





Creativity

**Don't
give up**

Teamwork



Transforming Ideas 💡
into Reality 📱:
Charting a Career 📁
Path from
Electrochemical
Materials to Practical
Sensing Devices...
& Beyond!



Prof. Dr. Irene Taurino

KU Leuven, Belgium

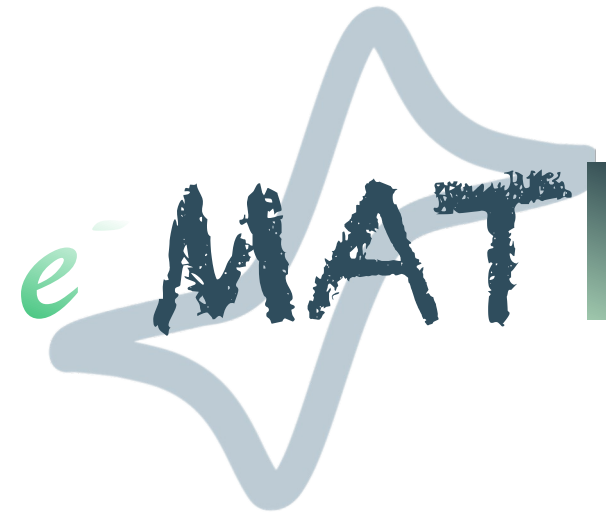
Department of Electrical Engineering

Department of Physics and Astronomy



Laboratory of electrochemical MATerials and bioInterfaces

Prof. Dr. Irene Taurino
KU Leuven, Belgium



Defining MY PURPOSE...



2 years old



My University Path

2005 – 2008

Bachelor



Biomedical
ENGINEERING



My University Path

2005 – 2008

Bachelor

2008 – 2010

Double Master



Erasmus fellowship

2005 – 2008

Bachelor

2008 – 2010

Double Master



EPFL

Institute of Materials
Physics and
Engineering



***My Master
Project***

Electrical
Engineering
Department



My PhD studies



2005 – 2008

Bachelor

2008 – 2010

Double Master

2011 – 2015

PhD

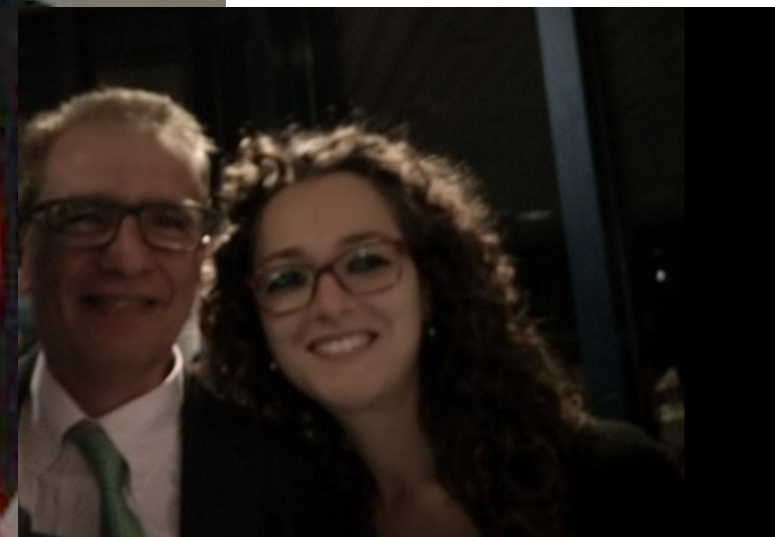


Thesis PI



Thesis
co-PI

Nanni as my PhD thesis director



Shashi Bobba
12 settembre 2015 · 🧑

Selfie with the Boss...
— con Irene Taurino.

Francesca Puppo, Cristina Boero e altri 2

👍 🗨️ 📷 📱 🗑️

Scrivi un commento...

🗨️ 😊 📷 📱 🗑️ ▶️



Nanostructured electrochemical sensors

2005 – 2008

Bachelor

2008 – 2010

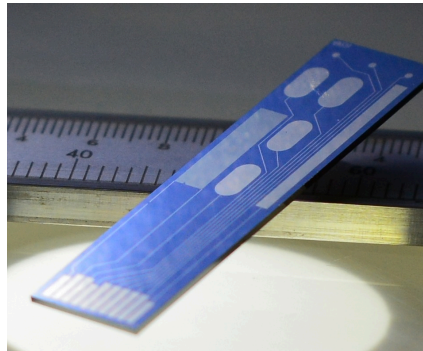
Double Master

2011 – 2015

PhD



1. Microfabrication



CMi EPFL Center of
MicroNanoTechnology



Nanostructured electrochemical sensors

2005 – 2008

Bachelor

2008 – 2010

Double Master

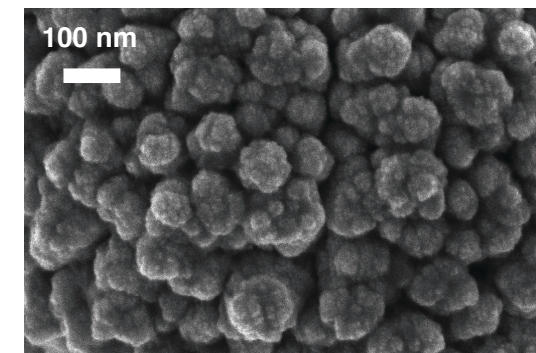
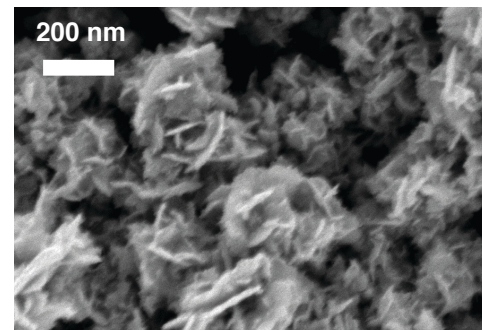
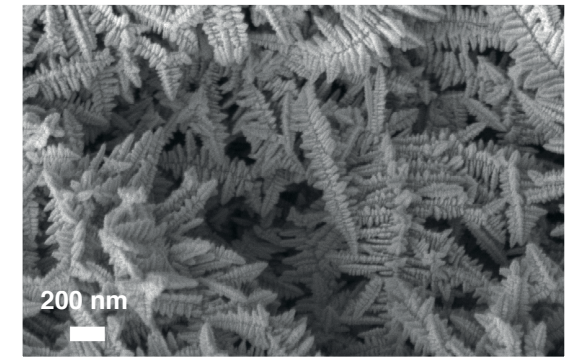
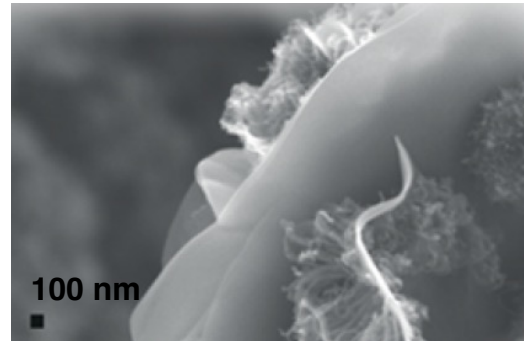
2011 – 2015

PhD



1. Microfabrication

2. Nanotechnologies integrated with wafer-compatible methods on the electrodes

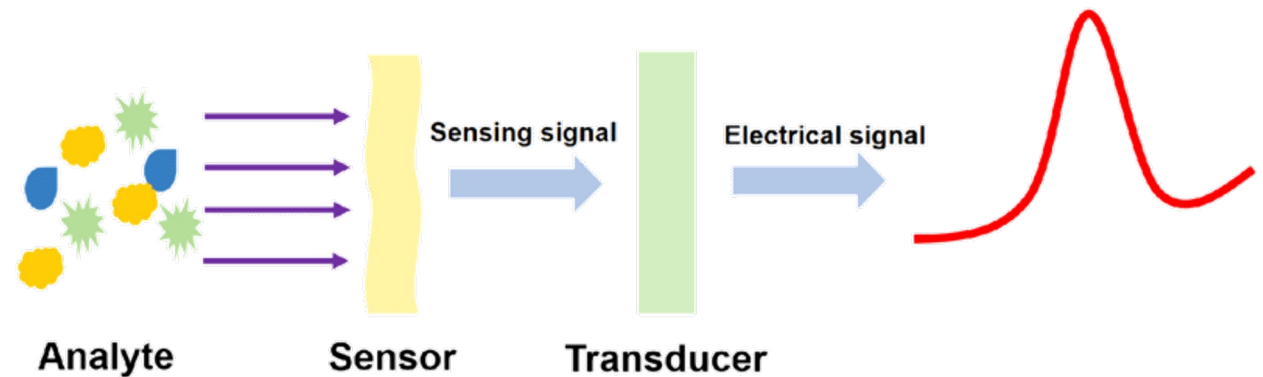


Nanostructured electrochemical sensors

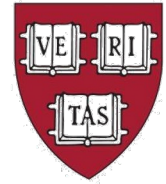
BEHIND THE SCENES

2011 – 2015
PhD

- ✓ 19 peer reviewed journal papers (12 as first author)
- ✓ Finalist EPFL doctorate Award



Biovalidation



2005 – 2008

Bachelor

2008 – 2010

Double Master

2011 – 2015

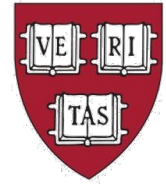
PhD 2014



Khademhosseini's lab
Tissue engineering Lab



Biovalidation



2005 – 2008

Bachelor

2008 – 2010

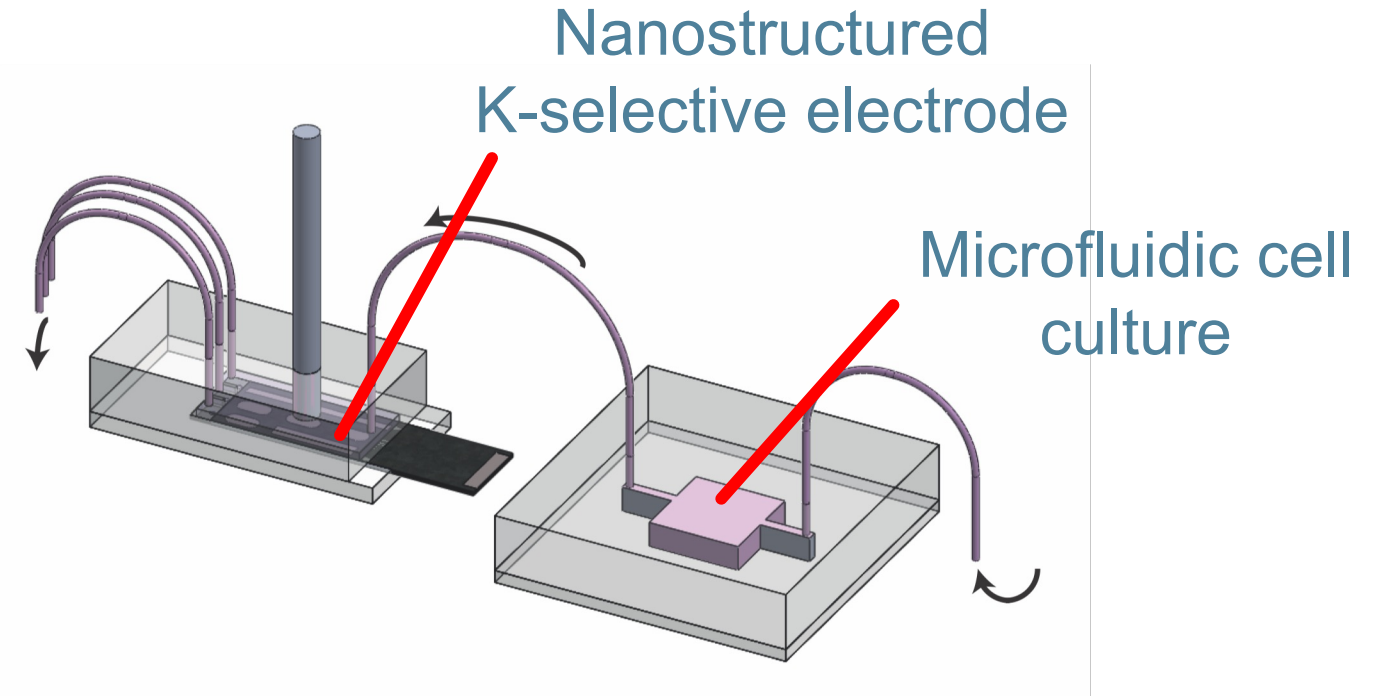
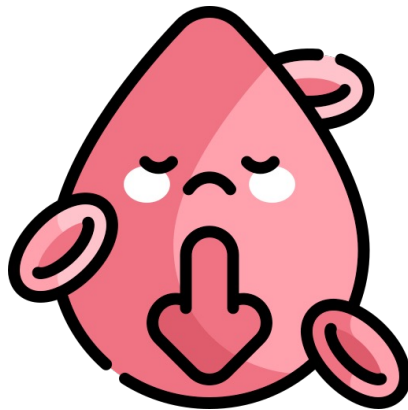
Double Master

2011 – 2015

PhD 2014



Cell death monitoring





HARVARD UNIVERSITY



Invited seminars & conferences



Imperial College London



Biosensors 2014
27-30 May 2014 | Melbourne, Australia





***Faculty
position***

**Industrial
R&D**

***PostDoc
2015 – 2016***

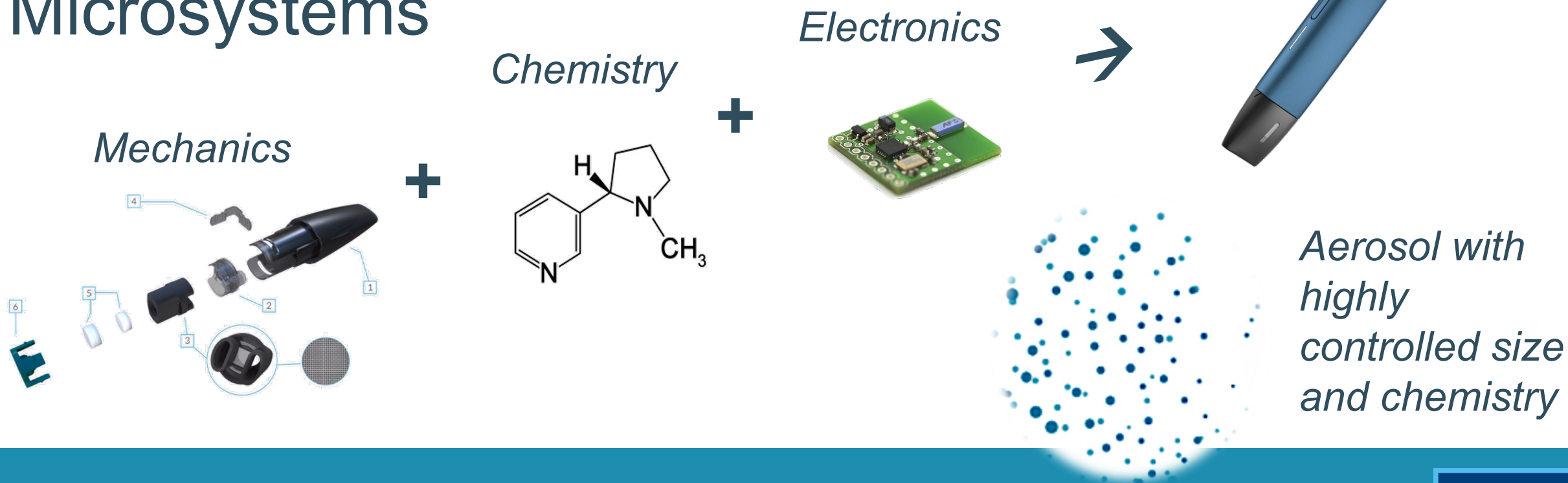


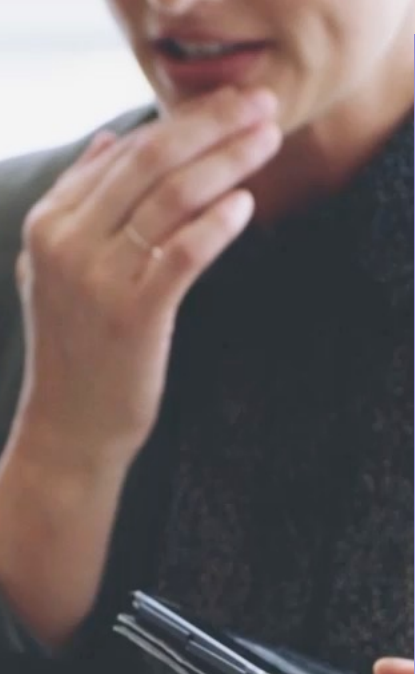


Reduced Risks Products



Microsystems





Questioning my job



- ✓ Salary
- ✓ Location
- ✓ Boyfriend
- ✓ Healthcare
- ✓ Retirement



🙄 Purpose

🙄 Co-workers





KEY TAKEAWAYS




BROADEN
MY HORIZONS



PROJECT
MANAGEMENT



 LENS.ORG

 255 Patents (47 Simple families)



KU LEUVEN

Since June 2021

Tenure Track Assistant Professor at KU Leuven

Europe's
most
innovative
university

Thomson Reuters



20 min from Bruxelles











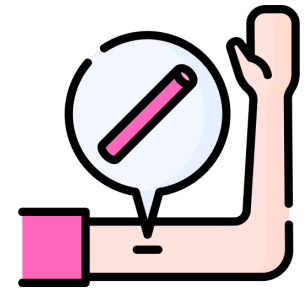
**✗ LIMITED
PRODUCTS**

**(Bio)chemical
markers: a real
signature 🖋️ of physio-
pathological conditions**



Body-anchored electrochemical (bio)sensors

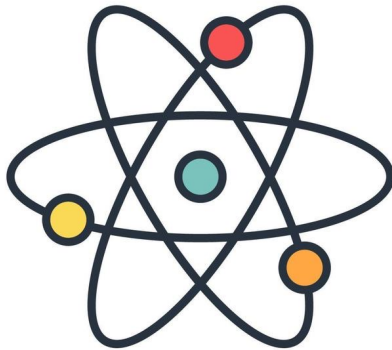
- ✓ Fast & continuous
- ✓ Compact & tiny
- ✓ Low-cost
- ✓ Multi-sensing



Body-anchored electrochemical (bio)sensors

Making The
Difference

Solid-state physics



Microfabrication



Body-anchored electrochemical (bio)sensors

**Making The
Difference**

Solid-state physics

💡 **New nanostructured & thin film electrodes**

Excellent control of structural & compositional features

- **Modulate the performance**
- **Minimize (bio)fouling**

Microfabrication

💡 **Groundbreaking workflows**

- **Clean room compatible steps**
 - **Organ-conformal**



Body-anchored electrochemical (bio)sensors

Making The
Difference

Solid-state physics

Microfabrication



Bicyclos

PotenGo

TALENT



SteerFer

My teaching

7 courses

✓ 2 as coordinator

✓ 1 new “*Soft bioelectronics & BioMEMS*”

→ evaluation score of 5.4 out of 6!



“a fantastic job...
was interesting, ...put a
lot of effort”

“presentations
were
insightful”

“I really look forward to
this class every week”

“thanks for an
amazing
semester
course, enjoyed
a lot”



*General co-Chair
Irene Taurino
KU Leuven*



≈ 1000 people

NMC 2022 EUROSENSORS

19th - 23th SEPTEMBER | LEUVEN, BELGIUM

THE LEADING CONFERENCE ON NANO AND MICRO ENGINEERING




PESM 2022

*“Anyone who keeps
learning stays
young.
Daily interaction
with young people
makes you young.”*



Henk van Noord



Embracing Nanni's Traditions



Embracing Nanni's Traditions



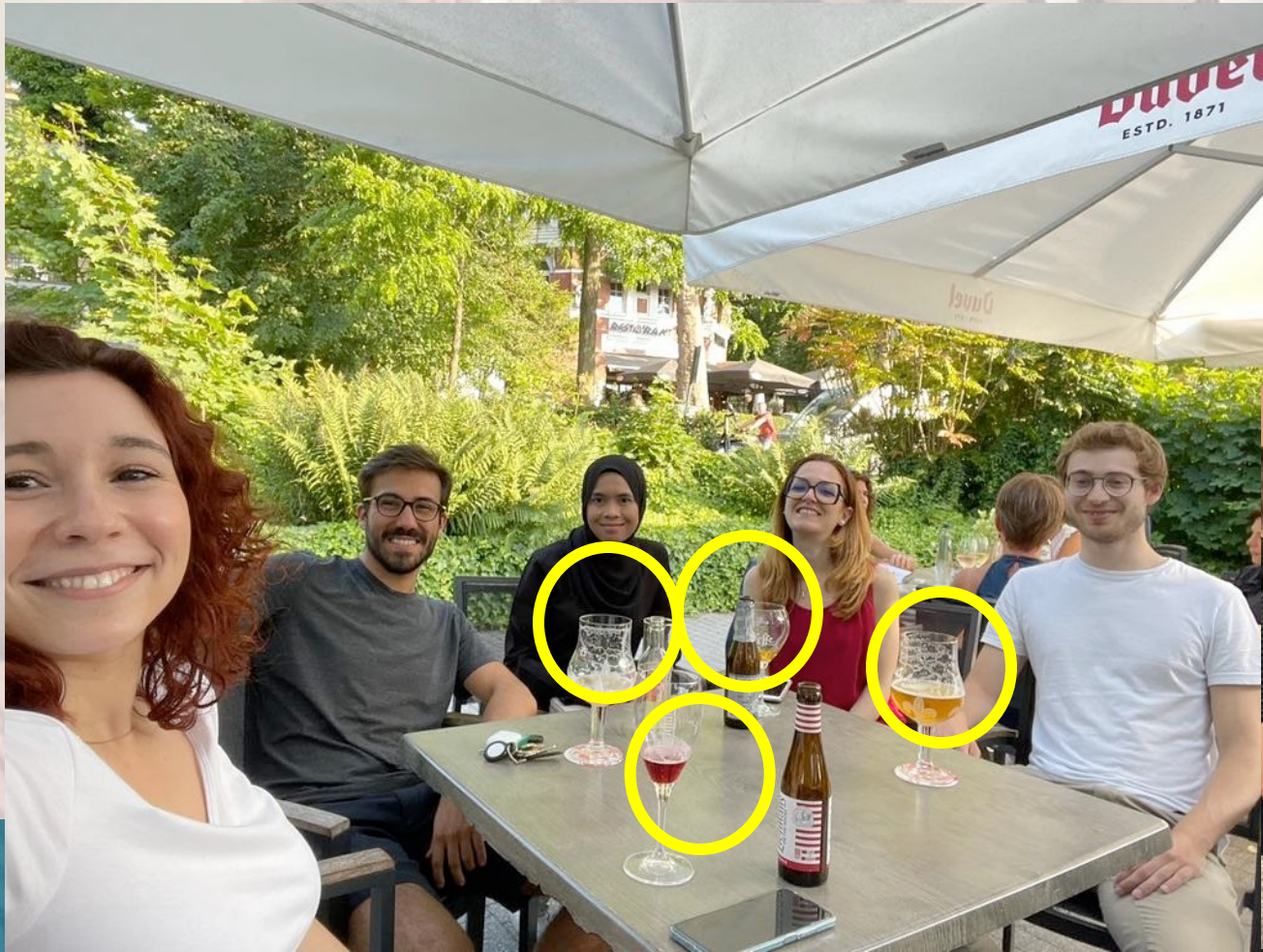
Embracing Nanni's Traditions



Embracing Nanni's Traditions

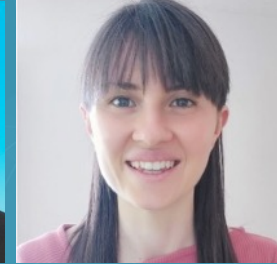


Embracing Nanni's Traditions

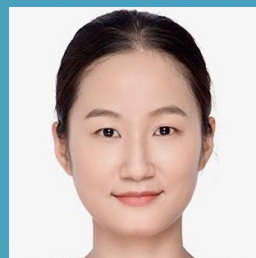


Transforming Ideas into Reality

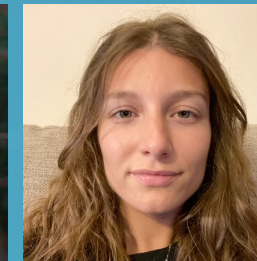
Postdoctoral researchers



PhD students



Master students



From Oct 2024



**Cheers to a grand
celebration in Nanni's way!**

Thank you! 🎉