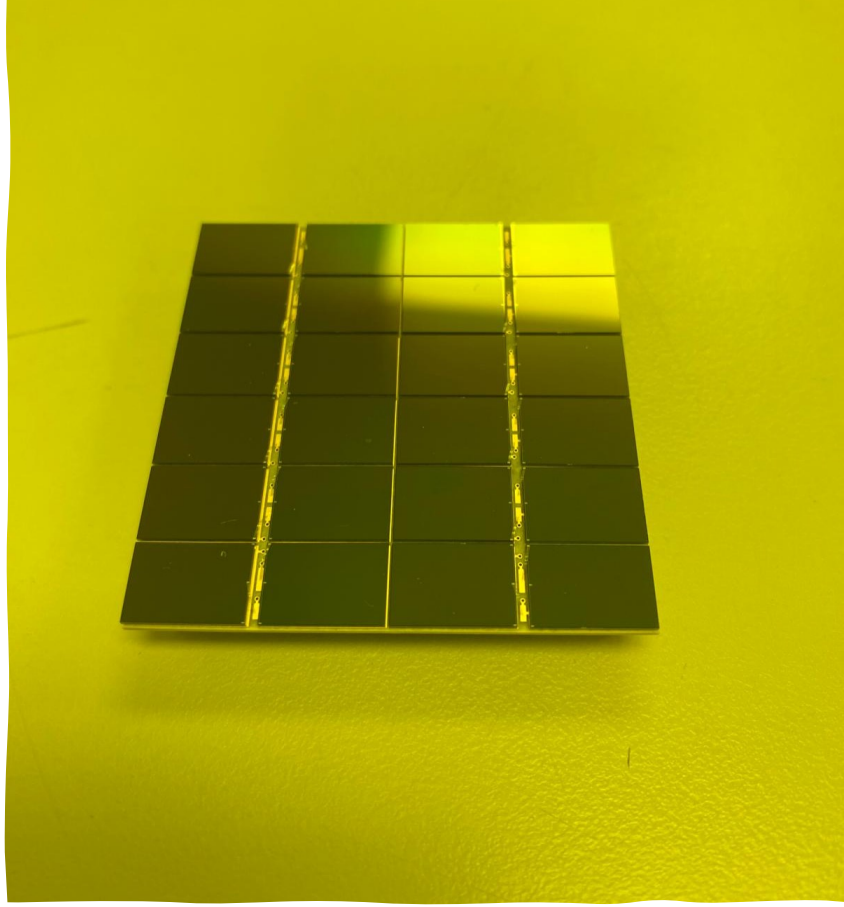


Seraphim Koulosousas

- 3rd Year PhD at Royal Holloway University of London
  - Currently based at Oxford University
- Working on Silicon Photomultiplier Characterisation for Darkside-20k
- I am looking forward to developing more hands-on experience in detector development.

About me

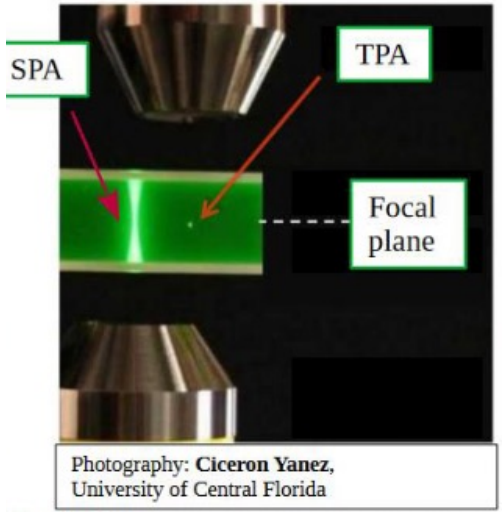
- Ilyas Benaoumeur
- 1st year PhD student at the University of Birmingham
- Member of the ATLAS experiment
- I work on the DAQ system of the ITK
- Football ,travelling and hiking

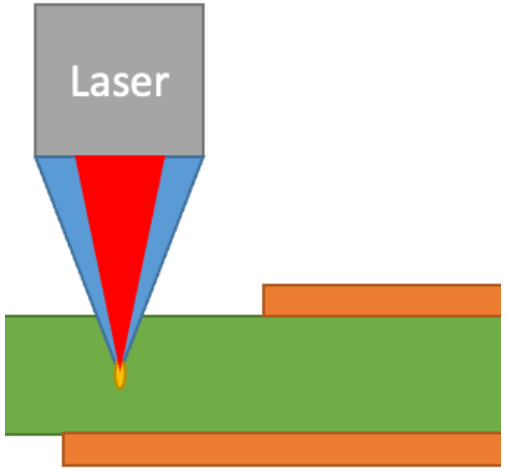
Introduction

- I’m Ceyhan from the University of Birmingham
- Part of the NA62 experiment whose aim is to measure the branching fraction of the very rare $K^+ \to \pi^+ \nu \bar{\nu}$ decay
- Recently completed a software project working on likelihood-based reconstruction
- Now starting a hardware project working with the ASICs for the NA62 4D silicon beam tracker (GigaTracKer)

Enoch Ejopu

- **PhD students (3rd Year)**
- **Sensor characterization (LGADs, Diodes & Diamond)**
- **Two-photon Absorption & Electrical.**
- **Simulation using KDetSim, TCAD.**
- **Expextation: Device simulation and characterization.**





MANCHESTER
1824
University of Manchester

UNIVERSITY OF LIVERPOOL

Development of a novel CMOS detector for dose verification during hadron and ion beam therapy

Fajer Alqahtani

UK HEP Instrumentation Summer School

1-12 July 2024

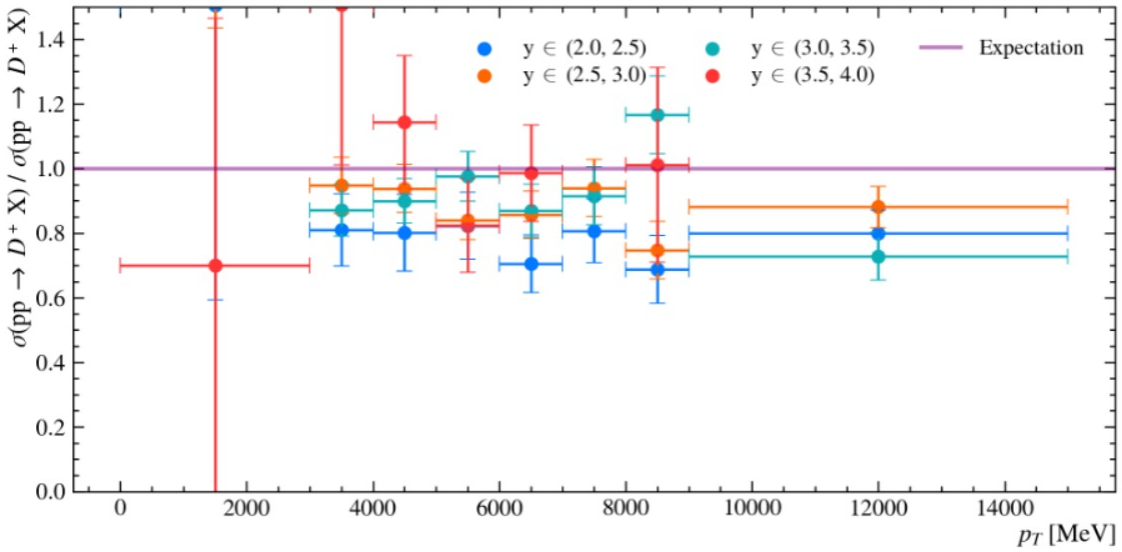
The University of Manchester

Science & Technology Facilities Council
Rutherford Appleton Laboratory

50 / 50

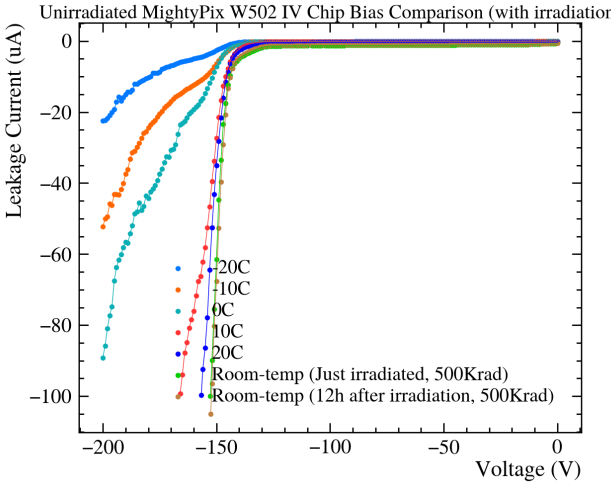
Analysis:

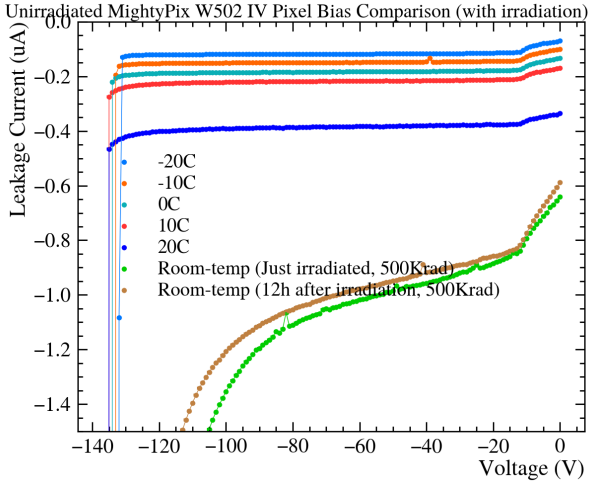
- Charm cross section analyses



Hardware:

- LHCb Mighty Tracker sensor testing





(woefully inexperienced on this front!)
This is why I'm here!

Rory McFeely,

33

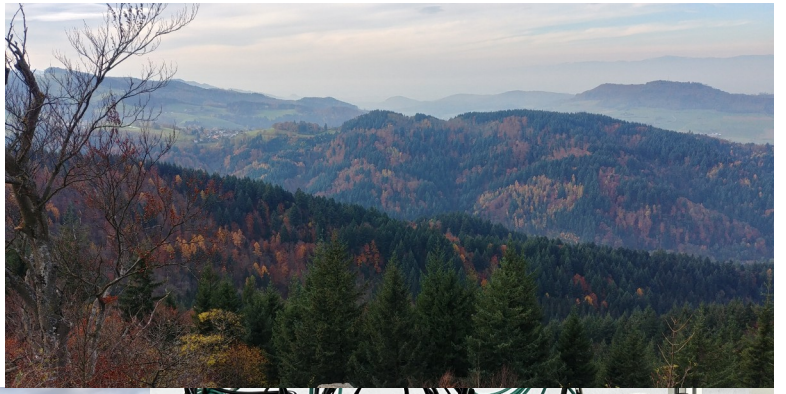
University Of Glasgow

Research: Development of Medipix Detectors for Scanning Electron Microscopy

About me:

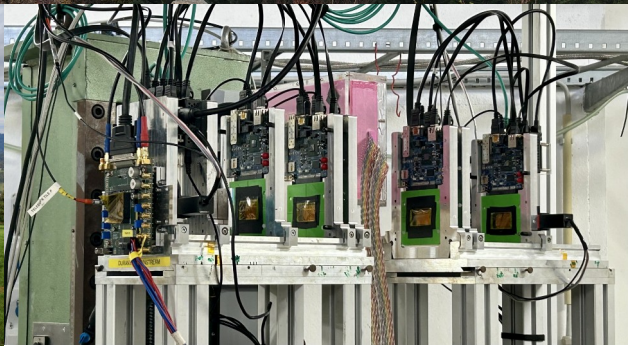
- Fabian Lex, Age 25
- 1st year PhD Student
- Group of Prof. Karl Jakobs, University of Freiburg
- Hobbies: Hiking, biking, dancing, reading

universität freiburg



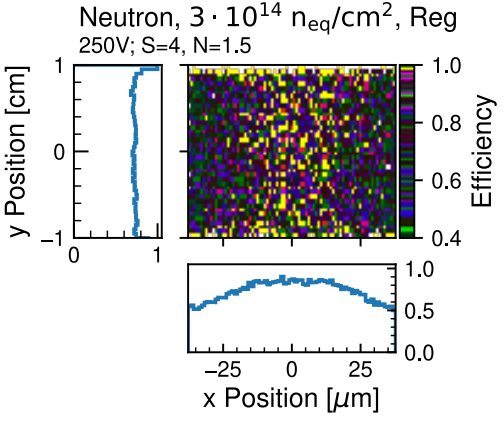
My current work:

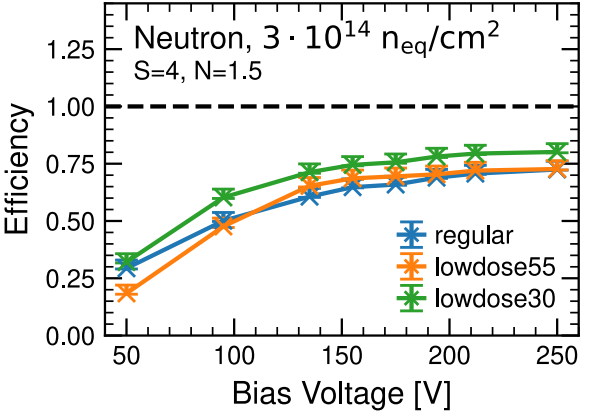
- Test beam analysis of irradiated CMOS strips sensors
- Charge measurements using radioactive source
- Rebuild/Upgrade of existing Top/Edge TCT and Timing setups
- IV/CV measurements of Fast 3D sensors



What I hope to get out of the school:

- Hands-on knowledge in designing electrical circuitry
- Working with LGADs (and getting to know their “features”)
- Gain experience with TCAD simulations
- Meeting new people





Olly Macfadyen (Mac)

3rd Year PhD Student
Royal Holloway - University of London
DarkSide-20k



Likes:
Science (don’t we all)
Guinness

Currently working at:

- Oxford University
- Laboratori Nazionali del Gran Sasso

Currently working on:

- Photodetectors for the DS-20k neutron Veto
- Cryogenic system for ultra-pure Underground Argon
- Supernova neutrino detection in DS-20k

Why am I here?

- I have some experience testing silicon photodetectors for DS-20k but want to learn more about the inner workings and design.

Anna Swoboda

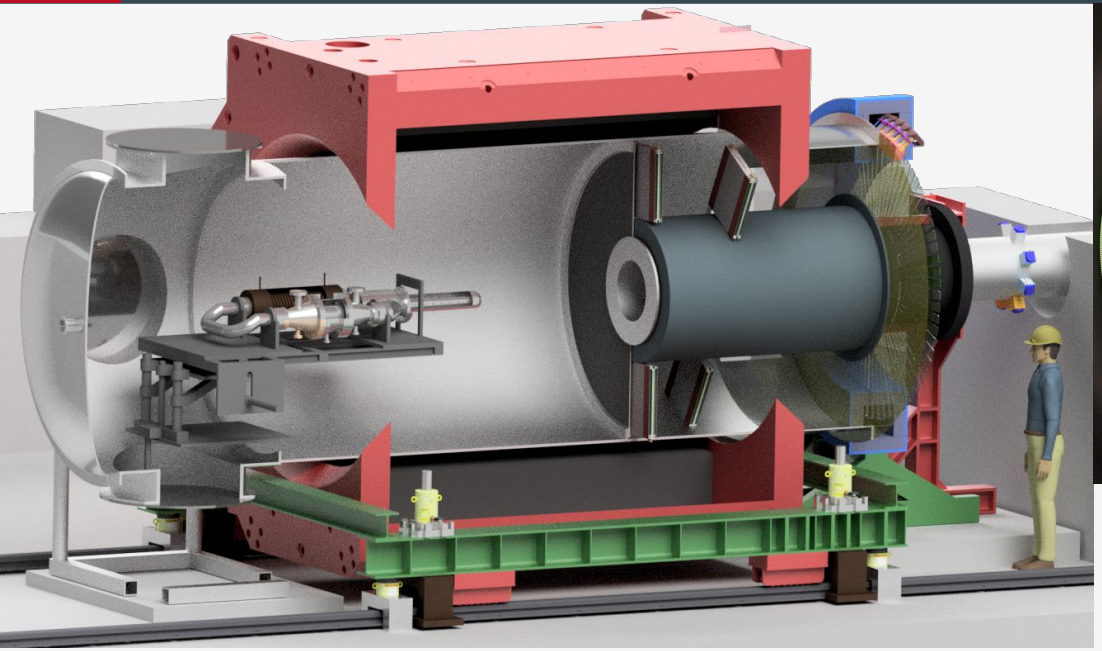
- PhD student @ University of Innsbruck (Institute of Mechatronics)
- Background in Micro-Electronics Engineering
- Based at CERN, working on the ATLAS ITk
  - More specific on the ITk OB LLS testing and integration
- Expectations:
  - To learn a lot about detector operation and readout, I'm espacially looking forward to the lab-sessions
  - To meet and connect with likeminded people

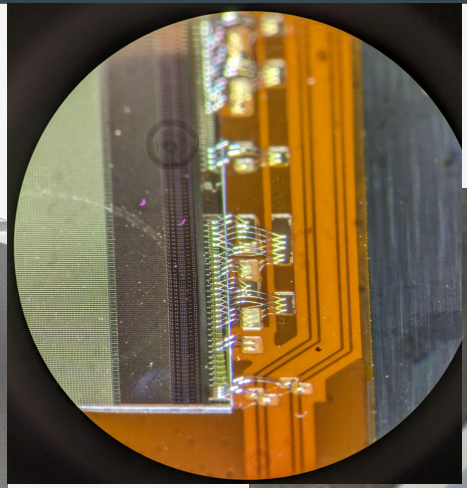
Hello
my name is

Jakub

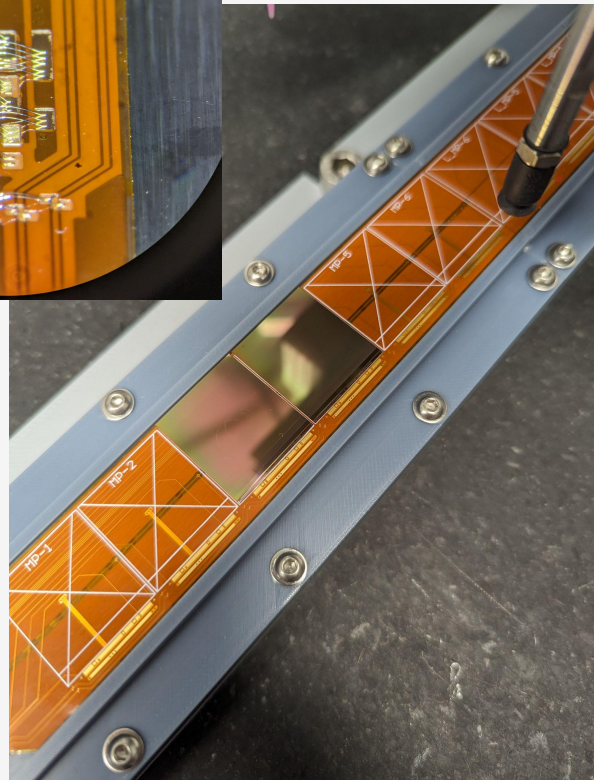
- PhD student at Charles University
- My focus is on solid-state detectors:
  - Performance and long-term stability testing of ATLAS ITk strip modules
  - Future involvement in DRD3 collaboration
- I also have many hobbies:
  - Boldering
  - Hiking
  - Board games
  - Music
  - Analog photography
- Came to the summer school to learn more about detectors and to have fun :)

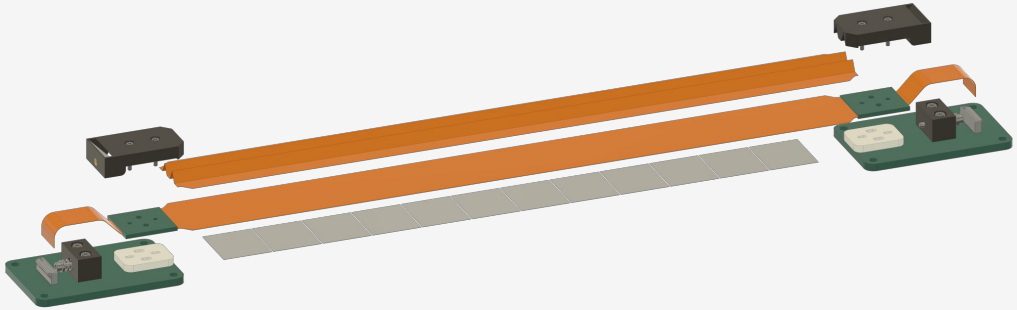
Lucas - P2 Experiment - Mainz (Germany)





AG Berger





Niels Sorgenfrei (=”worry-free”)

universität freiburg

About me:
- 26 years old
- From Freiburg in Germany
- PhD student since March 2023
- Working at CERN in Michael Moll’s group
- Associated with Karl Jakobs’ group at the University of Freiburg

My work:
- Studying radiation induced defects in p-type Silicon and n-type Silicon-Carbide diodes
  - ➔ Defect spectroscopy: DLTS, TSC
  - ➔ Diode characterisation: IV, CV
  - ➔ Simulation: python, TCAD

What do I want to get out of this school?
- TCAD know-how to get my work started
- Learn about electronics design
- Meet new people
- Explore Oxford (and its many pubs)







Jenny Lunde, PhD candidate in Physics

PhD with  UNIVERSITY OF OSLO

Doctoral student at  

Novel SPADs for charge-particle tracking with high-time resolution

ATLAS ITk:
Module assembly
Electrical testing
Quality control

"CASSIA":
CMOS sensors with gain layers
TCAD
Electrical testing

Main goals: TCAD, electrical characterisation of silicon detectors

Pritindra Bhowmick

- First year DPhil candidate in Particle Physics.
- Student with Magdalen College, University of Oxford and STFC Particle Physics department.
- Working on Integration, Characterisation and Testing of Silicon Photomultiplier Array detectors for DarkSide-20k dark matter search experiment.
- Previously worked in detector electronics and calibration at CERN as a Technical student.
- Attending the school to learn about Silicon detector design and simulation and improve electronics and characterisation knowledge.

- Name: Shuhui Huang
- Experience:
  - Current: Postdoc at University of Cambridge
  - PhD at University of Hong Kong in 2024

- Research in ATLAS experiment
  - I did my PhD in search of Supersymmetry with multilepton final states
    - Muon Spectrometer shifter at ATLAS control room during early Run 3 data-taking in 2022
  - I'll work on ..
    - Precision measurements on Standard Model electroweak diboson processes
    - R&D on irradiated silicon sensors for future colliders

- Expectation on the summer school
  - I am new to detector instrumentation but I am very curious how each part of particle detectors are made and how they end up to be a functional data-taking complex from individual modules. I am especially interested in life cycle of silicon sensors.
  - I would like to receive hands-on training on silicon sensors fabrication as well as read-out electronics. I also want to learn about simulation softwares so that I could compare real life detector performance with simulated results.
  - Introduce myself to the UK HEP instrumentation community and look forward to future collaborations!

From
Vienna, Austria

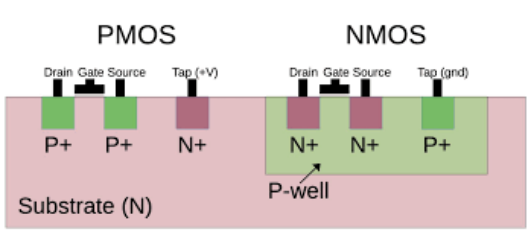
Sebastian Onder

PhD. Student at

HEPHY ÖAW AUSTRIAN ACADEMY OF SCIENCES

My work:

- Analog CMOS design, MAPS
- 4D tracking detectors in Si and SiC for CMS upgrade



CMS

I am looking forward to

- All the Tutorials, especially on TCAD and Measurements
- Explore Oxford

NICE TO MEET YOU

Daniel Radmanovac

- Physics Master‘s student at the **Vienna University of Technology**:
  - Worked with silicon based LGADs (Low Gain Avalanche Diodes) on timing measurements for 4D tracking (space and time) applications.

- PhD at the Institute of High Energy Physics (**HEPHY**) in Vienna starting in Autumn 2024:
  - Will work on silicon carbide (SiC)-based particle detectors for space and medical dosimetry, including the design of an electronic readout chain.

My goals for this summer school:

- Build a knowledge and skill foundation of useful tools and practices.

- Meet and connect with like-minded peers and industry experts.

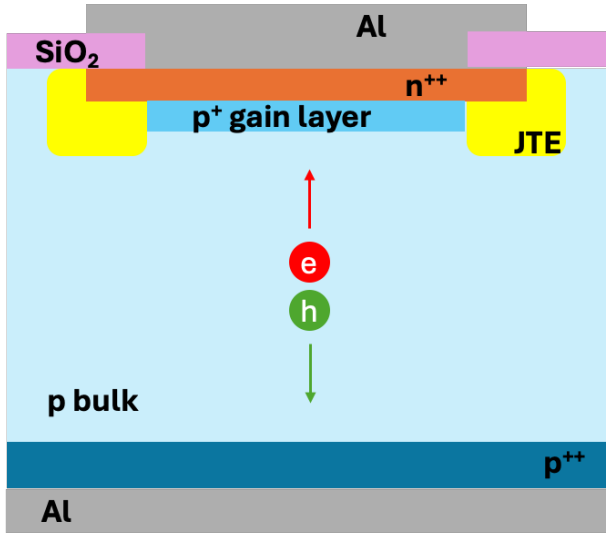
Contact: daniel.radmanovac@oeaw.ac.at

Radcliffe Camera - Oxford

Oxford Physics Microstructure Detector (OPMD) lab

Annabelle
PhD student
University of Oxford

Devon



Low gain avalanche detectors (LGADs)

Get to know Veronika Kraus

What brings me here:

[2017 – 2020] **Bachelor's Programme in Technical Physics**
- Technische Universität Wien
- Thesis: Systematic testings of the oscillating region's mechanical resonances for the Ramsey qBounce experiment (carried out at the Institute Laue-Langevin, Grenoble)

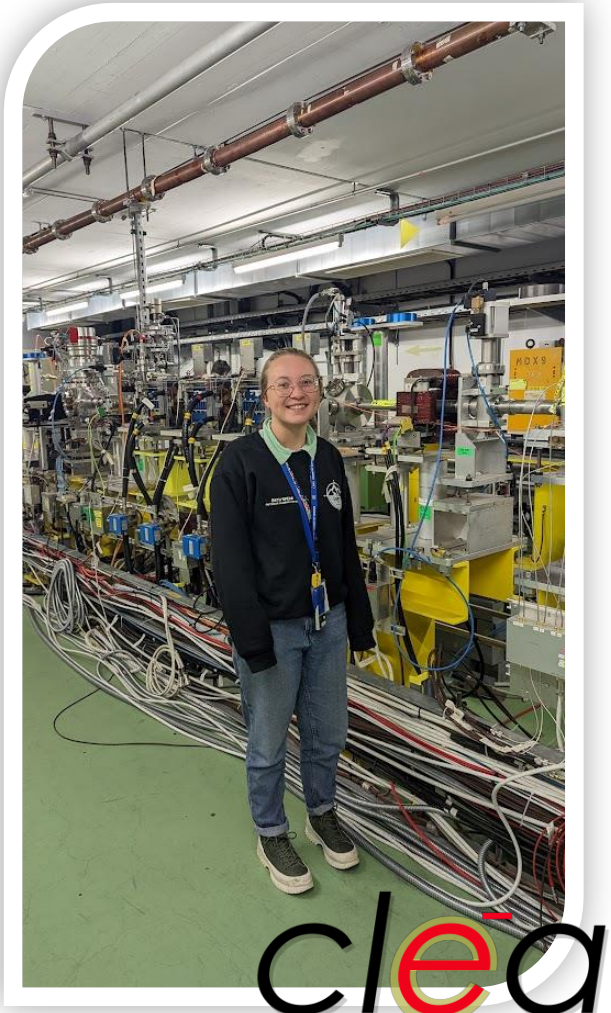
[2020 – 2023] **Master's Programme in Technical Physics**
- Technische Universität Wien
- Projects in the field of medical physics
- Thesis at HEPHY (Vienna): Process quality control and irradiation studies of silicon sensors for the CMS phase-II upgrade

[2023 – Current] **PhD at CERN**
- Solid State Detector department, R&D work with Michael Moll as supervisor
- Irradiation damage in silicon
- Focus on macroscopic degradation with irradiation of LGADs

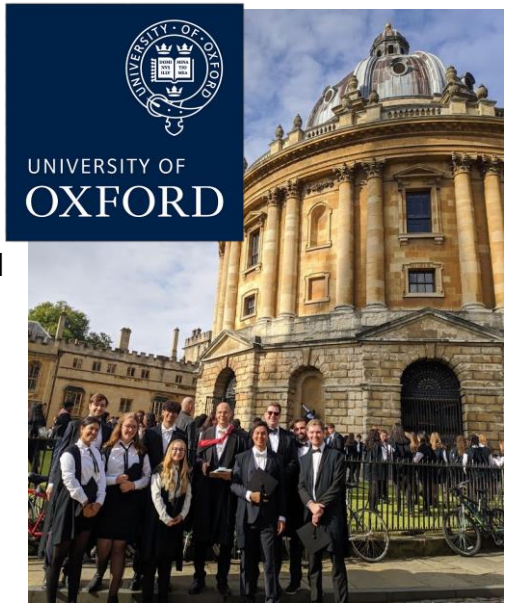
I look forward to
… learning how to simulate LGADs in TCAD and getting to know more about career opportunities from industrial partners
… meeting you all and to an interesting exchange about our fields of interest :)

Getting to know me outside of work:
I asked an AI to summarize all my hobbies and interests in one picture

Who am I?



- 25 year old PhD student from the UK
- Currently in my 3rd year with the University of Oxford
- Based at CERN for 1 year for part of my studies



- Working on Beam Instrumentation for the AWAKE experiment
- Focusing on Cherenkov BPMs and High Frequency diagnostics