

NWO Veni-ronde 2021-deel 2: domeinen SGW en TTW (Engels)

Embargo tot maandag 11 april 2022, 09.00 uur AM

Domain Social Sciences and Humanities (SSH)

Empowering meta-analysis by taking advantage of preregistered and replication studies

dr. R.C.M. van Aert (M), Tilburg University

An important threat to the validity of meta-analyses is publication bias. Replication and preregistered studies are deemed less susceptible to publication bias. I will develop a novel meta-analysis methodology that optimally synthesizes conventional with replication/preregistered studies and corrects for publication bias. This new methodology yields more accurate conclusions in meta-analyses.

Beyond Binaries: Intersex in Islamic Legal Tradition

M. Alipour (M), Utrecht University

While since the sixteenth century Shi'i jurists proposed a third gender to categorise intersex individuals, contemporary Islamic discourses employ a binary gender logic. Challenging the binary approach, this legal-hermeneutical study examines the little-understood non-binary conceptions of gender in Shi'i Islamic law, which remain essential for intersex and transgender Muslims today.

Fathers combining work and care

S.C.H. André (V), Radboud University Nijmegen

Although fathers and mothers increasingly aspire to share working hours and care responsibilities equally, this often seems not to happen in practice. Many fathers work more hours and are less involved in childcare than they would like. This could change if they used care-related work arrangements like part-time work, parental leave, flexible working and homeworking. Adopting an interdisciplinary approach, this study aims to clarify the factors that influence the relationship between fathers' work-care ambition and behaviour at four levels (the household, friends and family, work and country), so that we can learn how to make combining work and care easier.

How can computational models reflect multilingual language understanding?

dr. L.M. Beinborn (F), VU Amsterdam

When we communicate in a foreign language, we often use cues from our mother tongue to facilitate comprehension. Computational models ignore the differences between languages but still perform well in cross-lingual understanding. This research examines if multilingual models can reflect transfer effects and aims at developing cognitively plausible models to support language learning.

Language variation at home and abroad: the case of P'urhepecha in Mexico and its US diaspora

dr. K.R. Bellamy (F), Leiden University

Heritage speakers display considerable intra-group linguistic variation. By documenting lexical and morpho-syntactic patterns among P'urhepecha speakers in Mexico and the US diaspora, this project will investigate the sources of this variation. The ensuing online dialect atlas will serve as an online resource for speakers, learners and researchers of the language.

How to manage multiple team memberships

dr. H.J. van de Brake (M), University of Groningen

Many people work in multiple teams at the same time. Yet we know surprisingly little about the consequences of this work practice for employee wellbeing and performance. The proposed project examines why and when working in multiple teams has positive or negative effects. In doing so, I will not only look at the total number of teams in which a person is active, but also examine how these teams differ from each other.

Combatting organisational amnesia after crises

dr. W.G. Broekema (M), Leiden University

Combatting organisational amnesia after crises

Society expects from public organisations to learn from crises, to respond more effectively to future contingencies. However, organisations often forget these hard-learned lessons soon again, resulting in repeating mistakes. This project explains why some organisations forget lessons and others retain them, analysing Covid-19 lessons in 'real time' over three years.

Free Speech and Censorship in the Digital Society: A computational study of the determinants and effects of political speech regulation by social media companies

dr. A. Casas Salleras (M), VU Amsterdam

Private social media companies increasingly play a role in regulating (political) speech online, posing a clear threat to democratic accountability. Due to a lack of transparency and independent research, we do not clearly know the conditions under which platforms regulate speech, nor the effects (and effectiveness) of their policies. Challenges related to analyzing big SM data have made it difficult for research on this pressing topic to flourish. I ramp-up this research by leveraging innovative computational methods to disentangle the nature of this new speech regulation paradigm, as well as its effects on the politically-relevant behavior of users.

The Garden Complex

dr. ir. B. Cattoor (F), Delft University of Technology

Gardens are a major source of urban resilience: they are key in countering climate change effects and biodiversity loss, and are greatly beneficial to human health and well-being. Despite these powerful capacities, the garden complex –the sum of urban gardens– has been largely overlooked in research and planning. This is especially problematic because gardens occupy 30% of urban ground, but they risk disappearing or face critical change due to densification, environmental stress and changing lifestyles. This VENI addresses, analyses and activates the garden complex and thereby contributes to co-creating a more sustainable, liveable and resilient urban future.

Citizens to the rescue or going rogue? Harnessing the potential of online self-organization against crime

dr. R. Dekker (F), Utrecht University

In academic and societal debate, citizen self-organization is seen as a positive development. However, online self-organization against crime raises important normative questions. I will examine how social media logic changes citizen self-organization, how law enforcement evaluates this phenomenon and how we can harness the potential of online self-organization for policework.

Resolving treatment resistance in youth with aggressive behavior problems – A virtual reality approach

dr. A. van Dijk (F), University of Amsterdam

Over 45% of youth with aggressive behavior problems stop treatment against the advice of their therapist. What can therapists do to resolve treatment resistance in these youth? This project uses interactive virtual reality technology to investigate how therapist behaviors may cause resistance and provides a training environment for therapists to practice resolving resistance.

The Missing Entrepreneurs? The Diversity of Female Entrepreneurship in Europe, 1900-2020

dr. S. Dilli (F), Utrecht University

Female entrepreneurship is not a recent phenomenon. Nevertheless, we still know little about the historical development of female entrepreneurship, let alone about the explanations behind it. This project will collect new comparable time-series data on female business-owners and innovators in Europe since 1900. Based on this evidence, it will demonstrate the factors that explain the change in female entrepreneurship.

The missing link: How to make global supply chains more sustainable

dr. K.H. Eller (M), University of Amsterdam

A wave of recent regulations at the national, European and international level requires companies to guarantee sustainability and human rights in global supply chains. Despite these efforts, illegality and rights violations persist. This project provides the missing link. It shows the roots of current loopholes and how to prevent them.

From common ground to battleground? Public perceptions of bias in impartial institutions

dr. E.J. van Elsas (F), Radboud University Nijmegen

Supposedly impartial institutions – such as courts, the police, and universities – are often accused of bias. But to what extent do citizens perceive these institutions as biased, and where do such bias perceptions come from? This project answers these questions by combining content analysis, original survey data and experiments.

Didactic Intention and Cultural Intervention: Contemporary Activist Authorship in Germany and Britain

dr. L. Essa (F), Utrecht University

This project analyses how authors from marginalised communities aim to reach – and teach! – wide audiences with works of literature, film, and theatre that are designed to disrupt ethno-nationalist visions of Germany and Britain. It rethinks didactic art and the significance of authorial intention in literary and cultural studies.

I did it! Or did I? Towards diagnostic confession evidence in police interrogations

dr. L.M. Geven (F), Leiden University

Image being convicted for a crime you never committed. It sounds counterintuitive, yet upon surfacing wrongful convictions worldwide, innocents have shown to be coerced to confess to police. However, to date, police officers, judges and juries are unable to tell innocence from guilt based on your confession statement, with a magnitude of consequences. Using new experimental methods to elicit confessions, this project aspires to identify coercive factors in the interrogation room. Then, innovative lie detection tools based on verbal and behavioural cues to deceit will be implemented to find the truth behind the confession.

Mattering Minds: Understanding the Ethical Lives of Technologically Embedded Beings with 4E
dr. J.B. van Grunsven (F), Delft University of Technology

That technology plays an important role in how we live our ethical lives is increasingly recognized by philosophers and engineers alike. That said, little attention has been paid to how technology shapes our experience of the expressive bodily lives of others as beings who matter. Using insights from the fast-growing field of 4E cognitive science, this research shows that we are hereby ignoring an important dimension of ethical life that, when understood, can provide new normative insights for technology development.

Languages as Lifelines: How Multilingualism Helped Netherlandish Refugees Rebuild their Lives (1540–1600)

dr. A.D.M. van de Haar (F), Leiden University

In the sixteenth century, thousands fled the war-torn Southern Low Countries for the British Isles, Germany and the Northern Low Countries. This project investigates how these refugees used their language proficiency as starting capital to rebuild their lives. They applied their multilingualism to expand their social networks in exile, and as a professional skill. In doing so, they consciously employed the status of particular languages in their country of arrival. French, for instance, was particularly appreciated by the English aristocracy. The linguistic strategies of these refugees show that language differences do not necessarily hamper integration: rather, multilingualism offers invaluable opportunities.

A good crisis gone to waste? The 1930s Great Depression and primary export dependence in Africa
dr. M.A. de Haas (M), Wageningen University & Research

African economies are vulnerable to unpredictable global demand for agricultural and mineral commodities. This causes boom-bust cycles and complicates poverty reduction. Studying historical crises and their consequences can improve our understanding of this persistent pattern. The 1930s Great Depression signifies the deepest global economic crisis since the Industrial Revolution. Prices for Africa's export commodities collapsed. Why did Africa's dependency on such exports increase nonetheless? Using colonial archives, newspapers, and historical statistics, I study the reactions of colonial administrators, farmers and workers in Central and East Africa to explain the impact of the Depression and its consequences for development.

Enabling vulnerable communities to build back safer

dr. E. Hendriks (F), Twente University

To fight disaster risks, resistant housing is crucial. Too often, essential construction techniques are not used by the most vulnerable, despite assistance. Choices made during reconstruction are still insufficiently understood. This study will explore these choices to create effective targeted assistance and to enhance resilience of houses reconstructed after disasters.

Data exploits: Uncovering pathways to digital autonomy for science and society

dr. S. Hobbis (F), Wageningen University & Research

Digital technologies collect and process data through a top-down process that allows for exploitation. By studying how residents of remote environments with long histories of anticolonial resistance navigate digitization, this project uncovers possibilities for autonomy from digital exploitation and generates practice-based responses for more inclusive uses and management of data.

How can female leaders effectively manage employee voice?

dr. S. Isaakyan (F), Erasmus University Rotterdam

Despite increasing discussions about social equality and societal efforts to introduce it in organisations, female leaders still face gender-related biased evaluations. These evaluations may be triggered when female leaders endorse or reject their employees' change-oriented ideas, consequently leading to negative implications for themselves. This project seeks to understand these implications and provides timely solutions enabling female leaders to effectively manage their employees' change-oriented ideas and overcome biased evaluations.

Valuing the body: a moral history of human tissues in twentieth-century medicine

dr. N. Jacobs (F), Erasmus MC

From organs, blood and bones to urine, milk and sperm—in today's medicine we can donate almost every part of our body. The possibilities seem limitless; but we do set moral limits. What are those limits exactly? Why do we put them where we put them? And how do these boundaries unfold in the daily practice of medicine? In this project, I investigate moralization processes surrounding the use of human tissues in twentieth-century Dutch medical practice. With this historical perspective, I examine how modern medicine has affected how we morally value (parts of) our body.

How oil made a connected world

dr. P. Jafari (M), Royal Netherlands Academy of Arts and Sciences

Oil has shaped our world profoundly. It has created wealth and mobility, but also socio-ecological degradation and colonial inequalities. This research shows how both trends occurred simultaneously due to the ways oil companies and imperial states transformed land ownership, labour relations and the natural environment in oil producing regions. To overcome the obstacles and resistance that they faced in that process, oil corporations introduced legal, managerial and technological solutions that connected the oil producing regions with the rest of the world, but also institutionalized socio-ecological degradation and colonial inequalities.

Places to not Forget: De-Silencing the Narratives and Heritage of the World's First Black Republic, Haiti

dr. J.S. Jean (M), KITLV

This project investigates archaeological sites and contemporary practices and interactions with heritage in postcolonial societies. Innovatively combining insights from archaeology, ethnography, and heritage studies, I use Haiti (World's First Black Republic) to illuminate the importance of involving historically marginalized communities to arrive at inclusive narratives of the past and heritage.

I spy with my little eye... How the brain generates visual experiences

dr. M.C. de Jong (F), Spinoza Centre for Neuroimaging - Royal Netherlands Academy of Arts and Sciences

Your eyes capture light like a camera, but to see you need your brain. How does your brain integrate visual with subjective information? Neural signals travelling in the opposite, 'feedback', direction through a hierarchy of brain regions may play a key role. This project will determine how feedback signals contribute to visual experiences of objects. While human participants view images of real and illusory objects, I will measure feedback signals using advanced neuroimaging techniques and manipulate them with pharmacology. This project will help solve the enigma around feedback signals and, thereby, will help us understand how brain regions work together.

The Real Effects of Non-Conventional Monetary Policy: A New Portfolio Channel

dr. D.M. te Kaat (M), University of Groningen

Following the global financial crisis, various central banks expanded their set of non-conventional monetary policy instruments. The academic literature studying the impact of these instruments on the real economy mainly focuses on the transmission via increased credit supply. However, to what extent and through which channels do these instruments affect economies with declining credit volumes, as in the case of the euro area post-2008? To answer this question, the proposed research studies unconventional monetary policy transmission outside the credit market through a household portfolio rebalancing channel.

Foreign Books in China, Cultural Control, and Technology

dr. S. Kharchenkova (F), Leiden University

In China the government regulates what readers can access, but editors and translators in their everyday practice play a key role in selecting foreign books for publication and preserving or adapting their content. Focusing on state control and technology, this project investigates the fate of foreign books in contemporary China.

Risk-pooling and institutional innovation for sustainable water service transitions(RISKPOOL)

dr. J.K.L. Koehler (F), Institute for Environmental Studies, VU Amsterdam

In the face of global challenges such as climate change, innovation in water services is urgently needed. Institutional innovation is happening on a large scale, in which hybrid institutions emerge, which share risks between private, public and community actors. Advancing institutional theory of risk, the range of choices these risk-pooling actors make are exposed. The global set-up of this project, the attention for the urgent transition to a more sustainable society and the focus on joint learning will make sure the project results in new insights in the design of the water utilities of the future.

Traveling Sex Education

dr. W. Krebbekx (F), University of Amsterdam

Sex education programs originating in the Netherlands travel to various countries in the Global South. How do these sex-ed interventions interfere with other knowledges and educational practices? And what new constellations of sexuality emerge along the way? Traveling Sex Education traces the itineraries of these programs in Uganda and Bangladesh.

When language is not a given

dr. I.L. Lammertink (F), Radboud University Nijmegen

Language acquisition is not a given for every child. Children with Developmental Language Disorder (DLD) have severe difficulties acquiring language without a clear cause. This project investigates how the nature of children's language input affects the ease with which children learn language. This project is unique because it focuses on the role that peer language input rather than parental or teacher input plays during language development. This question is particularly relevant in the educational context of Dutch children with DLD where peer languages may differ between children with DLD enrolled in special education versus regular education.

Toward personalized bereavement care: Examining individual differences in response to grief treatment

dr. L.I.M. Lenferink (F), Twente University

Prolonged grief disorder is a debilitating condition, affecting 10% of bereaved people. To date, studies evaluating treatments for prolonged grief have focused on symptom change on a group-level, ignoring individual variability in grief-responses. Personalized prolonged grief treatment may enhance treatment outcomes. This project contributes in three ways to personalized treatment for prolonged grief, by:

- (i) improving the understanding of differences in grief-trajectories in response to treatment for prolonged grief using a novel FAIR data-archive;
- (ii) examining grief in daily life;
- (iii) offering dynamic support in daily life to treat prolonged grief.

A Lost Pearl: Feminist Theories in Buddhist Philosophy of Consciousness-only

dr. J. Li (F), Leiden University

Drawing upon the Buddhist philosophy of consciousness-only that has been largely overlooked by feminists, the project suggests a novel framework for Buddhist feminism to resolve the canonical tension in the Buddhist stances towards the feminine and empower Buddhists to fight against sexism. As this project will argue, researchers can expand the horizon of both Buddhist philosophy and feminist thinking when they re-read Buddhist texts from a feminist perspective. The proposed version of Buddhist feminism further advances the current discussions in intercultural feminism on the reciprocity of cultural diversity and gender equality.

Faster ground-breaking scientific insights enabled by flexible and efficient statistical methods

dr. A. Ly (M), Institutes Organisation of NWO

Every year millions of euros are spent on innovative ground-breaking research, but to assess the veracity of the empirical effects, outdated statistical methods are used that are inflexible at best and misleading at worst. This project aims to develop reliable flexible and efficient methods with which data patterns can be identified as quickly as possible to maximally save time, effort and, in clinical settings, lives, enabling the saved resources to be allocated to other research efforts. Hence, the methods developed here will lead to scientific insights being gained faster and in greater number, which in turn increases societal benefits.

Bad influence through social media: How online behavioral contagion propagates problematic behaviors and what we can do against it

dr. P.K. Masur (M), VU Amsterdam

Social media facilitate the adoption of problematic behaviors (e.g., incivility) or risky practices (e.g., disclosing too much). But the exact psychological mechanisms and ways to protect against negative consequences of such behavioral contagion effects are unknown. This project combines experimental, tracking, and simulation methods to study online behavioral contagion and its boundary conditions. The project further analyzes whether media literacy protects against irrational adoption of problematic behaviors and tests whether subtle nudges embedded into the social media design can buffer against negative influence on social media.

Beyond black boxes and biases: Using simple and transparent algorithms to accomplish fair and valid assessment in organizations

dr. A.S.M. Niessen (F), University of Groningen

Information derived from psychological assessments is often interpreted intuitively, which results in suboptimal and biased decisions. I investigate if the use of simple, transparent algorithms results in

more valid and fairer assessment. This project advances insights into test use by investigating how such algorithms can best be designed and used.

Cat – there. Soap – where? Abstract use of space in Sign Language of the Netherlands

dr. M. Oomen (F), University of Amsterdam

In sign language conversations, people, animals, and things often get associated with seemingly random locations in space: sign 'cat' and point to the right, then point again to refer to that same cat. This research identifies the unwritten rules signers apply when picking out spatial locations to represent such referents.

Caring for Resilience: A Multi-Sited Ethnography of Knowing, Valuing, and Managing Nature

dr. I. van Oorschot (F), Erasmus University Rotterdam

'Resilience' is the new buzzword in environmental policy, the thought being that our ecosystems have to become 'resilient' against the challenges accompanying rapid and unpredictable climate change. But what does that entail in practice? What value judgments come into play when environmental management professionals try to 'foster resilience', and what knowledges does it require? Drawing on in-depth ethnographic fieldwork in three ecosystem types – heath, forest, and tidal areas – I study how 'resilience' takes shape in the actual, everyday practices of environmental management professionals, and analyze how 'resilience' generates novel forms of knowing, valuing, and managing nature.

Budgeting Decision Accuracy: Analysing and Advancing Decision-Making in Public Budgeting

dr. J.F.A. Overmans (M), Utrecht University

I study how lack of cognitive accuracy amongst politicians and bureaucrats affects the allocation of tax money. This harms effective and legitimate responses to societal challenges. I map effects of bias and noise on individual budget allocation, and study how training, choice architecture and budget guidelines reduce lack of accuracy.

Policy evaluations evaluated. When do they prompt an overhaul of policies?

dr. V.E. Pattyn (F), Leiden University

With policy evaluation becoming more institutionalised in public organisations, concerns about the limited use of much evaluation research have increased. This study investigates the conditions under which and how evaluations foster or impede fundamental policy changes. It compares evaluation use in countries and policy fields with different evaluation governance designs.

Global Access to Medicines through EU Law & Policy

dr. K. Perehudoff (F), University of Amsterdam

The European Union (EU) plays a central role in regulating Europe's medicines supply. New evidence suggests these internal actions also impact on medicines access outside of Europe, which can have important consequences for political and economic stability, and human health and wellbeing. This project investigates the EU's legal and ethical responsibilities towards medicines access in low- and middle-income countries, and studies how the EU's actions can and do impact on access to medicines in these countries. This project proposes a legal impact model that can guide the EU's future action towards pharmaceuticals in line with its principles and values.

Anthropocene Legalities: Reconfiguring Legal Relations With/in More-than-Human Worlds

dr. M. Petersmann (F), Tilburg University

The Anthropocene demands a recognition of how nonhumans (from CO2 to coronaviruses) actively participate in social life. How can legal rules and concepts capture this shared human-nonhuman agency and co-existence? To displace the anthropocentrism of modern law, this project develops 'Anthropocene legalities' to enact response-abilities to care in more-than-human worlds.

Portable Islam: Swahili literary networks in the Indian Ocean

dr. A.R. Raia (F), Leiden University

From the 1930s onwards in East Africa, a massive print production of Swahili religious pocket literature started : this vernacular literature was more accessible than Arabic and became the prime medium to spread new knowledge in the Indian Ocean. The study on how the network of booklets together with their authors, publishers and readers reshaped traditions of learning will rectify simplistic notions of inert Islamic learning traditions. Research, open access databases and outreach reading clubs in the Netherlands will contribute to a fruitful dialogue with African Muslim cosmopolitan communities.

Jihadi-brides and neo-Nazi wives? Women's pathways into and out of extremism

dr. E. Rodermond (F), VU Amsterdam

Women play a key, but understudied role in (violent) extremist groups, and their involvement generates significant societal risks, for example through the intergenerational transmission of violent extremist ideologies. Yet, they are still often depicted as 'naïve brides', 'the partner of' or 'victims', hampering in-depth investigation of their extremist engagement and disengagement processes. This study combines insights from life-course criminological research on male extremists and general female offenders with the use of unique primary data to study why and when women engage in and disengage from terrorism and violent extremism. Results will contribute to tailored programs to prevent women's extremist involvement.

Emergency Ethics: Crisis, Nature, and Wealth in Venezuela

dr. E van Roekel (F), VU Amsterdam

Due to the protracted humanitarian crisis, many Venezuelans currently sustain their livelihoods at the expense of others and nature through resource extraction, smuggling, money transfers, and trading cryptocurrencies. These emergency practices are linked to global supply chains and international organised crime, wherein individuals and companies make astronomical profits from sustaining the crisis. I will ethnographically investigate how Venezuelans in rural and urban areas justify these actions. Herewith I will provide new insights about ethical behaviour during crisis and determine how prolonged crisis affects the moral relations between social and environmental justice.

The developmental dynamics of intelligence: Cognitive networks of facts and skills

dr. A.O. Savi (M), University of Amsterdam

Intelligence predicts success in many areas, but how do you influence it? This research constructs a new theory that describes intelligence as a growing network of facts and skills, revealing the role of development and education. The theory explains and predicts developmental patterns at the individual and population levels. These patterns are tested against large-scale longitudinal educational data.

No music, no life? How music shapes subjective wellbeing across social groups

dr. J.C.F. Schaap (M), Erasmus University Rotterdam

While listening to music has proven benefits for subjective wellbeing, one person's deeply soothing tune can fuel another person's profound loathing. As tastes in music are shaped by people's social backgrounds, this mixed-methods project investigates why music shapes subjective wellbeing differently across social groups based on class, gender and race/ethnicity.

Major Life Transitions and Personality Development in Young Adulthood

dr. M.A. van Scheppingen (F), Tilburg University

What drives personality development in young adulthood? A large body of research has shown that people become more agreeable, conscientious, and emotionally stable from young through middle adulthood. At the same time, young adults go through important changes in social roles: they start careers, relationships, and families. This project focuses on how multiple life transitions contribute to personality development young adulthood, and if personal experiences during the transition (e.g., stress, impact) explain why some people change more than others.

Understanding the workplace: The role of non-routine analytical team tasks

dr. D. Schindler (M), Tilburg University

As the labor market transforms to contain more teamwork that is non-routine in nature and requires cognitive effort, it is imperative to deepen our understanding of these tasks' functioning. This research project uses surveys, laboratory, and field experiments to provide a comprehensive assessment of the determinants of workers' success, investigates how bonus incentives can increase team performance, and demonstrates the effects of staff turnover.

Learning the future of complex decisions: A new mathematical approach

dr. A.H. Schrottenboer (M), Eindhoven University of Technology

Organizations make complex decisions while the future is uncertain. For example, inner-city stores are replenished by trucks before sales are known, and ICU beds are reserved each day before COVID-19 patient inflow is known. To make good decisions, organizations account for a decision's impact on the future. My research develops a fundamentally new mathematical approach to quantify such a decision's future impact by combining Mathematical Programming and Machine Learning methods. This helps organizations to make better decisions resulting in, for example, less nuisance and pollution in inner-cities and better ICU and regular hospital care.

Muslim Women on the Front Lines of Social and Political Change: A Case Study of the Gulf Cooperation Council Countries

dr. L.S. Sirri (F), University of Amsterdam

Are Muslim women in the Gulf just interested in the right to drive cars? Or do they also want to sit in the driving seat politically and steer their societies towards gender equality and democratization? By looking beyond the clichés, this research examines women's life experiences in the Gulf Cooperation Council countries to reveal the practical tools employed in the day-to-day struggles of people. By identifying 'home-grown' strategies used to combat patriarchy and religious extremism, this research has the potential to empower Muslim women everywhere and may help to improve counter-radicalization policies in Europe.

The power of inaction and ambivalence in transnational refugee governance: EU-actors and the contested return of Syrian refugees from Lebanon and Turkey

N.M. Stel (F), Radboud University Nijmegen

Lebanon and Turkey increasingly pressure the Syrian refugees they host to return to their country of origin. But human rights organizations indicate that returnees risk torture and death in Syria. Current returns therefore often defy international refugee law. This project investigates how such contested return dynamics are influenced by EU-actors' positioning. Specifically, by studying what EU-actors do not say or do in the face of contested refugee returns in Lebanon and Turkey, it develops a fundamentally new perspective on transnational refugee governance that foregrounds inaction and ambivalence as exercises of power.

Making the Dutch economic "Golden Age"

dr. J.J.S. van den Tol (M), Leiden University

This project looks beyond the usual suspects of merchants, and studies the role of industry in the early modern Dutch economy. This is not all about economic production; industry's role in deciding regulations and determining import duties was at least as crucial for their contribution.

Bridging the earnings gap. What LGBT-couples tell us about gender inequality

dr. M. van der Vleuten (F), Utrecht University

Major life events, such as marriage, children and separation, generate and amplify gender differences in earnings trajectories. Explanations for these inequalities are often based on differences between men and women, but how do these events affect (in)equalities in same-sex couples? By comparing earnings trajectories of male and female same-sex couples to different-sex couples, this research identifies the true impact of gender on earnings inequalities across major life transitions. This project uses the largest source of information on same-sex couples to date, which increases our understanding how they organize their work and family life in different countries.

Optimizing Health Service Delivery Channels in Low- and Middle-Income Countries

dr. H. de Vries (M), Erasmus University Rotterdam

To enhance access to health services, stakeholders are investing in four service delivery channels: static clinics, mobile outreach, door-to-door outreach, and virtual outreach. Which channels to select for a given service and context remains an open question. This project develops models, algorithms, insights, and simple decision rules for decision makers.

The bright side of life: understanding the origins of optimism

dr. C. Vrijen (F), University of Groningen

Optimists are physically and mentally healthier and happier than pessimists. Where do individual differences in optimism come from? I investigate to what extent and how parents transmit their optimism to offspring. My studies increase understanding on the origins of optimism and may inform research on how to raise optimistic children.

Pattern recognition in extreme events

dr. P. Wan (F), Erasmus University Rotterdam

Extreme events, such as the 2008 financial crisis and the 2021 European flooding, entail high risks for the society. Quantifying the risks of extreme scenarios is the first step towards preventing catastrophic outcomes. As extreme observations are scarce by nature, this task is mathematically challenging and rely on the efficient detection of patterns in data. This research proposes new perspectives for pattern recognition in extreme observations by adapting machine learning techniques.

The Prediction Machine

dr. J.W.A.P. Ward (M), Maastricht University

Government policies rely on predictions about their effect on society. Using a case study of British government between the 1960s and 2000s, this project uses historical research to investigate how prediction became so important to government and explores the consequences of these predictions on government. This project will particularly focus on how prediction influenced the rise of “neoliberal” government.

Speaking Human Rights. Translating Migration Control Measures into Human Rights Language

dr. J.M. Wessels (V), VU Amsterdam

Imagine the situation in refugee camps at the borders of Europe, the de facto detention of asylum seekers, or push backs at the Mediterranean Sea. From the outset it seems that human rights norms forbid such practices. However, States often successfully litigate before the European Court of Human Rights to ensure that their migration control practices are not unlawful under human rights law. How do States do this? This research is the first to provide a comprehensive analysis of the legal techniques that governments strategically deploy to use human rights litigation in their favour.

Poetry in the age of global English

dr. M.M. You (V), Utrecht University

This project investigates how Anglophone poetry responds to the shifting political, economic, and aesthetic dynamics currently re-contextualizing the English language on a global scale. It focuses on how translanguaging poetic practices can help produce strategies for English to co-exist with and even reinforce the vitality of local languages and cultures.

Domain Applied and Engineering Sciences (AES)

PANDA: feasibility of PediAtric Neural based communicAtion

dr. M.P. Branco (F), UMC Utrecht

Hundreds of children are born with severe physical impairment and are unable to communicate effectively. What if these children could use their brain signals to communicate and participate in society? An implantable communication Brain-Computer Interface (cBCI) would allow brain signals to be directly translated into computer commands, thereby enabling the user to control communication software. Although already possible for adults, the development of implanted cBCIs for children with disabilities has been left mostly untouched. This research aims to evaluate the feasibility of implantable cBCI technology to establish communication in children with severe physical impairments.

Physics-informed AI to avoid power blackouts in the energy transition

dr. J.L.C. Cremer (M), Delft University of Technology

Sudden catastrophic power blackouts across entire regions can last for months, with serious consequences for society. Even experts cannot quickly understand when blackouts occur and there is no efficient countermeasure. This research uses artificial intelligence to predict power blackouts and provides an effective countermeasure that can accelerate the energy transition and protect society from the next pan-European blackout.

Sustainable and Miniature Power Solutions for Future Internet-of-Things

dr. S. Du (M), Delft University of Technology

Making wireless sensor devices self-sustainable and small, with energy harvesting solutions and sub-mm dimensions, will be critical in future Internet-of-Things applications, e.g., in healthcare and smart-farming systems. However, current self-sustained devices are larger, with dimensions dominated by off-chip inductors. Removing these inductors can potentially decrease the system size by 99%, and pave the way to real-world implementations and commercialisation. This project proposes a new inductor-less architecture for energy harvesting systems. It achieves higher energy efficiency than conventional inductor-based systems, breaks the miniaturisation barrier, and enables fully silicon-integrated self-sustained wireless sensing devices for future Internet-of-Things.

Removal of toxic anthropogenic solutes in drinking water treatment by electrochemical polishing

dr. J.E. Dykstra (M), Wageningen University & Research

The presence of anthropogenic components in surface water, sometimes already toxic at very low concentrations, challenges the applicability of conventional technologies to produce safe drinking water. The chemical charge of some components, such as boron, arsenic and some organic micropollutants, is affected by the solution pH, and effective removal is challenging with conventional technologies. An innovative, chemical-free, electrochemical technology will be developed to polish, after conventional treatment, water, and to remove these harmful components. A physical-chemical transport model will be developed, which will aid the design of this innovative process.

Ultrasound-informed photoacoustic imaging (UiPI): A new method for personalized risk assessment of ischemic stroke

dr. F. Kalloor Joseph (M), Twente University

Worldwide vascular diseases cause 18 million deaths annually, partly from ischemic strokes caused by rupture of unstable plaque in the carotid artery. Currently, the degree of arterial narrowing is used to decide the treatment type between surgery and medication. This method is suboptimal, resulting in unnecessary surgeries and more occurrences of stroke. Thus, there is an urgency to incorporate instability associated with the plaque composition in deciding the treatment. This project will develop ultrasound-informed photoacoustic imaging, a new method for personalized assessment of plaque composition. Clinical implementation of the method can improve treatment decision making, resulting in effective care.

AQUA-SCALEM: Aqueous-based 3D Structuration for Complex and Large Engineered Muscles

dr. ir. T. Kamperman (M), Twente University

Tissue engineering can revolutionize our healthcare and food production systems. However, current tissue engineering strategies only offer limited scalability, which prevents their clinical and industrial translation. To overcome this grand challenge, this research offers a scalable 3D printing method that enables the biofabrication of large living muscle tissues. The project thereby facilitates, amongst others, development of improved regenerative medicine therapies, animal-free drug screenings, and animal cruelty-free cultured meat.

Exposure Analytics: molecular evidence of daily-life chemical exposures

dr. F. Klont (M), University of Groningen

Humans are exposed to numerous chemicals every day, for example through our food, environment, and potential medical treatments. Exposures are typically studied using questionnaires thereby

relying on how well we remember past exposures. This project aims to provide molecular evidence of exposures to better study their impact on health and disease.

The 'Plug-and-Play Radionuclide Generator': Nanoparticle-Based Recyclable Target Materials

dr. ir. R.M. de Kruijff (F), Delft University of Technology

Radioactive isotopes such as ^{99m}Tc are widely used to diagnose various medical diseases including cancer. However, current production methods are based on just a few (old) nuclear reactors worldwide, and produce considerable long-lived radioactive waste. To be able to continue using these isotopes in the future, new, clean production routes are essential. Therefore, I want to develop a new type of radionuclide generator for the production of ^{99m}Tc . This nanoparticle-based generator can be returned to the irradiation facility after use in the hospital to make it radioactive again. This way we will be able to provide reliable patient care!

Beyond bugging: wireless sensing and monitoring with harmonic radar

dr. ing. A. Lavrenko (F), Twente University

From object tracking to non-contact inspection, the need for wireless monitoring solutions is ubiquitous. Commonly available technologies, however, often fail in highly cluttered environments such as at sea, underground, or when the object of interest is very small. This project fills this technological gap by delivering innovative solutions utilizing the harmonic radar principle to provide wireless sensing and monitoring functionality in the most challenging operational conditions.

Nanoplastic – Macroproblem? Unraveling removal mechanisms during water treatment

Dr. dipl.-ing. K.M. Lompe (F), Delft University of Technology

Nanoplastics in drinking water are a potential threat for human health but difficult to analyse due to their small size and variable composition. This research uses an engineered nanoplastic tracer particle with a metal core allowing for straightforward analytical detection to unravel removal mechanisms in drinking water sand filters using pilot studies and models.

Peatland: living on a gassy soil. Revealing the role of gas on the behaviour of peats

dr. S. Muraro (M), Delft University of Technology

Global warming is increasing the exsolution of gas bubbles from peats, which can compromise the performance and safety of geo-infrastructure. The researcher will investigate the role of gas bubbles in peat through advanced experimental testing at the micro- and macroscale which will support the development of a model to predict the geotechnical behaviour of gassy peat. This research will help to formulate mitigation protocols thereby improving the future safety of geo-infrastructure.

Bi-directional All-optical Fiber-wireless Communication System

dr. ir. C.W. Oh (F), Eindhoven University of Technology

Wireless communication has become a need in many facets of our daily lives. Unfortunately, this has led to congestion in the radio wireless spectrum. Although the potential of beyond Gigabits-per-second optical systems have been demonstrated by several research groups, the implementation of a bi-directional all-optical Gigabit fiber-wireless system remains a challenge in both academia and industry. In order to tackle this, I will make use of my expertise in optics, photonics and optical communication to work towards an innovative system by adopting the optical injection locking technique together with diffractive optics to establish passively steered beams and simultaneous user localization.

Unleashing the Potential of Separation Technology for Achieving Innovation in Research and Society (UPSTAIRS)

dr. B.W.J. Pirok MSc (M), University of Amsterdam

In UPSTAIRS, methods and open-access algorithms will be created, to facilitate the use of powerful contemporary separation technology for other (industrial) disciplines. By automating the selection and simultaneous optimization of a large number of parameters, contemporary methods can be drastically improved. This will help society solve pressing problems and will help us better understand materials, art, pharmaceuticals, environment, and other matrices.

Circulating tumor cells, together we triumph divided we fall

dr. ir. K.M. Pondman (F), Twente University

Cancer cells can travel through the body as clusters, with for example immune cells and/or platelets. These clusters (CTMs) may be better equipped to survive in the blood flow and cause cancer spreading (metastasis) compared to individual cancer cells (CTCs). Yet, their extreme rarity makes their study very challenging. Here, CTM models will be created, with well-defined compositions, to identify which of their characteristics increase their survival and ability to cause metastasis, using a blood vessel model. The generated new knowledge will be instrumental in developing new treatments targeting these CTMs to, subsequently, avoid spread of cancer.

Making Digital Material Technologies a practical reality for sustainable utilisation of porous materials

dr. M. Rücker (F), Eindhoven University of Technology

From fuel cells to hydrogen storage – porous materials define the efficiency with which sustainable energy is converted and stored in form of hydrogen. Novel digital tools, referred to as ‘digital material’ technologies can help to design these porous materials and improve their performance. However, these technologies rely on accurate digitalization methods. In this project, I develop digitalization tools reflecting features at molecular level in a representative manner. In large quantities, these small features may impact the behaviour of the hydrogen. Their accurate determination is therefore essential to make ‘digital materials’ a practical reality.

Regenerative propellers: sustainable and quiet electric propeller aircraft with in-flight energy recovery

dr. ir. T. Sinnige (M), Delft University of Technology

Sustainable and quiet aircraft are essential to reduce the impact of aviation on our environment. The combination of electric propulsion technology with efficient yet quiet propellers can enable the achievement of this goal. This project investigates a novel approach to maximize energy efficiency and minimize noise of future electric aircraft with propellers that are optimally integrated with the aircraft and regenerate electricity during parts of the flight.

You won't find what you don't image: Exposing blind spots in endoscopic cancer screening

dr. ir. F. van der Sommen (M), Eindhoven University of Technology

Artificial Intelligence (AI) is nowadays used in numerous algorithms that strive to help medical doctors in finding early gastrointestinal cancers. These algorithms are typically developed in specialized academic hospitals and trained with data that meets the highest quality. However, in the community hospitals, where these algorithms will be applied, the quality and completeness of the endoscopic imaging procedure is generally much lower, thereby severely degrading the detection performance of any supportive AI algorithm. This project aims to develop methods for quantitatively

measuring endoscopic imaging quality and completeness during live endoscopy, thereby limiting the risk of malignant cancers being overlooked.

From signal-based modeling to sensation-based modeling

dr. Y. Vardar (F), Delft University of Technology

Imagine you could feel the brush strokes of Van Gogh in his Starry Night painting, the fur of your beloved pet on a Zoom call, or tissues in medical images. I will enable this breakthrough by formulating a generic parameterized model that can emulate any tactile texture across diverse human sensations like roughness, slipperiness.