



# Connect



## Improving the quality of life with Voice Technology

**A new master's at Campus Fryslân is, according to Dr. Matt Coler, associate professor and programme manager, 'a great encapsulation' of the research and scientific mandate at CF. The master's in Voice Technology draws students from both linguistics and computational sciences/Artificial Intelligence and has them working together on scientific developments with practical applications for society.**

BY TORI KELLY

### Interdisciplinary programme

'The combination of language and technology is not something you come across very often,' admits Coler. 'Part of the vision of Campus Fryslân is to think differently about how we structure relations between scientific and applied disciplines. We really can claim interdisciplinarity in our faculty and this master's programme is an excellent example. It affects everything we do, from recruitment to teaching, from classroom design to programme content.' Dr Jelske Dijkstra, programme developer and senior researcher, continues, 'With our students coming from such different domains, we have to quickly get them to understand

each other's languages and way of thinking in order to progress. We do this by getting them to work together in structured exercises which draw on the others' expertise. The course on programming will have the linguists drawing on the expertise of the computer scientists while the speech sounds course will mean the expertise flows in the other direction. They'll help each other and develop an understanding of each other's perspectives and approaches.'

### Quality of life

One of the obvious advantages of an interdisciplinary programme is that these different perspectives of a research question can lead to more innovative and creative solutions. Matt Coler: 'The use of the word 'technology' in the name of the master's already hints at the fact that we're not looking just at theoretical applications of language modelling, but also on its implementation in software running on devices. As an academic, and in particular as a social scientist, I believe those devices should have a positive social impact. As a university, we're liberated from only developing products driven by commercial interests. In fact, as a university, it is our role to develop products that improve the quality of life.'

Jelske Dijkstra elaborates: 'The application of voice technology in the field of health provides some clear examples. Voice synthesis, the creation of a voice electronically, can allow someone who has lost their voice to continue to communicate, but not just with a 'default' artificial voice like the kind on your smart phone. The voice should be the person's own and should sound natural and familiar. Your voice is, after all, part of your identity. The way you talk, your intonation, your choice of language, it's all part of who you are.' Matt Coler: 'In fact, these characteristics are exactly what makes it difficult for someone relying on voice recognition to hear, such as is the case with cochlear implant users. People relying on electric hearing often have enormous difficulties understanding speech in different kinds of noisy environments, or perceiving melodies or sung speech.'

### Day-to-day life

This commitment to improving the quality of life goes beyond only the health sector. Take, for instance, the quality of synthetic voices used on many consumer products: 'Just try having Siri or Alexa read a long text out loud – the monotony of the voice is insufferable. Or consider

the accuracy of speech dictation on your smart phone or computer – it's not great. Imagine being able to just connect a pair of headphones and have all your emails or news

**'Universities are in a position to spearhead developments that improve the quality of life'**

headlines comfortably read to you. Or dictating a message casually and let the recognition algorithm automatically correct your speech when you misspeak or stutter, or even increase the formality of the text.' 'Or only being able to whisper and having a device that turns your whisper into realistic speech,' adds Jelske Dijkstra. 'Or having speaker recognition actually recognise who is talking.' Such innovations are the tip of the iceberg, and the MSc Voice Technology intends to

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**At home in the world of research**

Jesse van Amelsvoort: 'The freedom to think energizes me.' [p.3](#)

play a part in those breakthroughs by training the next generation of speech scientists.

### Tangible results

Jelske Dijkstra: 'Speech scientists can definitely help improve quality of life. Collaboration with other fields such as AI or robotics present clear opportunities, and we work with industry so that we can explore more possibilities – and so that our students can see just how diverse the opportunities are. Guest speakers come in to talk during the programme, and the master's cumulates with a thesis and what we call a demonstrator, a practical application.' Matt Coler: 'The demonstrator shows the public what your research does – and grads can share it with potential employers. A thesis is great for science, but while recruiters or HR managers are unlikely to read it, they'll check out the demo. And the demo will show them that the graduate can not only talk and work with people from other fields but can produce tangible results.'

The MSc Voice Technology is the only programme in continental Europe dedicated exclusively to speech synthesis and speech recognition. Classes begin in September 2021.



# 'Regional Center of Expertise is an opportunity for sustainability education'

Campus Fryslân and Circular Friesland|SPARK the Movement have teamed up to launch the Regional Center of Expertise (RCE) of Education for Sustainable Development Fryslân, the first RCE in the Netherlands that is part of the international UN network. The goal is to embed sustainability in all levels of education. Enthusiastic students have rallied to have a say in the future of the planet.

BY GERARD DE JONG

The green light came in January of this year: the plan drawn up by Campus Fryslân and Circular Friesland to set up an RCE in the province was approved by the United Nations University in Tokyo. Heleentje Swart of Circular Friesland is one of the driving forces behind the initiative. "What's the best way to build a sustainable society? That's the key question. We want to contribute to the development of good education on sustainability. Campus Fryslân is the perfect partner for that."

Chantal Vrijhof, education policy officer at Campus Fryslân, is the other driving force behind the initiative. "We will be part of an international network, participate in conferences and knowledge sharing, and be able to bring in more expertise to reflect on our didactic and pedagogical development."

A working group will be set up to explore the most effective ways of incorporating sustainability into education. Swart calls it 'transformative learning': "The 20th century was dominated by the paradigm of growth. Now, we are coming face to face with the limitations of that paradigm, both on a global and regional level. With the help of companies, governments and educational institutions, we are tackling the challenges here and now: together, we are building a regional network of expertise in the field of sustainable development. This will help us to change our own view of the world, as well as that of our pupils and students."

Max Eisenbart, second-year Global Responsibility & Leadership student, will be one of the RCE's youth coordinators. "For a research internship in Bonn, we are currently looking at a project on the "pocket garden approach".

**'This will help us to change our own view of the world, as well as that of our pupils and students'**

It's really just a miniature garden in a pot, but this kind of teaching method gets primary school children to engage with nature in a very hands-on way. This new way of learning is sorely needed."

Aukje Sina Zijlstra, a first-year student following the same degree programme, will also be a youth coordinator. "Today's pupils are engaged in society. Sustainability isn't just a subject for the classroom; it can also be explored in the wider world. The RCE creates opportunities to think about what the world should be like."



Heleentje Swart

And you're never too young to start doing that. Swart: "All levels of education are now involved, from primary schools to universities. That's where change begins. Instead of just talking about it, we want to focus on tangible projects that will act as a catalyst."

Vrijhof is just as determined. "This is a fantastic addition to everything that's already going on. We are going to explore how we can promote this theme throughout the region. Campus Fryslân will play a key role in this by facilitating, connecting and stimulating discussion."

In February 2022, the European RCE meeting will be held in Friesland. Swart: "We want to help young people participate on an equal footing, for example by giving workshops and holding panel discussions."

Eisenbart can't wait to get started: "I want to be the link between the RCE and young people. So that young people are actually involved in decision-making processes about the future. All too often, decision-makers talk about us, rather than to us. This is a huge opportunity to change that."



Chantal Vrijhof



## Column

Hannah Huber - Student assessor and student Global Responsibility & Leadership

## Uncertainty about the future has become a new reality for us as students

As our society struggles with the COVID-19 pandemic, responses often focus on children or the elderly. But one group of people is often neglected, as their struggles seem invisible. A whole generation of students has had to adapt to the pandemic and shift their education online. Uncertainty about the future has become a new reality for us as students, and our resilience is tested daily.

When looking at the impact of the pandemic on students, there is more than meets the eye. Most of us are living in an environment with increased pressure due to living in 14sqm student apartments or shared living situations. Others had to move back home with their parents because of financial difficulties or the responsibility of supporting their loved ones. The increased time spent in front of a screen without a clear line between private life and uni life is an additional burden to those already struggling with mental health issues. Students report a decline in their mental and physical health and most express disappointment with their university life. Concentration difficulties, lack of motivation, feeling drained without proper places for studying are additional problems to the original worries about deadlines and exams. The lack of social interactions along with no opportunities to meet new people or experience a real student life is an additional challenge. For international students, the distance from their families, difficulties of understanding the Dutch health system combined with a fear of acquiring COVID-19 in a foreign country are added struggles. Lastly, students are being robbed of once in a lifetime opportunities such as studying abroad. Applying for or planning their future such as internships or work is becoming a tense situation.

It is a challenge to include all students and understand all the layers. To achieve such, Campus Fryslân has introduced a "mental health and well-being" working group to monitor the students' needs and come up with action points and recommendations. We learned that to adjust remote education and support all students effectively we need to listen and learn from the students themselves. Through offering mental health support, creating safe study environments, adapting the curriculum, open communication between staff and students, and shifting the way we approach productivity and education, we can try to support students during this uncertain time. It is important that not only we as universities support students, but that national responses consider us in their planning.



Jesse van Amelsvoort:

## At home in the world of research

**Where do you feel at home? What do you need to feel like you belong, in a world where we value our own cultures while increasingly becoming part of a bigger society? These and other questions were the focus of Jesse van Amelsvoort's research. He analysed the works of six leading authors on the topic of minority cultures – and he took to the task like a duck to water.**

BY EELCO SALVERDA

By way of research done in Utrecht, London, Göttingen and Groningen, Jesse van Amelsvoort ended up in Friesland, at Campus Fryslân. His interest in cultural science, integration and Europe led him to conduct research into minority cultures. A contradiction in terms? Oh no, on the contrary, explains Van Amelsvoort. "We share our cultures and tell stories in an effort to understand the world around us. But that world is changing. The concept of the nation-state has been dominant for the last two-hundred years. Recently, though, there has been a shift towards European integration and even globalization, resulting in pressure on the local

all of their creations. 'Worlds that have their own geography, where they feel at home, and that completely ignore our nation-state. I like to call it post-national. They refuse to allow borders to limit them but, at the same time, they are not like global citizens who feel at home anywhere.'

**'The freedom to think energizes me.' Campus Fryslân was an ideal environment for this work'**

**Superdiversity**  
Van Amelsvoort says that the themes are the same for authors from minority cultures and for migrant authors. "It's about processes of inclusion and exclusion. This might be a lesson if we think about our society and diversity. In modern society, we use the term superdiversity, which means that your identity is no longer determined by just one criterion. A person has various identities and moves in different cultural circles. There may be practical consequences to this, for example, would you teach only Dutch to a refugee living in Fryslân, or maybe Frisian too?"

**Energized by research**  
One aspect of Van Amelsvoort's own identity stands out: he's a born and bred researcher. "See that big bookcase behind me? That is why I do research. I love reading, thinking and formulating ideas. The freedom to think energizes me." Campus Fryslân was an ideal environment for this work: a new faculty with lots of young people and the drive and open mind that characterizes pioneers. "On campus, colleagues from various disciplines conduct research into language and minority cultures, which leads to new and exciting ideas and perspectives."

**A future at Harvard?**  
Van Amelsvoort's PhD thesis is almost done and his graduation ceremony is around the corner. He will surely miss doing research, right? "Well," he says, laughing, "I think I'm done with this topic for now. Although I would have hated to skip this phase. This experience has made me the thinker that I am today. I would love to continue my career as a researcher." Van Amelsvoort is hoping to win a Rubicon grant that will pave the way to Harvard University. While there, he plans to study the representation of awareness and the choices that people make when it comes to climate change and migration in literature. This will be his next step in understanding the spaces that people take up in a changing world.

## Citizen Climate Adaptation Awards

On Friday 16 April, pupils from CSG Bogerman secondary school in Sneek and students of the University of Groningen and Van Hall Larenstein University of Applied Sciences were awarded Citizen Climate Adaptation Awards. Campus Fryslân and the Wetterskip Fryslân water authority board challenged pupils and students (aged between 15 and 24) to come up with innovative ideas on climate adaptation. This climate competition takes place once every two years. The 2021 category 1 winners are: Jasmine Pasha Fahri, Afke Marij van der Goot and Amarins Tjalsma (1st prize), Sanne-Fleur de Jonge and Luna de Jong (2nd prize), Sjoerd Jan de Jong, Thijs Dijkman and Nemo Ding (3rd prize). The winners in category 2 are: Filip Jankowski, Paolo Parboni and Anthony Simpatico (1st prize), Aline Wemmenhove and Judith de Hollander (2nd prize) and Hugo Mohr and Gijs Verkooijen (3rd prize).

## The UCF's first ever graduation ceremony

The first cohort of Global Responsibility & Leadership students will be receiving their degree certificates on 25 June. A fitting programme has been put together to celebrate this unique and special occasion. After an opening speech by Sander De Rouwe, representative of the Province of Friesland, a valedictory speech by one of the students and a musical intermezzo, the certificates will be awarded and, following tradition, the students will throw their caps in the air. On behalf of all staff at Campus Fryslân: congratulations and good luck in your future careers!

## Free online course on climate adaptation in cities

Do you want to learn more about targeted governance strategies that can prepare cities for climate change? Join the 3-week Massive Open Online Course and explore topics such as climate risks and adaptation in cities, processes and drivers of urbanization, urban systems and urban planning, as well as the role of new digital technologies in urban adaptation. Participants of this MOOC benefit from the expertise of adaptation specialists at Campus Fryslân and the Global Center on Adaptation. The course investigates opportunities and barriers for urban adaptation governance based on case studies of real-life adaptation challenges in urban communities. The course starts at different times: [www.futurelearn.com/courses/governing-urban-adaptation/1](http://www.futurelearn.com/courses/governing-urban-adaptation/1).



# Favourite spot(s) in Leeuwarden



The number of students that are enrolled in a bachelor degree or master degree programme in Leeuwarden is about 23,000. Find out what they like about Leeuwarden and what their favourite places are!



De Froskepôle

#### Dani Pattinasarany, MSc Sustainable Entrepreneurship

Leeuwarden is a lovely city. Besides the city centre where I can find food and shops, I have a favourite place to refresh my mind. It is called de Froskepôle, by an old windmill in the southeast of Leeuwarden. Within 20 minutes biking distance of the campus building, I can find a beautiful, calm, and peaceful place. To reach the windmill, I must walk through a small shady forest for around ten minutes. It is a lovely place to recharge my energy in the middle of my study. Sometimes I jogged in this place to maintain my physics and mental health.



Het Westerpark

#### Gabija Savickyte, BSc Global Responsibility & Leadership

One of my all-time favourite spots in Leeuwarden is the Westerpark, or like me and my friends often call it "the ducky pond". It is such a hidden gem right next to the city centre! Usually less crowded, with a beautiful pond, and even a small fountain it becomes a perfect oasis for walks, having picnics with friends, or even following lectures and studying. Every season truly transforms the park – snow and ice on the pond makes the park look like a magical winter postcard, while spring and summer bring wonderful flower and tree blooms. However, for me, the ducky pond is the most beautiful during autumn – changing leaves, chestnuts and sparkling spider webs early in the morning look truly magical.

## Algorithms and Law Enforcement in the Netherlands



Column

Lucas Haitzma student Governance and Law in Digital Society

In the last decades, algorithmic decision making has seen an unprecedented increase as more data has become available whilst simultaneously technological innovations, such as artificial intelligence, make the processing of these data possible. Algorithmic decision making refers to decision making processes that are entirely or partially automated and used to process large amounts of data and use it to answer a question or solve a problem. Such data driven decisions have become increasingly used by law enforcement agencies within the context of detecting and preventing criminality and have the potential to bring great benefits. Algorithms and automated processing of big data can aid law enforcement agencies by helping them with the prediction of crimes and data analysis, recognizing patterns, increasing efficiency, and increasing capacity for information processing.

In the context of criminality and law enforcement, the Dutch government uses algorithms for purposes such as predicting when and where petty criminality will occur in order to allocate police resources, predic-

ting the likelihood of recidivism for making decisions related to probation, and detecting and predicting serious crimes and terrorism in order to make surveillance decisions. Despite the potential benefits and the widespread use of algorithmic decision making, there are risks to using such technologies which can lead to conflicts with human rights. The use of such decision making processes can often lack transparency, lead to discrimination and bias, and lead to issues related to data protection and privacy.

In practice, it is evident that the technology is currently developing faster than the law can keep up with, which makes it difficult to regulate these technologies effectively. As such, I believe that in the coming years research is needed to understand how human rights are currently regulating the development, design and use of these technologies and how we can regulate them in the future in order to maximize their benefits while minimizing their risks.

### Colophon

Verbindt/Connect is a publication of the University of Groningen/ Campus Fryslân  
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Volume 6 - Number 1,  
Edition of 600 copies.

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Design: David-Imre Kanselaar  
Printing: Zalsman Groningen

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