Newsletter N.4, July 2022

Dear reader,
For this fourth edition, the RE-SAMPLE project is moving forward. This month we will continue the presentations of our consortium members and of our PhD students! You will also come with us on different events that happened in the last months!

Presentation of University of Piraeus Research Centre

UNIVERSITY OF PIRAEUS RESEARCH CENTER

The University of Piraeus was founded in 1938 and today consists of ten departments. The Department of Digital Systems covers (through the curricula and the conducted academic research) important areas of the widely and rapidly

The main objective of SSL is to conduct research, development and educational activities in various areas of systems security. Through such activities, the SSL aims at contributing to the collective excellence of the Department of Digital Systems and the University of Piraeus and paves the way for the realization of a secure and trustworthy digital society. The main research activities of the Laboratory lie in the areas of: Information Security Management System development (ISO 27001), Information Systems Security

developing field of Digital Systems and ICT. More specifically, the department's curricula and research cover the areas of telecommunications, digital/network services, security of digital systems, privacy, big data processing, artificial intelligence, biomedical and health informatics, e-learning and educational technology.

The Systems Security Laboratory (SSL) was founded in 2008 as a research and graduate education unit within the Department of Digital Systems of the University of Piraeus. The SSL consists of 3 faculty members, 4 Postdoc Researchers, 3 Research Assistants and 17 Ph.D. Students.

(ISO 27005), Risk Assessment and Risk Treatment, GDPR Compliance – Privacy Impact Assessment, Systems and Network Security, Privacy Enhancing Technologies, IoT & Smart Grid Security, Internet Privacy, Mobile and Wireless Network Security, Digital Forensics, Security Assurance & Penetration Testing.

COPD & Mental Health

In May, the European Mental Health Week took place. The theme for 2022 was "Speak Up for Mental Health". This event was the occasion to remind that mental health issues can worsen Chronic Obstructive Pulmonary Disease but also be reinforced by it.

Anxiety and depression are frequent and highly prevalent comorbidities in COPD patients. They are often underdiagnosed and not treated properly. The serious respiratory symptoms that patients with COPD patients may be suffering from increase anxiety, stress and uncertainty, which affects the patients' quality of life. Mental health issues can affect the patients' general health and discourage the proper following of treatments.

The RE-SAMPLE project works with patients with COPD and comorbidities, including mental health issues. These issues are an important criterion for participants selection as they have an impact on treatment approaches to relieve both respiratory and non-respiratory symptoms. The project aims to support patients in dealing with their diseases in the everyday life, enabling them to better manage their pathologies. Better understanding the patients' mental health for their disease self-management is an important part of developing the RE-

SAMPLE virtual companionship programme.

Exploring Human-Centered AI in Healthcare

At the end of June, the (hybrid) workshop Exploring Human-Centered AI in Healthcare: Diagnosis, Explainability and Trust took place at the European Conference on Computer-Supported Cooperative Work (ECSCW) in Portugal. This annual conference focuses on practice-centred computing and the design of cooperation technologies, and is committed to grounding technological development and systems design in an understanding of the specifics of practical, situated action (see more about ECSCW and about this year's programme here). To be able to attend a workshop at the conference, researchers and practitioners are usually invited to submit a short position paper (2-4 pages) presenting use cases and ideas.

From the RE-SAMPLE team, we submitted a position paper to the workshop on Human-Centered AI in healthcare based on what we learned from patients and healthcare professionals during the first year of the RE-SAMPLE project. The paper was written by Christiane Grünloh, Eline te Braake,

Manual data collection in healthcare is often performed by patients or their caregivers, which adds workload to their existing disease burden. We reported on a qualitative study with Dutch patients and healthcare professionals focusing on data collection of patients living with chronic obstructive pulmonary disease. Both groups were concerned about additional workload for patients when asking them to fill in questionnaires on a daily basis. We concluded that manual data collection by patients creates a response burden that needs to be balanced against their disease burden and the limited energy patients have at their disposal. When automatic data collection via sensors is not possible, the data collection instrument needs to be designed in a way that pays attention to multiple factors that affect the response burden.
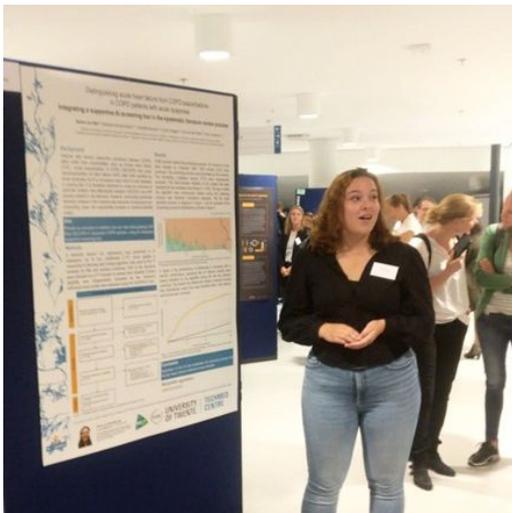
The workshop took place in the afternoon on 27th and 28th June 2022 in a hybrid form. Five position papers and two field works were presented, during which all participants could add questions on a Miro board. After each presentation, there were really interesting discussions on human-centred AI, processes to incorporate the AI systems in daily care and trust that people put in the technology. After our presentation, there were interesting discussions around the fact, that some benefits of AI technologies only transpire later (e.g., predictions based on data collected) and how to communicate this to

Marian Hurmuz and Stephanie Jansen-Kosterink from Roessingh Research and Development (Enschede, The Netherlands) with support from other colleagues in the consortium. In the position paper, we acknowledged that artificial intelligence systems need big data sets for the development of models or machine learning algorithms. This data has to be collected, which is not always possible to do automatically.

patients. We also discussed that while AI systems do provide value that is realised more long-term, we should ensure that patients also benefit in the short term and are not asked to merely collect data. In RE-SAMPLE these short term benefits are related to coaching, self-management and peer-to-peer support that are currently being conceptualised. The workshop was very insightful and inspiring and we are looking forward to future collaborations.

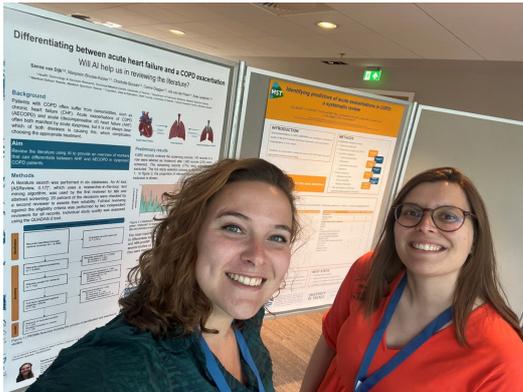## PhD corner

Activities of our PhD students in June

The RE-SAMPLE PhD students from the University of Twente and MST (hospital in Enschede) have had some busy weeks. On 9 and 10 June, the annual WEON Epidemiology conference was held in Nijmegen, where Sanne presented the first results of her systematic review during the 'Methodology' poster session. After the weekend, on 13 and 14 June, Charlotte and Sanne had the opportunity to present results of their reviews at the Dutch Lung Congress in

On 16 June, the Technical Medical Centre of the University of Twente organised its own Research Day in a big cinema in Enschede. Roswita and Charlotte were invited to give a 1-minute pitch. Roswita pitched why it is so important that we investigate technology-supported shared decision-making in chronic conditions. Charlotte gave a pitch about the goal of the RE-SAMPLE project, improving personalised COPD and comorbid care, and why this is so important. Sanne gave a poster presentation about her review.
You will probably hear from them again soon, as they will also present their work at the international lung congress of the European Respiratory Society in September 2022 in Barcelona!

Utrecht, in the 'Clinical future perspectives' poster session.

Meet our PhD students: Sanne

My name is Sanne, and I am involved in the RE-SAMPLE project from the University of Twente (the Netherlands).
I originally am from the South of the Netherlands, but I moved to Twente for my PhD. Although I will never become a real "tukker" [how they call people from Twente], my integration is going well.
What made me end up here, of all places? I am interested in the field of health, medicine and people. Especially when there are remarkable differences between groups of people. What mechanisms lie behind these differences? This made me choose Epidemiology a few years ago. I graduated previous year and after that, I started my PhD within RE-SAMPLE. I am super-/advised by Anke, Marjolein, Carine and Job, and work in close collaboration with Charlotte.

You may know Charlotte from the previous newsletter! In the picture, you see me (left) and her (right) at the Dutch Lung Congress where we presented our work so far. It is nice to see what research is done in the field of respiratory medicine, and it is especially nice to see many young people involved!

So what am I doing, then?
I am particularly focussing on the combination of COPD and heart failure and I hope to be able to contribute to improving disease management for our patients. I like the way in which technology may support that, and it all comes together in this project! Working together in a research group as big and international as RE-SAMPLE, is a big challenge, but also gives lots of opportunities. In September, we are finally going to meet each other in real life in Twente. What an experience that will be! 😊

Coming events

RRD is organizing a workshop with the

You will find detailed information about this workshop on RRD website (click

topic „How To Train Your Stakeholders: Skill Training In Participatory Health Research", which will be held at NordiCHI, 2022, Aarhus.

here).

To apply, all you need to do is fill in a short survey. The application deadline is on the **12th of August, 2022, 23:59 (AoE)**.

Do you want to know more about RE-SAMPLE activities?

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