French newspaper *Le Figaro* for the article 'Christie's retire de ses enchères 4 antiquités soupçonnées d'avoir été pillées' in: *Le Figaro*, 17 June 2020.

Bogdan C. Iacob is author of the op-ed article 'From the Outside Looking In: Romania during the Pandemic' for the website *Cultures of History Forum* created by the Institute of Advanced Studies Imre Kertész Kolleg Jena, 25 June 2020.

Christos Tsirogiannis gave a TV interview on the international trade in antiquities to *Euronews*, for a live show running at 13:00-13:30 CET, 25 June 2020.

Christos Tsirogiannis gave an interview to the newspaper about his research on looted antiquities to *The Telegraph* for the article 'Bonhams 'sold 2,500-year-old wine jug it was warned had been looted', claims antiquities expert' in: *The Telegraph*, 18 July 2020.

Niels Chr. Hansen gave an interview about the global research project on music during the time of the corona to the *Norwegian NRK* for the article 'Koronatiden kan ha endret folks musikkvaner', 5 August 2020. ■

EVENTS AT AIAS



Explore a **selection of the events** organized by the AIAS Fellows and by Aarhus University faculty or external collaborators in the year of 2019-2020. As a **meeting place and ground for discussion between and across disciplines**, AIAS is always **open to academic events organized** by Aarhus University faculty members, departments and external institutions. The number of larger events in the Spring and Summer of 2020 is lower than last year, as many have been postponed or cancelled due to the corona pandemic and the lockdown. With the 'physical' distancing, the engagement between the disciplines has moved online, to **a virtual AIAS meeting ground** in the Spring 2020. One house, **multiple topics and formats...**



Photo: Farewell Reception for former AIAS Director Morten Kyndrup, September 2019. By: Ida Marie Jensen.

EVENTS AT AIAS

AIAS Fellows' Seminar: 'Cancer models: In vivo cancer models based on CRISPR/ Cas9' by AIAS Fellow Martin Thomsen, 9 September 2019.

UIC Event: University International Club event: on 'Pregnancy and Birth in DK'. Organized by Daniela Trifiletti, International Centre, Aarhus University, 11 September 2019.

AIAS Conference: *Nordic Remote Sensing Conference 2019 (NoRSC '19)*
More than 100 researchers were brought together in the broad field of Remote Sensing in primarily the Nordic and Arctic countries. Topics included the acquisition of data from satellite, airborne, terrestrial or under-water platforms, development of algorithms for data processing and analysis, and the use of derived metrics in applications across disciplines. Organized by AIAS Fellows Cici Alexander and Anna Neuheimer, 17-19 September 2019.

AIAS Farewell Reception: Reception and farewell to AIAS Director and founding father Professor Morten Kyndrup. Talks by Deputy Director Nikolaj T. Zinner, Chair of the AIAS Board of Directors Prof. Jørgen Frøkiær, Prof. Poul Nissen, Dandrite and by AIAS Fellows Georgina Born, Isabelle Torrance, Bjørn Panyella Pedersen, Joshua Nash, Asad Jan and Magnus Kjærgaard, 20 September 2019.

AIAS Fellows' Seminar: 'Special Effects: Music in Nineteenth-Century Magic Shows' by AIAS Fellow Jessie Fillerup, 23 September 2019.

Videnskabsklubben: Mentor Workshop for students. Organized by: Videnskabsklubben – a club for children to learn about science and curiosity within the natural sciences, 26 September 2019.

ERC Launch event: ERC Project Launch of '*Classical Influences and Irish Culture (CLIC)*' by PI and AIAS Former Fellow Isabelle Torrance. CLIC is an ERC Consolidator-funded project investigating the sustained diachronic relevance of classical material from ancient Greece and Rome to the formation of socio-political Irish identities from the medieval period to the present day. Organized by: AIAS Former Fellow Prof. Isabelle Torrance, The School of Culture and Society, English, Faculty of Arts, Aarhus University, 1 October 2019.

AIAS Fellows' Seminar: 'Climate change during the dynamic cretaceous world: Impacts on the extinct polar biome' by AIAS Fellow Jennifer Galloway, 7 October 2019.

AIAS Joint Research Presentations: One-day seminar with short 6-minute research presentations by all AIAS Fellows, 9 October 2019.

AIAS Fellows' Seminar: 'Idea archives: Documenting and analyzing creative workflows' by AIAS Fellow Peter Dalsgaard, 21 October 2019.

AIAS Joint Conference: *Multimodality: Illusion, Performance, Experience.* Two-day international conference that aimed at expanding the methodological scope of current research on multimodal perception

AIAS FACILITIES OPEN TO ALL

AIAS is a unique place with excellent facilities to host conferences, symposia and other academic events. It is a meeting place for researchers from diverse disciplines, and is open to all institutes, departments and centres at Aarhus University and for external collaborators. Find out how, via: aias.au.dk/opportunities-at-aias/synergies-with-aarhus-university

through transdisciplinary and transhistorical lenses, as researchers in philosophy, cognitive science, psychology, and media and performance studies have recognized that the study of multisensory experience requires new theoretical and empirical approaches. Co-organized by AIAS Fellow Jessie Fillerup with Aarhus University, B-Magic – an EOS research network, Les Arts Trompeurs and CRILCQ – Centre de recherche interuniversitaire sur la littérature et la culture québécoises, 24-25 October 2019.

AIAS Course: 'Statistical Genetics Workshop' on methods for analysing complex trait genome-wide association study (GWAS) data. Organized and taught by AIAS Fellow Doug Speed and Professor David Balding, 28 October 2019.

Animal Welfare Seminar: 'On animal welfare'/ Dyrevelfærdsudvalget at Health. Organized by the Faculty of Health, Aarhus University, 29 October 2019.

PhD Defense: 'Organokatalyseret Dynamisk Resolution - Asymmetrisk Syntese med Kirale Startmateriale' by Jakob Blom, Dept. of Chemistry, Faculty of Natural Sciences, Aarhus University, 31 October 2019.

Meeting: in the Research Unit for General Practice. Organized by The Research Unit for General Practice, Faculty of Health, Aarhus University, 31 October 2019.

AIAS Fellows' Seminar: 'Metacognitive Self-Inference: Understanding the Influence of Arousal on Self-Monitoring' by AIAS Fellow Micah G. Allen, 4 November 2019.

August Krogh on Tour Talk: 'Systems analysis of Insulin and Exercise Actions in Muscle and Fat' by Professor David James, School of Life & Environmental Sciences and Sydney Medical School, University of Sydney, Australia. Co-organized by the August Krogh Club, Aarhus University and The Danish Diabetes Academy, 13 November 2019.

AIAS at Geoscience Seminar: 'Environmental effects of the High Arctic Large Igneous Province: Land and Marine Impact' by AIAS Fellow Jennifer Galloway. Organized by Geoscience, Faculty of Natural Sciences, Aarhus University, 13 November 2019.

AIAS at CODEX: *Becoming Leonardo da Vinci:* 'What happens when teratonnes of carbon are emitted to the atmosphere' by AIAS Fellow Jennifer Galloway. Organized by CODEX, International Technology Leaders Network, 14 November 2019.

Qcool Kick-off event: Organized by AIAS Former Fellow, Prof. Thomas Pohl, Dept. of Physics and Astronomy, Aarhus University, 15 November 2019.

AIAS Fellows' Seminar: 'Toward curing HIV: Evaluating stem-cell derived plasmacytoid dendritic cells to treat HIV infection' by AIAS Fellow Renée van der Sluis, 18 November 2019.

MapField Workshop: Organized by GEUS, 21 November 2019.

Funding Seminar: 'Research funding - Equal opportunities?'. Organized by the Faculty of Health, Aarhus University, 27 November 2019.

AIAS Workshop: *The Origin and Destiny of Life.* One-day interdisciplinary workshop on the topic of 'Life' with nine talks from various disciplines. Co-organized by AIAS Fellows Thomas Tauris, Cici Alexander, Samia Joca and Jennifer Galloway, 29 November 2019.

AIAS Fellows' Seminar: 'Population consequences of disturbance: Can individual changes in animal behaviour affect populations?'. Organized by AIAS Fellow Fredrik Christiansen, 2 December 2019.

Advisory Board Meeting: for project HealthD360. Organized by the Dept. of Public Health, Faculty of Health, Aarhus University, 2 December 2019.

AIAS Fellows' Seminar: 'Collective Intentionality and the challenge of Collective Improvisation: A novel approach to the issue of collective intentionality on the edge between phenomenology and aesthetics' by AIAS Fellow Lucia Angelino, 9 December 2019.

Funding seminar: 'Funding opportunities within the Natural and Technical Sciences'. Organized by The Novo Nordisk Foundation, 17 December 2019.

Celebration: Celebrating Five New Villum Investigators at AU. Organized by the Faculties of Natural Sciences and the Technical Sciences, Aarhus University, 18 December 2019.

AIAS Conference: *Quantum Community DK conference* bringing together researcher within the quantum field in Denmark. Organized by AIAS Fellow, Prof. Nikolaj T. Zinner in collaboration with the Dept. of Physics and Astronomy, Aarhus University, 9-10 January 2020.



Photo: Talk in the lecture theatre at NoRCS'19, *The Nordic Remote Sensing Conference*, in September 2019. By: Ida Marie Jensen.

Conference: *ROPH'20: Research on Online Political Hostility*. International two-day conference with roundtables, presentations and posters. Organized by AIAS Former Fellow, Prof. Michael Bang Petersen, and Postdoc Alexander Bor, Dept. of Political Science, Faculty of Business and Social Sciences, Aarhus University, 23-24 January 2019.

Meeting: in the University Management. Organized by the Rector's Office, Aarhus University, 19 February 2020.

ERC Event: Information meeting on ERC Advanced Grants for experienced researchers. Organized by the Danish Ministry of Education and Research, 25 February 2020.

COVID-19 CANCELLATIONS

Due to the corona pandemic, all larger conferences, symposia and workshops that were planned by the AIAS fellows and AU and international collaborators and scheduled for the Spring, Summer and Autumn of 2020 have been postponed or cancelled. The AIAS Fellows' Seminars from March until August 2020 have all been held virtually.

August Krogh on Tour Talk: 'Krogh's Insights About the Microcirculation – Relevant a Century Later' by Professor Christopher Ellis, University of Western Ontario, Canada. Organized by the August Krogh Club and Aarhus University, 27 February 2020.

AIAS Fellows' Seminar: 'How much did they produce? Production pattern of central Anatolian cities during the Roman period' by AIAS Fellow Hale Güney, 2 March 2020.

AIAS Symposium: *Mini-Symposium on Endothelial – Muscle cell cross talk*. A cross-disciplinary mini symposium that aimed at disseminating new research findings, concepts, and therapeutic opportunities at the forefront of endothelial and muscle biology. Co-organized by AIAS Fellow Joanna Kalucka and Assistant Professor Jean Farup, The Dept. of Biomedicine, Faculty of Health, Aarhus University, 5 March 2020.

AIAS Fellows' Seminar: 'Magical Laboratories in Space: Extreme Physics with Compact Objects' by AIAS Fellow Thomas Tauris, 3 February 2020.
AIAS Joint Research Presentations: One-day seminar with short 6-minute research presentations by all AIAS Fellows, 5 February 2020.

AIAS Funding Seminar: 'Research Funding Seminar' with presentations on the Danish funding landscape, EU funding and funding strategy for the AIAS Fellows given by the Aarhus University Research Support Office and organized by AIAS in collaboration with the AU Research Support Office, 6 March 2020.

AIAS Fellows' Seminar: 'Toward managing cancer symptoms. Investigating circadian rhythms and light exposure in cancer patients' by AIAS Fellow Lisa Wu, 17 February 2020.



Photo: NoRCS'19, The Nordic Remote Sensing Conference and poster presentations in the Hall, September 2019. By: Ida Marie Jensen.

AIAS Former Fellow talk at the IMC: 'Using behavioural science to promote sustainability' by AIAS Former Fellow Jessica Barker, The Behavioural Insights Team, UK. Organized by the Interacting Minds Centre, Aarhus University, 6 March 2020.

AIAS Virtual Fellows' Seminar: 'Understanding the blood vessels one cell at a time' by AIAS Fellow Joanna Kalucka, 14 April 2020.

AIAS Virtual Fellows' Seminar: 'Power, Business, Regulation. Analysing the Single European Market' by AIAS Fellow Sandra Eckert, 20 April 2020.

AIAS Virtual Fellows' Seminar: 'An Alternative Europe? Global Spaces and Balkan Imaginations during the Cold War' by AIAS Fellow Bogdan C. Iacob, 27 April 2020.

AIAS Virtual Fellows' Seminar: 'Cystic Fibrosis - and hidden jewels in the urine' by AIAS JCS Fellow Jens Leipziger, 4 May 2020.

AIAS Virtual Fellows' Seminar: 'How the knowledge economy worked (and didn't) before and after COVID19' by AIAS Fellow Herman Mark Schwartz, 11 May 2020.

AIAS Virtual Fellows' Seminar: 'Navigating the present: An anthropological study of human agency, design and historicity' by AIAS Fellow Ton Otto, 18 May 2020.

AIAS Virtual Seminar: 'Citizens' Behavior During the COVID-19 Lock-down: Evidence from Eight Western Democracies' by AIAS Former Fellow, Prof. Michael Bang Petersen, Dept. of Political Science, Faculty of Business and Social Sciences, Aarhus University 25 May 2020.

AIAS Virtual Seminar: 'The parental brain: tuning in to infant signals' by Associate Professor Christine Parsons, Interacting Minds Centre, Aarhus University, 8 June 2020.

AIAS Virtual Seminar: 'Cold War Lives: Cultural Diplomacy and the Biographical Turn' by Associate Professor Rósa Magnúsdóttir, History, Aarhus University, 15 June 2020.

AIAS Summer Get-Together: Social summer gathering for the AIAS Fellows only (due to COVID-19 restrictions on number of people) with welcome talk by AIAS Director Søren Keiding and music performance by jazz pianist Mads Bærentzen, 19 June 2020.

AIAS Virtual Fellows' Seminar: 'Urban Aesthetics and Gentrification: From Citizens as Sensors to Participatory Citizenship' by AIAS Fellow Tijen Tunali, 22 June 2020.

AIAS at European NetIAS Lecture Series: 'Opening the borders of symptom management: Investigating circadian rhythms and light exposure in cancer patients' by AIAS Fellow Lisa M. Wu. Organized by Bologna IAS and the NetIAS network, 25 June 2020. ■

ORGANISATION, STAFF AND FUNDING



ORGANISATION, STAFF AND FUNDING

BOARD OF DIRECTORS

Jørgen Frøkiær

Professor, Head of Department of Clinical Medicine, Faculty of Health, Aarhus University, Chair

Dorthe Berntsen

Professor, Head of Center on Autobiographical Memory, Department of Psychology and Behavioural Sciences, School of Business and Social Sciences, Aarhus University

Bo Barker Jørgensen

Professor, Center for Geomicrobiology, Department of Bioscience, Faculty of Natural Sciences, Aarhus University

Torben M. Andersen

Professor, Department of Economics and Business, School of Business and Social Sciences, Aarhus University

Karl Anker Jørgensen

Professor, Department of Chemistry, Faculty of Natural Sciences, Aarhus University

Lars Ditlev Mørck Ottosen

Professor MSO, Department of Engineering, Faculty of Technical Sciences, Aarhus University

Lotte Meinert

Professor, Department of Anthropology, School of Culture and Society, Faculty of Arts, Aarhus University

ADVISORY BOARD

Bertil Andersson

Professor, Nanyang Technological University, Singapore

Andreas Engel

Professor, Case Western Reserve University, USA

Hans Ulrich Gumbrecht

Professor, Stanford University, USA

Lene Hau

Professor, Harvard School of Engineering and Applied Sciences, USA

Bo E. Honoré

Professor, Princeton University, USA

Cheryl Mattingly

Professor, University of Southern California, USA

David Rubin

Professor, Duke University, USA

Helmut Schwarz

Professor, Technische Universität Berlin, Germany

NEW GOVERNANCE MODEL AT AIAS AND NEW BOARD COMPOSITION

After the evaluation of AIAS in the fall of 2017, we have instigated a number of changes at AIAS and, in particular, the AIAS governance model. This also follows the specific recommendations of the external evaluation board, and during 2019, we have implemented a majority of these recommendations. In accordance with the governance model, the director of AIAS is no longer the chair of the AIAS board of directors. Instead, the Rector of Aarhus University has appointed Professor Jørgen Frøkiær as new chair of the AIAS board. The board will elect a new vice chair of the board in September 2020. In addition, new board members have been appointed by the five faculties at Aarhus University in an effort to strengthen the bond between AIAS, and the University

SELECTION BOARD

Heide Schulz-Vogt

Professor. Dr., Leibniz Institute for Baltic Sea Research, Germany

Li Bennich-Björkman

Professor, Uppsala Universitet, Sweden

Taina Pihlajaniemi

Professor, University of Oulu, Finland

Karin Gundersen

Professor, University of Oslo, Norway

Jørgen Frøkiær

Professor, Aarhus University, Denmark

Nils Bubandt

Professor, Aarhus University, Denmark

Søren Rud Keiding

Acting Director of AIAS, Professor, Aarhus University, Denmark

STAFF

Søren Rud Keiding

Acting Director of AIAS, Professor, keiding@aias.au.dk

Nikolaj Thomas Zinner

Deputy Director & AIAS JCS Fellow, zinner@aias.aauk.dk

Lena Bering

Communications Officer, lber@aias.au.dk

Helle Villekold

AIAS-COFUND Programme Manager, helle@aias.au.dk

Tanya Majlund McGregor

Administrative Officer, tanya@aias.au.dk

Pia Leth Andersen

Special Consultant, plan@aias.au.dk

Vibeke Moll Sorensen

Relocation Officer, vms@au.dk

Dorte Bank Mariager

Front Desk Receptionist, dorte@aias.au.dk

FUNDING



AIAS wishes to thank the following for their support to the Institute:

- Aarhus University Research Foundation
- The European Union's Seventh Framework Programme for research, technological development and demonstration (Grant agreement no 609033)
- The European Union's Horizon2020 (Grant agreement no 754513)
- Aarhus University



AARHUS UNIVERSITY RESEARCH FOUNDATION

AARHUS UNIVERSITETS FORSKNINGSFOND



