



### **Upcoming Events\***

May 5

May 6

**May 16** 

DION Grant: Shut Up and Write Pizza Seminar with Tekna

Norsk Movie Night with DION

\*Details about the events will be published in our social media accounts and through the WhatsApp group



post@dion.ntnu.no









Contact us















The interest organization for temporary scientific employees at NTNU

#### Gjøvik Newsletter

**APRIL**, 2025





DION is the interest organization for temporary scientific staff at NTNU that organize various events aimed at helping PhDs, postdocs and other temporary scientific staff at NTNU. A majority of these events are completely free. Additionally, DION can help provide information, advice and support in anyays possible as well as advocate for the benefit of scientific staff at the university.

All temporary scientific employees at any NTNU campus are also eligible to apply for DION GRANT (up to 2500 NOK). This can be used to cover expenses for organizing activities that create opportunities to network, learn, and enrich their experience. Please keep an eye on Innsida and other DION social media channels for grant calls.

# Researcher Spotlight



### Aafan Ahmad Toor

Hi, I am Aafan Ahmad Toor, a PhD researcher at the Department of Information Security and Communication Technology (IIK) in Gjovik. My research work is at the intersection of BigData Processing, Artificial Intelligence, Pattern Recognition, Real-time Computing, Privacy, and Internet of Things (IoT).

As IoT devices become increasingly integrated into our daily lives, ensuring their security and reliability is more important than ever. My PhD research focuses on detecting unusual patterns—or anomalies—in data collected from smart homes and other IoT systems. These anomalies could indicate critical issues, such as equipment failures or security breaches

I have developed a real-time adaptive usina artificial method networks (ANNs) to identify such anomalies efficiently, even as data patterns time. evolve over exploring Additionally, a m privacy-preserving techniques to anomalies detect without compromising sensitive user employing information, advanced concepts like differential privacy and homomorphic encryption.

To support the broader research community, I am also creating an open-source dataset of contextual anomalies from smart homes. This repository will help other researchers benchmark and improve their own anomaly detection models.

Through my work, I aim to make IoT systems more reliable and privacy-conscious—contributing to smarter and safer connected environments. Any of this sounds interesting? You are welcome to contact me for idea sharing and multidisciplinary collaboration."

## Floriane Verceux

Hello there! I am Floriane Verceux, a PhD student in ASEMLab, in the Department of Production and Construction Engineering in Gjøvik. Our main topics focus on the durability and sustainability of composite materials and plastics. But what is durability? Well, let's get to it!

To make it simple, the durability of a material translates to how its properties will evolve in time. If a material is durable, you can use it for a long time without seeing it break or become yellow. Durability is important because it's a way to ensure the compliance of the material - we talk here about satisfaction, but also safety. What if you build a bridge, but the material degrades after 2 years and the bridge breaks? Of course, we don't want that, and that's why we study durability. How do we do it? It's a lot of laboratory work, experiments, accelerated aging, and hours spent trying to understand the results

My main research topic focuses on the impact of recycling on the durability of plastics. We all know that recycling and reusing non-renewable resources is the main goal for our generation. But the truth is, people are sceptical about buying objects made out of recycled plastics, and often think that 'recycled plastics are not as good as virgin plastics'.



An important part of my work is to compare the durability of virgin and recycled plastics to understand the impact of recycling. This way, we can reassure people by proving that recycled plastics can be as good as virgin plastics, even after some years of use. I work on the evolution of mechanical and chemical properties, but also colour. You have all experienced a transparent phone case becoming yellow? One of my goals is to understand why it happens and how to avoid this issue.

But of course, you will not only find me in the lab. Outside of my research, I enjoy life in Gjøvik and the nature around us. Like everyone here, I enjoy going for walks absolutely everywhere. I practice a lot of different sports, go to the gym, enjoy meeting friends and have some drinks, or just stay at home to watch Breaking Bad (clichés are true).

I hope that you enjoyed discovering part of my research, and if you are curious about materials science, durability or want to find a spot with a good view in the surroundings, don't hesitate to reach out!