

1 Slide -



Presentation of Students, Lecturers and CAS Team
on the Introduction to Accelerator Physics

Santa Susanna, Spain

26 September 2023

Students

In groups of 6 people come forward

- Karina Ambrosch
- Winnie Bratumyl
- Auriane Canesse
- Tristan Canfer
- Arnaud Devienne
- Nabil El-Kassem

Karina Ambrosch

PAUL SCHERRER INSTITUT

PSI

E-XFEL IBFB



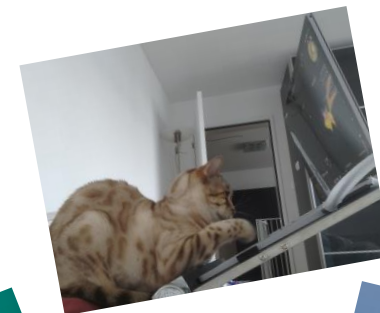
SwissFEL RF



MedAustron



HIP A LLRF



Winnie Bratumyl

Hamburg, Germany



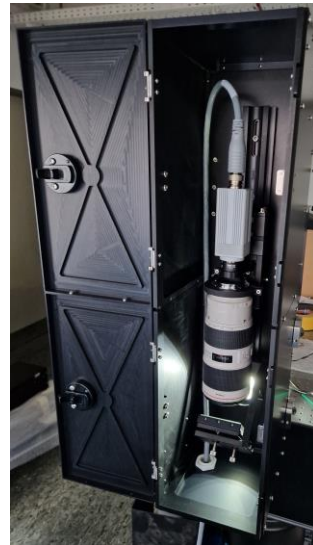
Work

Mechanical Engineer

Studied in Flensburg and Lübeck

4 years designing of cash-desks

Desy → Maschine Diagnostic Departement
- since June last year



Private

Walk or run with my dog

Bouldering

Bake and modelling cakes

Try to learn piano





Dr. Auriane Canesse

Physicist

- Senior Applied Fellow in the [Radiation to electronics \(R2E\) group at CERN](#) (SY-STI-BMI).
 - Radiation level monitoring for the Monitoring and Calculation working group (MCWG)
- PhD: ATLAS collaboration - McGill university - Canada
 - Standard Model Measurement, [tri-boson production \$W\gamma\gamma\$](#)
 - New Small Wheel detector commissioning
- Masters: CMS collaboration - Louvain-la-Neuve - Belgium
- Hobbies: mostly climbing and ski touring but also ice hockey, baking and chicken taming.



Tristan Canfer

Electronics Technician

Accelerator Diagnostics

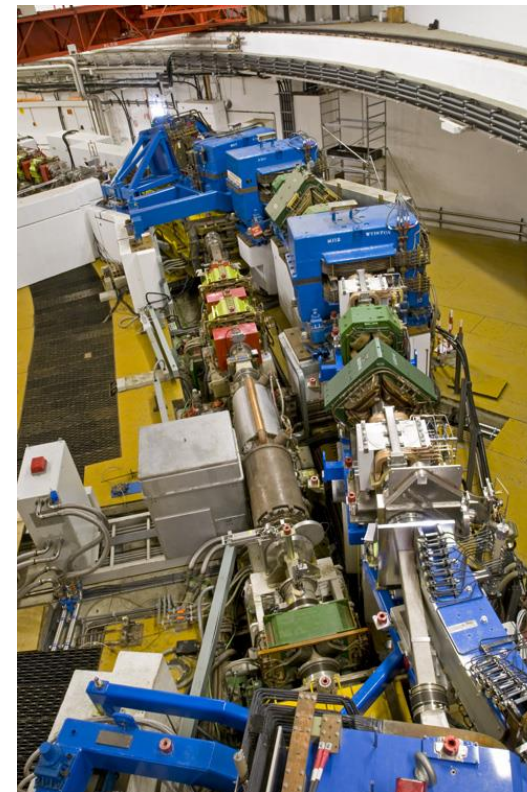
ISIS Neutron and Muon Source, UK

Studying BEng in Electronic
Engineering



Science and
Technology
Facilities Council

ISIS Neutron and
Muon Source



Arnaud Devienne

- **Experiences**

- RP / Nuclear Safety

- **Hobbies**

- Sports / Travels



**FUSION
FOR
ENERGY**



Mixed Ultimate Frisbee (@ Geneva)



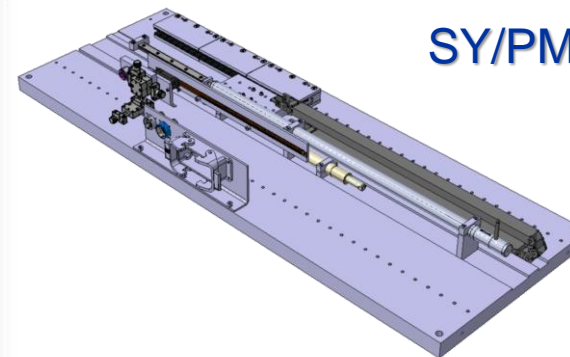
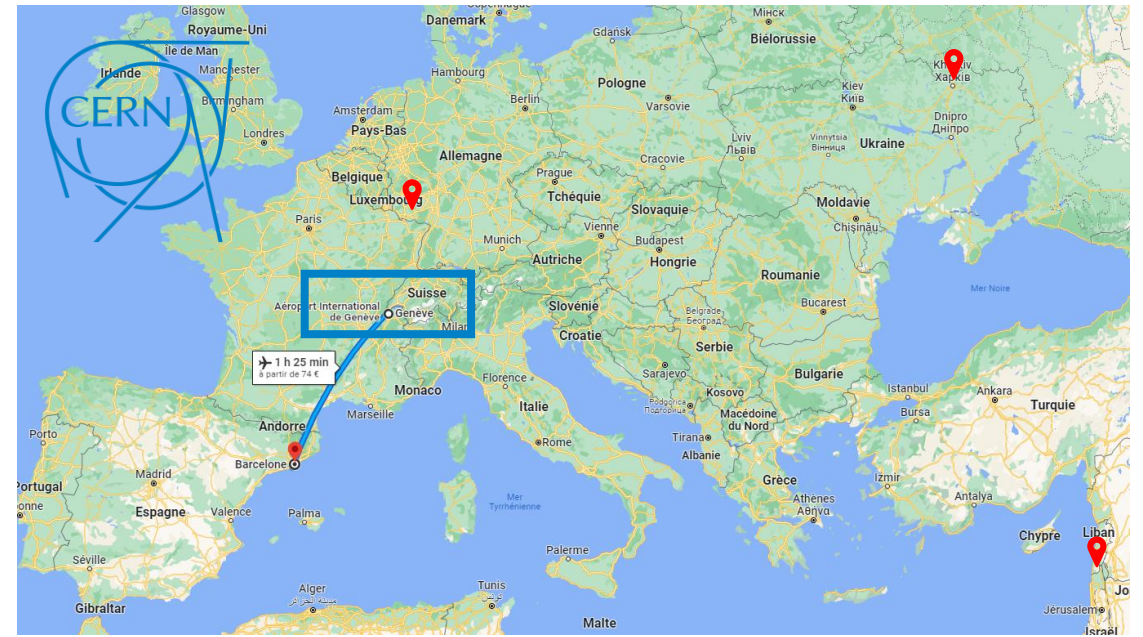
Surf (@Barcelona)



Beach Ultimate Frisbee (@ Europa)



Nabil El-Kassem



SY/PM



Students

- Seyedeh Sedigheh Hashemi
- Satya Sai Jagabathuni
- Sara Karbassi
- Jacob Kelly
- Montague King
- Johanna Korpijärvi

S. Sedigheh Hashemi - Born In Iran-1989

Studied Physics- PhD in Gravity and Cosmology -Black holes and wormholes!

2022 changed my field to **Accelerator Physics!** 😊



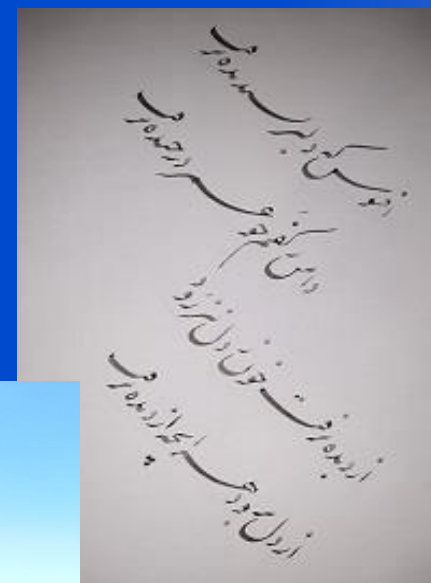
I travel a lot- I visited Trieste in Italy-Venice-Slovenia-China-Yerevan-Russia

I climb mountains- Swimming-Running

I do art- Nastalliq writing

Instagram: S.Sedighehashemi-drshtrips

Linkedin: Seyedeh sedigheh hashemi



- **Name:** SATYA SAI JAGABATHUNI
- **Doctoral student @ CERN**
- **Supervisor:** Frank Zimmermann
- **Project:** FCC-ee Final-Focus Optics Correction & IP Tuning
- **Affiliation:** University of Geneva
- **Nationality:** India
- **Hobbies and Interests:** Cooking, Travelling and Listening to Music





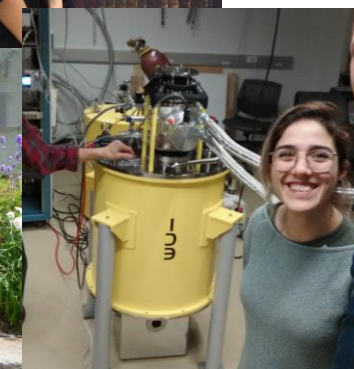
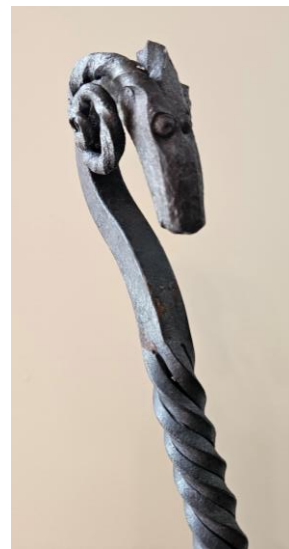
ISIS Neutron and Muon Source

Accelerator Physicist Beam Physics Operations

- Climbing, Hiking, Caving
- Crafts Skills



- MSci Physics
- MRes Condensed Matter Physics
- Cryogenic Test Engineer

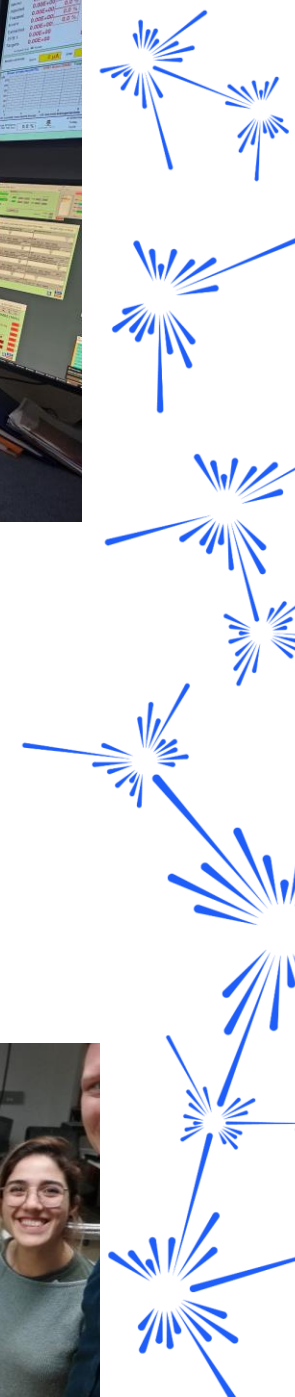


www.isis.stfc.ac.uk

[@isisneutronmuon](https://www.instagram.com/isisneutronmuon)

uk.linkedin.com/showcase/isis-neutron-and-muon-source

ISIS Neutron and Muon Source



Jacob Kelly

jacob.kelly@iba-group.com



2017: Undergraduate Master's degree from the University of Manchester

2022: PhD in Accelerator Physics from the University of Manchester / the Cockcroft Institute

- Superconducting isochronous cyclotron design
- 70 MeV protons for ocular proton therapy

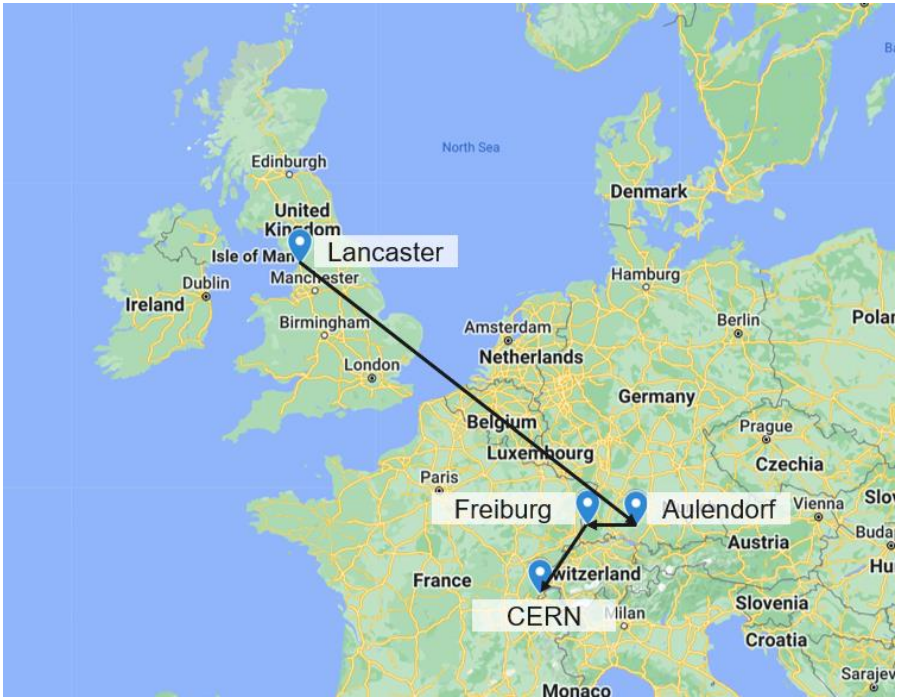
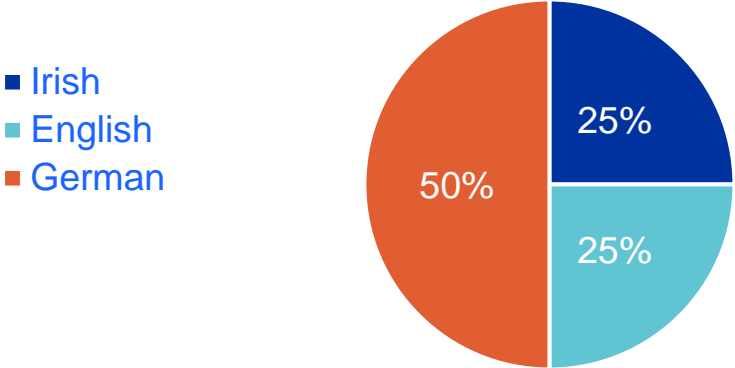
2023: R&D Physicist at IBA, Belgium

- Rhodotron electron beamline magnet simulations
- Variable energy synchrotron for proton therapy

Meeting Monty

- Quarter Irish, Quarter English, Half German
- Researched silicon tracking detectors
- PhD topic: optical Beam Loss Monitors
- Part-time tennis trainer
- Collect 2 € coins
- Enjoy escape rooms

Monty's Nationalities





EUROPEAN
SPALLATION
SOURCE

Johanna Korpijärvi

Hobbies I usually procrastinate:

- 3d printing
- Electronics
- Programming
- Baking
- Cooking



Students

- Jasper Kouwenberg
- Giulia Latini
- Mariangela Marchi
- Sergio Masa
- Eloise Matheson
- Ryan McGuigan

Jasper Kouwenberg

Medical Physicist, HollandPTC



- Gantries
- Eye treatment room
- QA
- Software (& IT)
- Treatment planning
- Chordoma
- Seminoma
- Ocular melanoma



NETHERLANDS





GIULIA LATINI

giulia.latini@lnf.infn.it



- **Research Fellow At INFN-LNF from April 2023**

My research work is about

- » *Anomalies detection for control and diagnostic systems on particle accelerators*
- » *Virtual diagnostic systems using machine learning algorithms*

- **Master's Degree In Electronic Engineering At Sapienza, University Of Rome**

Master thesis project carried out at INFN-LNF

- » *Machine learning algorithm to predict the beam spot size and then the emittance measurements on first meter of SPARC_LAB linear accelerator*



Mariangela Marchi



My background:

- Grew up in Avezzano (Abruzzo, Italy)
- BSc and MSc in Electronics Engineering at “La Sapienza”, University of Rome 🇮🇹🥰

CERN:

- Technical Student in SY-RF-MKS : RF measurements and Tuning of a RFQ stand-alone 750 MHz proton accelerator and RF optimization of its RF input power coupler.
- PhD Student in Accelerator Physics at “La Sapienza” and Doctoral Student at CERN (SY-RF-BR).

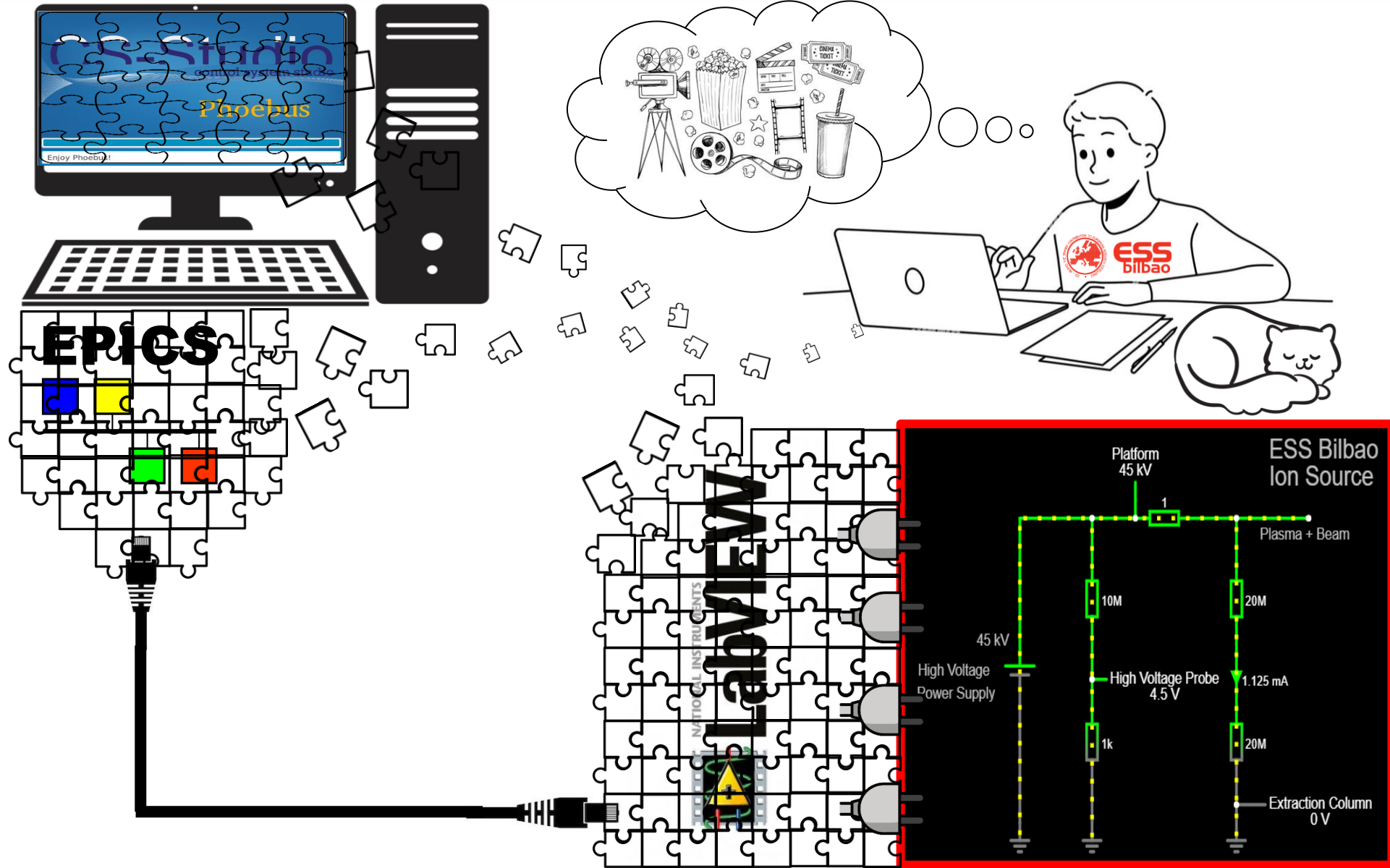
Hobbies:

Sport, Drawing, Chess, Psycho-Horror Cinema, English Literature addicted , AC Milan and Man Utd fan....and visit new places and try new experiences!

PhD Topic: Study of the longitudinal beam instability thresholds and sources, measurements of the longitudinal impedance and longitudinal painting of the CERN PS Booster.



Control Engineer



Profile

Native to The Isle Of Man

Graduated from Lancaster University in 2019 (MPhys)

Role in Precision Optics for three years (Manx Precision Optics)

PhD

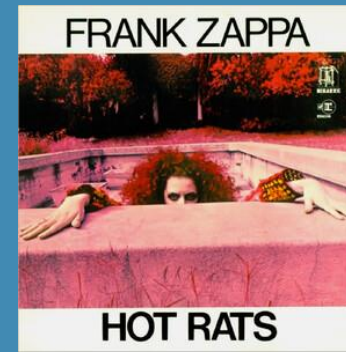
PhD at Lancaster University with the Cockcroft Institute

Near-field electrodynamics of charge distributions during high field-gradient acceleration processes

Hobbies

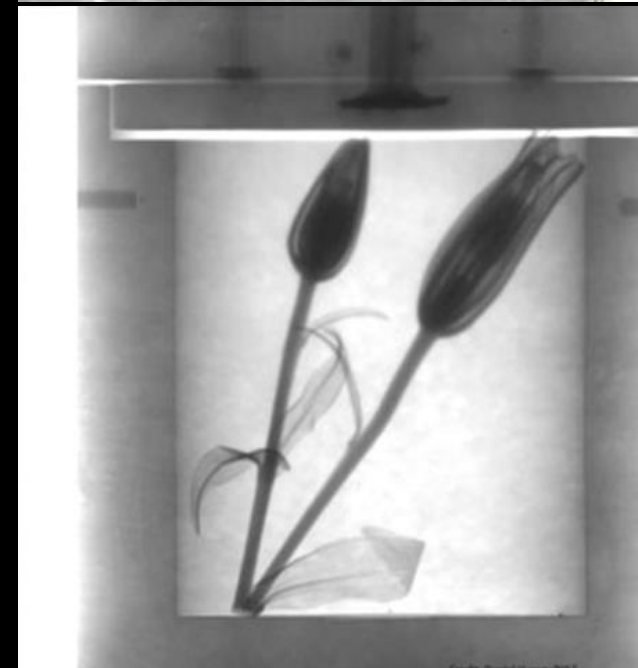
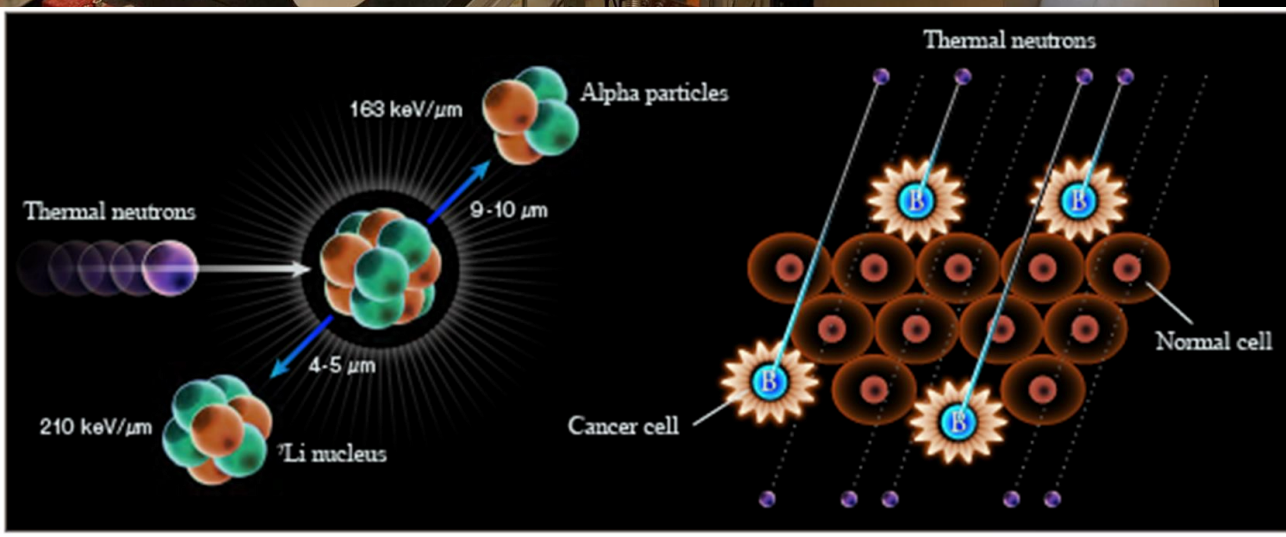
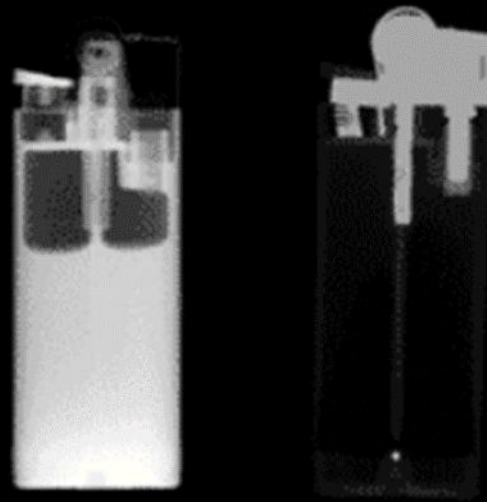
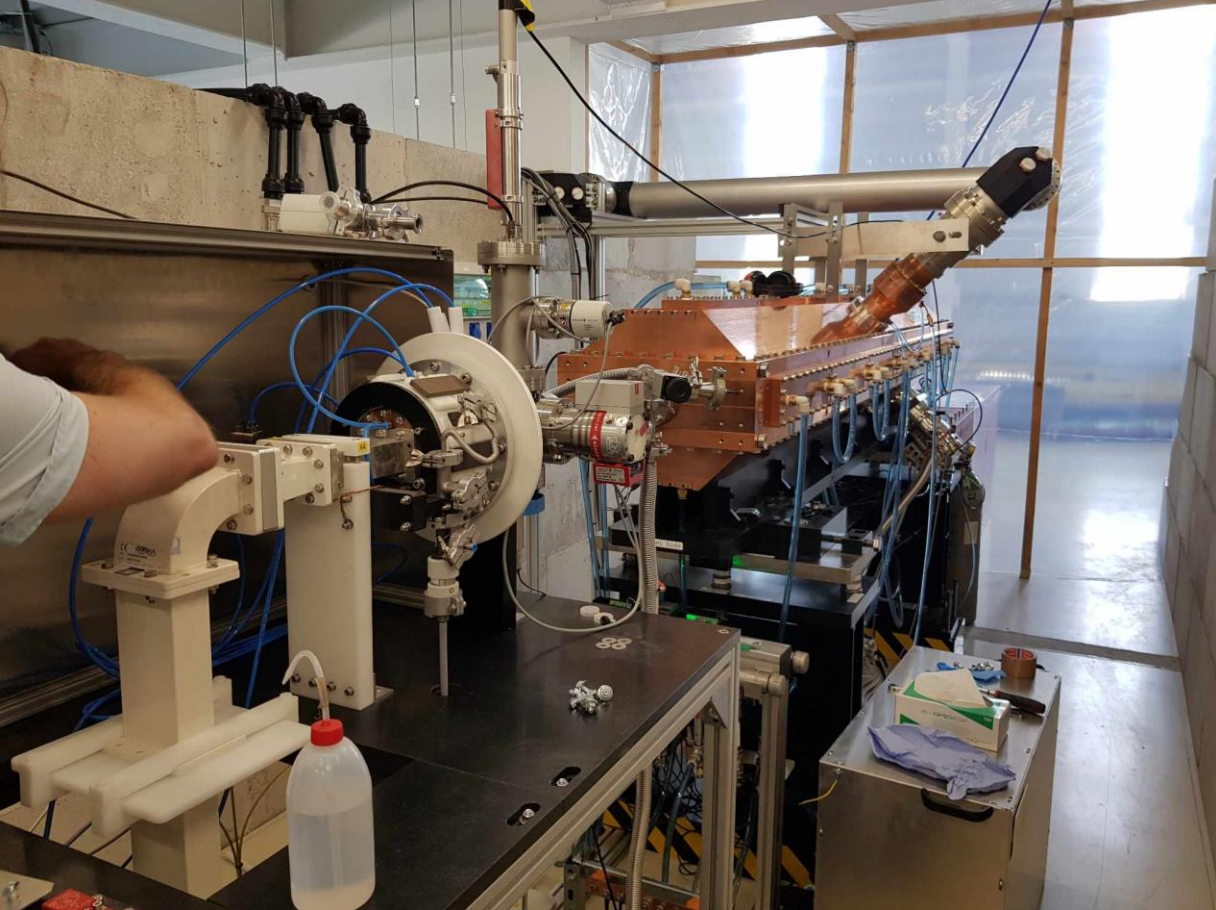
- Music/Guitar
- Cool books
- Vinyl
- Reenactment
- History

What I do on the weekend



Students

- Attila Merse Miklós
- Oleksandr Naumenko
- Fern Pannell
- Betina Mara Pereira Ferreira
- Alexandra-Gabriela Serban
- Sheldon Smith

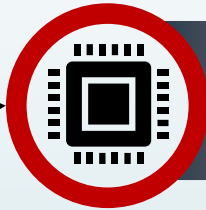


Me, Oleksandr



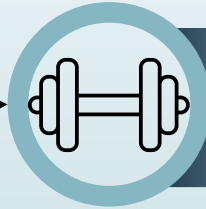
Traveller

- Born in [Ukraine](#)
- Raised in Germany
- Slow to adjust



Gamer

- Fan of strategy: Homeworld, Civ, EU4
- Also [DnD](#), boardgames
- Knows rules to games he doesn't own



Sporty

- Gym enthusiast
- Big fan of [hiking](#)
- Can shoot a bow



Physicist

- Astrophysicist at heart
- Studied all kinds of [theoretical physics](#)
- All over Europe



Communicator

- Loves science for bringing people together
- Loves [teaching](#), igniting sparks
- But also ready to learn

Fern Pannell – PhD High Energy Physics



University College London

MSci Physics

PhD High Energy Physics



Plasma Wakefield Acceleration at AWAKE (PhD)

- Beam instrumentation for measuring energy gain and emittance of accelerated electrons

Previous work in Proton Beam Therapy

- Detector for proton range verification



Betina Mara Pereira Ferreira



Blumenau-Brazil



Chemical Engineer

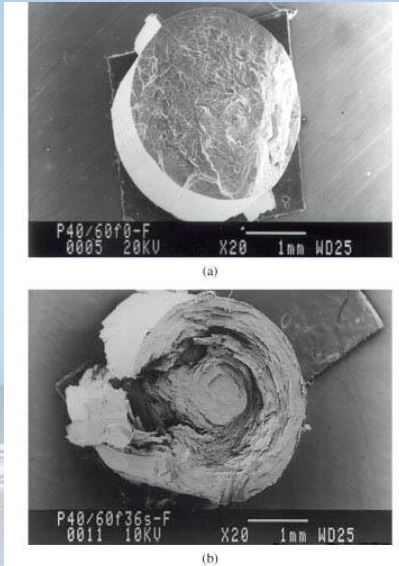


Figura 7. Fotomicrografias da blend PLLA/PHBV 40/60, onde a) sem degradação; e b) com 12 semanas de degradação *in vivo*.



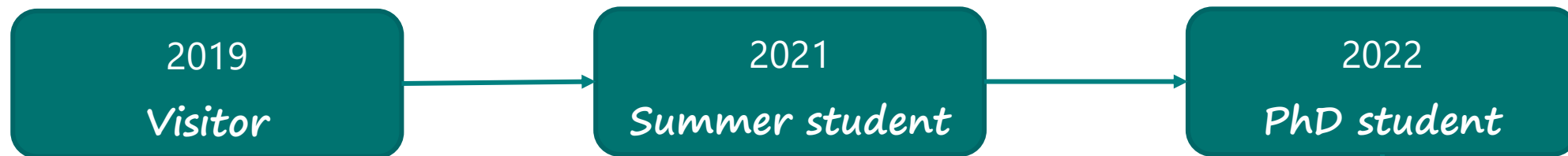
MCR Operator
ESS

Hobbies



Hello, I am Alexandra!

- Born and raised in **Bucharest**, Romania.
- Bachelor's and Master theses at Faculty of Physics, University of Bucharest: specialized in **theoretical and computational physics**.
- **CERN** timeline:



- **Passions:** *photography, drawing, reading.*



Personal archive

SY-STI-BMI:
developing and implementing new physics models in the general-purpose Monte Carlo code **FLUKA**.



Sheldon

Family, Pets, Hobbies, Work



City of Saskatoon



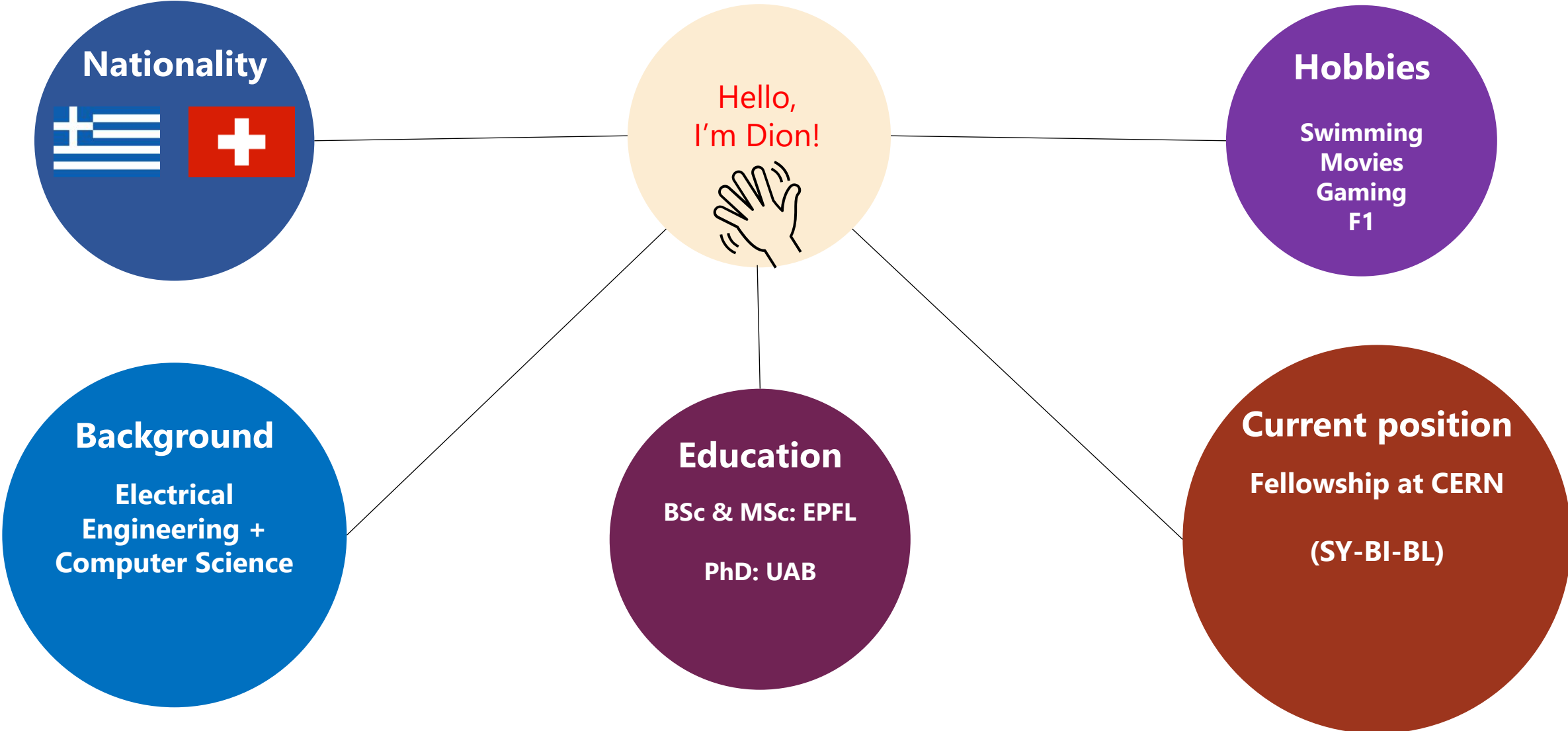
Control Room



Students

- Dion Tzamarias
- Nikita Zena van Gils
- Paula Desire Valdor
- Tuuli Nissinen
- Boyan-Kaloyanov Naydenov Popov
- Gustavo Sánchez

Dion Tzamaras



Greetings fellow humanoids!

LOVE
LOVE
LOVE

"FUN" FACTS:

- Nikita Z. van Gils
- 50% Swiss 50% Dutch (100% lost in life)
- MSc Mathematics → PhD in experimental physics @AWAKE



ACTUAL FUN FACTS:

- Coriander tastes like soap to me
- I cannot roll my tongue
- I grew up in Argentina and Switzerland
- I have Dyscalculia (cannot cope with numbers)
- I speak 8 languages
- Fennel is love

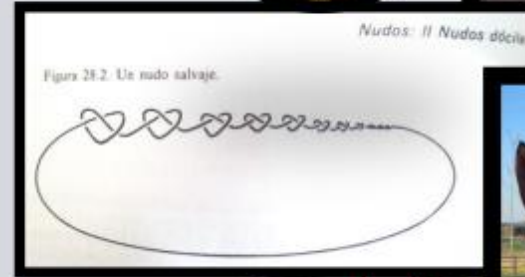
PLEASE DON'T
PUT ME IN A BOX



I AM VERY ZEN



A.S.



Paula Desiré Valdor

From: Santander, Spain.

Age: 23

Studies: Bachelor in Physics + Bachelor in Mathematics and Master in Particle Physics (Univ. of Cantabria).

Hobbies: Swimming.

Currently working as a Technical Student at CERN in accelerator physics and beam dynamics, in the simulation of a low energy acceleration stage of the Muon Collider. And looking forward to start the PhD!



Tuuli Nissinen



MSc (Tech.) physics student at Tampere University, Finland

- Previous experience in ultrafast fiber optics and supercontinuum generation

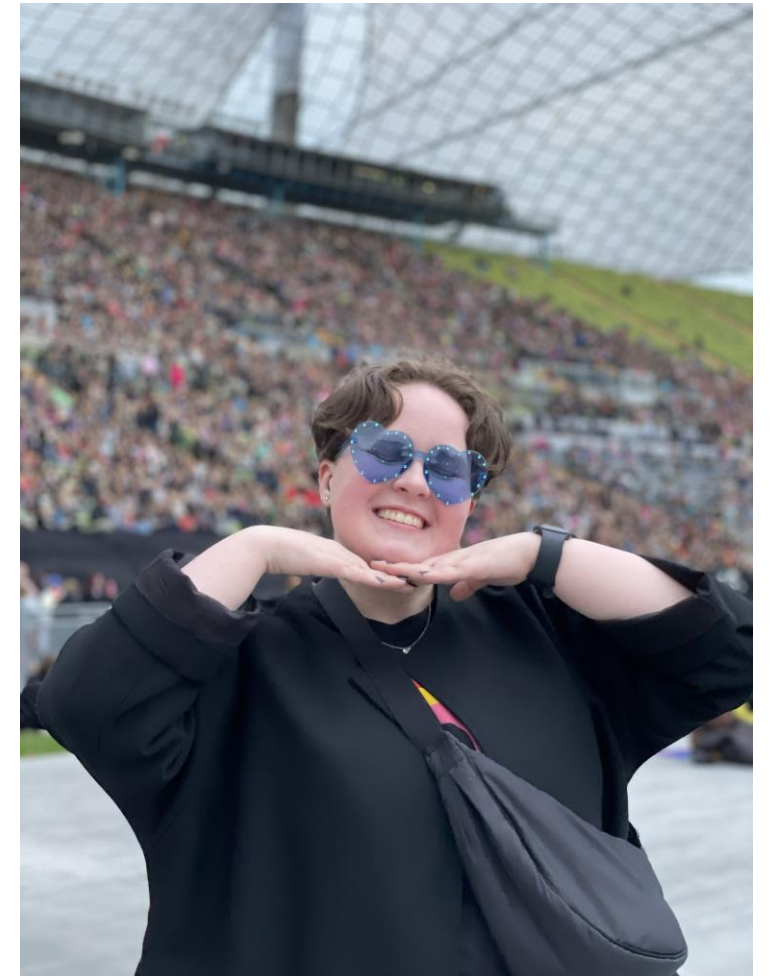
Technical Student at CERN, BE-ABP-LNO

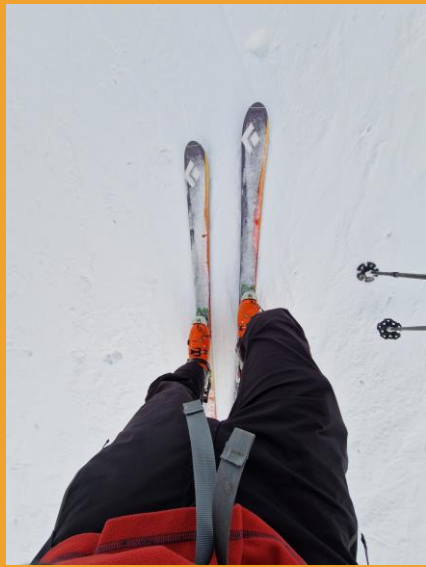
- Optics Measurements and Corrections
- Low-amplitude optics measurements in the LHC with the Transverse Damper (ADT)

Free time: crocheting, knitting, baking, language learning



Bonus: Here's my cat, Helmeri!





Current post: Cryogenics System Engineering Fellow at CERN

Education: MSc in Aerospace Engineering

Interests:

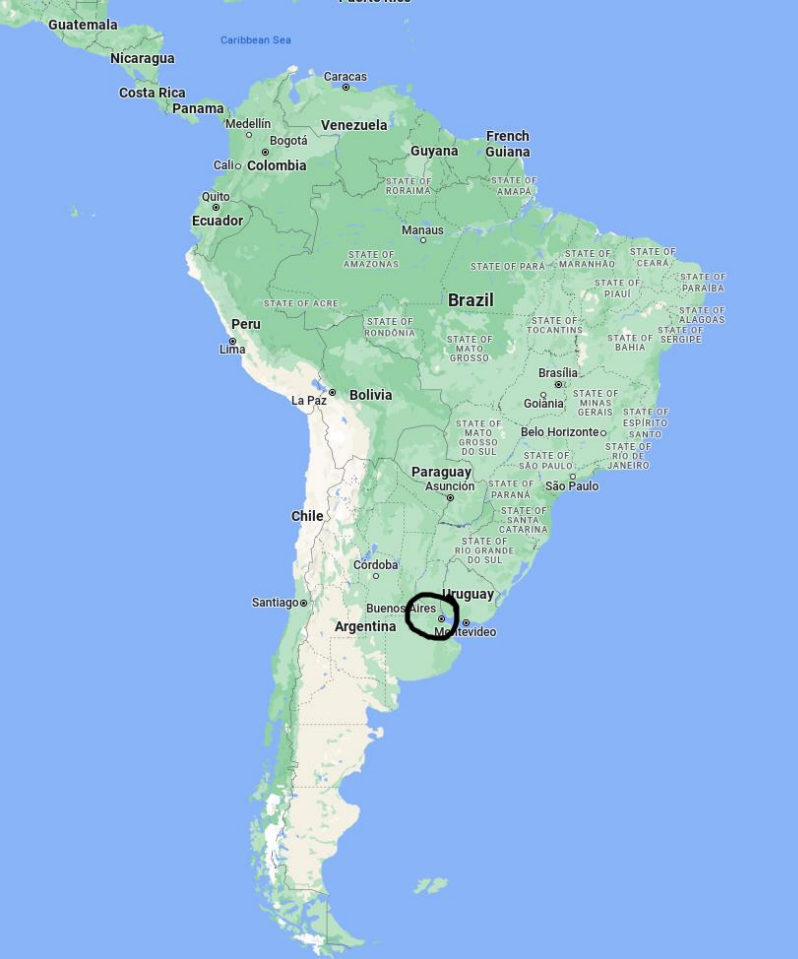
- Sports: trail running, cycling, swimming / climbing, hiking, ski-touring / calisthenics
- Other: nature, movies, podcasts, investing, programming and photography



Boyan Naydenov

Gustavo Enrique Sánchez

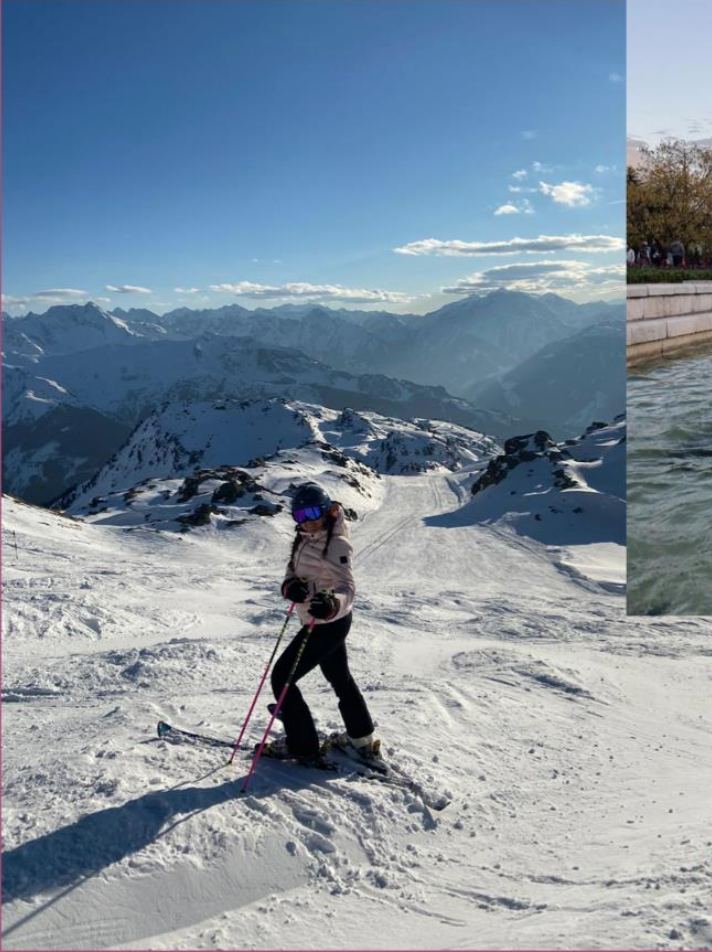
- Born in Ciudad de Buenos Aires, Argentina
- 36 years old
- Argentinian and Italian
- Software Engineer from Universidad de Buenos Aires
- Joined CERN in August 2022 (TE-MPE group)
- Hobbies: travelling, playing guitar, finance, video games



Students

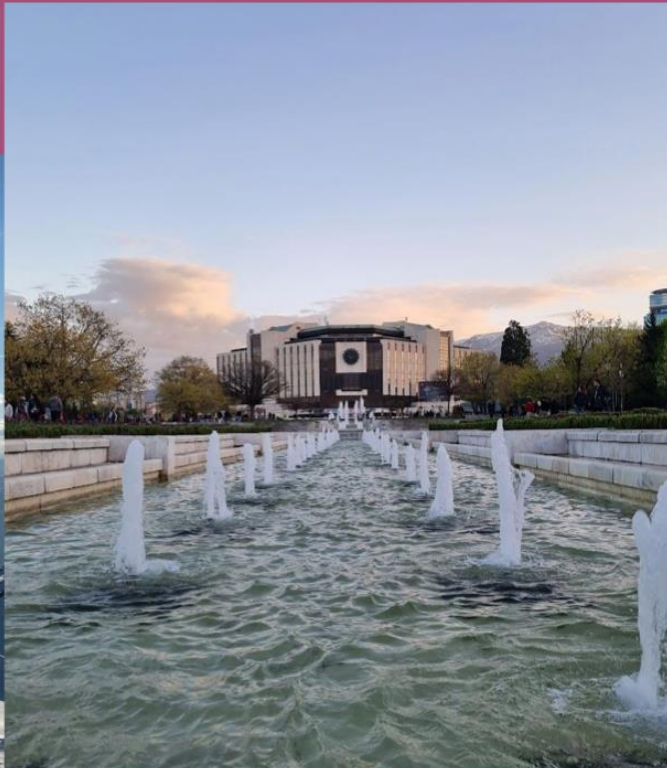
- Anna Radoslavova
- John Patrick Salvesen
- Arturo Abbondanza
- Sasha Jade Horney
- Miltiadis Bozatzis
- Artur Gevorgyan

Anna Valeri Radoslavova



Zillertal, Austria

- I come from Bulgaria
- Bachelor and Masters in physics (Heidelberg university)
- I enjoy both theoretical and experimental physics, previously working on QFT (QCD), now LHC at CERN



Sofia, Bulgaria (hometown)



(Me)

Hobbies:

- Skiing
- Volleyball
- Tennis
- Music



Heidelberg, Philosophenweg



FUTURE
CIRCULAR
COLLIDER



Jack
Salvesen





ARTURO ABBONDANZA

PhD student at University of Ferrara, Italy

My actual scientific interests:

- particle dynamics
- accelerator technology

My hobbies:

- music (violin and viola)
- digital photography

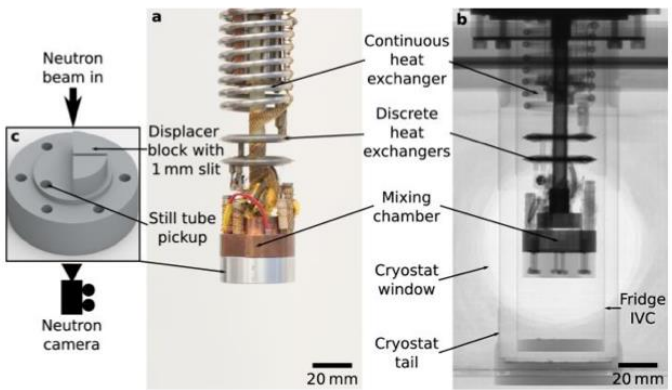
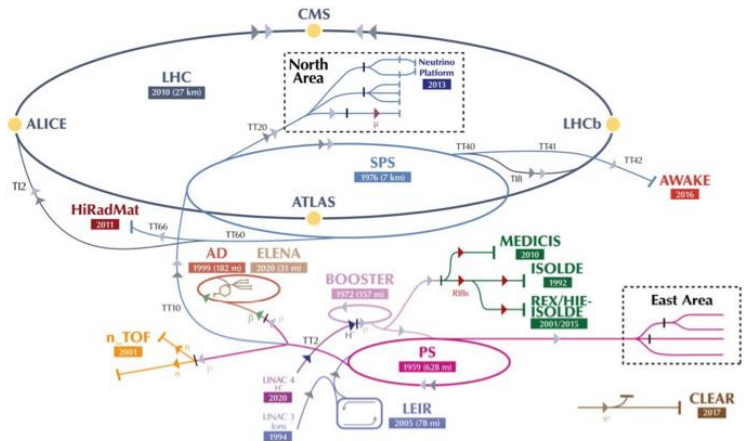
THANK YOU!



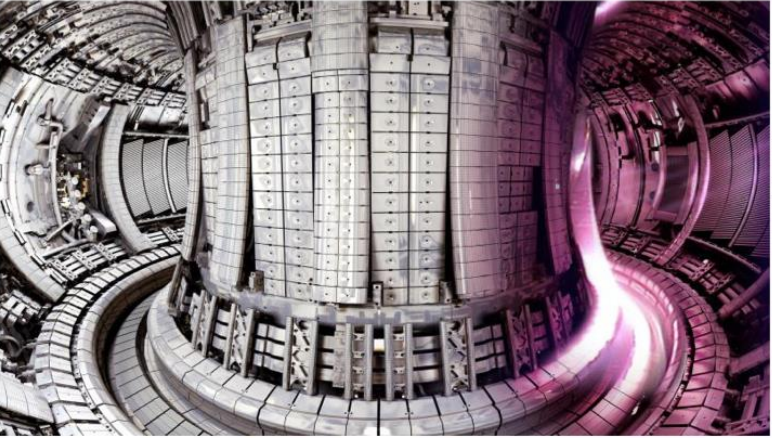
The 70 MeV proton cyclotron at the National Laboratories of INFN in Legnaro (near Padova, Italy) for SPES project



INFN
LNL
Istituto Nazionale di Fisica Nucleare
Laboratori Nazionali di Legnaro



Sasha Horney



Miltiadis Bozatzis - Miltos



Thessaloniki, Greece



Electrical and Computer Engineering
Aristotle University of Thessaloniki



Applied Physics Technical Student
CERN, BE-ABP-INC



Huge Music fan -
Classic 60s, 70s, 80s
Rock



Always enjoying
good Hiking trips



Playing Chess
Not the best player
though



Interested in Cinema
Movies/TV Series fan



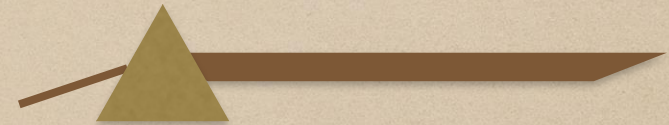
Applied Physics Technical Student, CERN

Studies of transverse tail population in Proton
Synchrotron (PS) during transition energy for LHC - type
beams

Research Intern, E3 Program - EPFL

Development of an Optical fibre sensor based on Faraday
effect for measuring intense electrical currents

System/Electrical Engineer, AcubeSAT - AUTH
Design & Manufacture a 3U CubeSat nano-satellite under
ESA's FYS!3 program



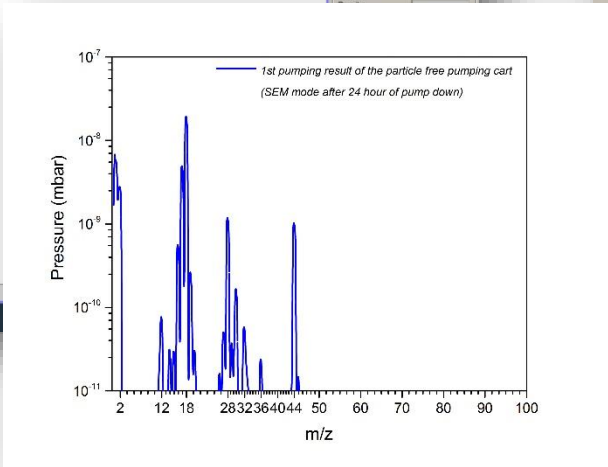
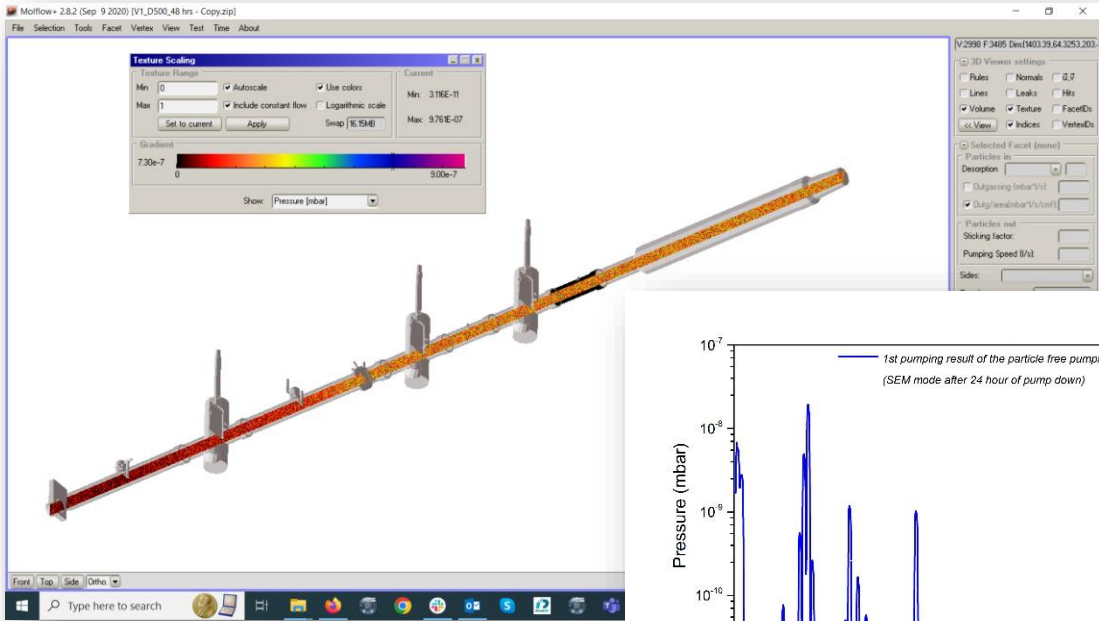
- 🌀 Favourite band: Pink Floyd
- 🌀 Favourite album: The Wall
- 🌀 Favourite song: Sultans of Swing
- 🌀 Favourite TV Series: Breaking Bad



AREAL, an e- accelerator!

ALBA Synchrotron Light facility!

Neutron source, based on the most powerful Proton accelerator!



Fishing and Vinyl records



Students

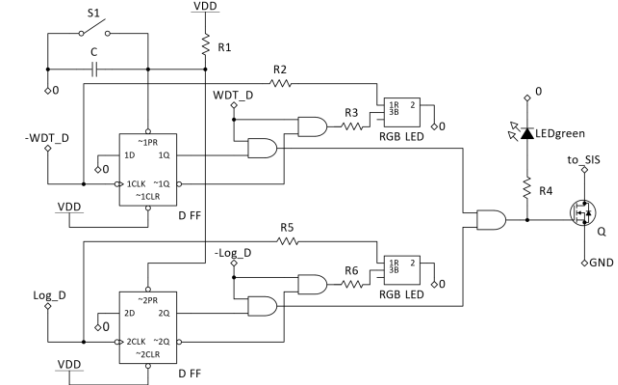
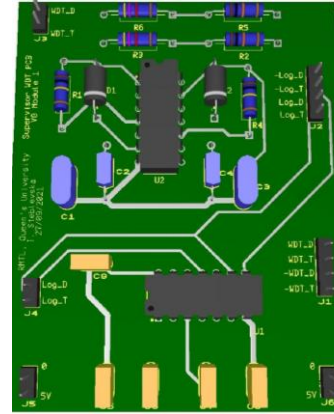
- Iveta Steblevska
- Florian Wolfgang Stummer
- Szymon Lopaciuk
- Valerio Pagliarino
- Felipe Donoso
- Emma Elizabeth Quinn

Iveta Steblevska

PhD student at Queen's University, Canada.



Electrical engineer developing accelerator instrumentation [1].



I can cook, but I don't enjoy it.
I can eat, and I definitely enjoy it.



I hate running.
I hate not running more.

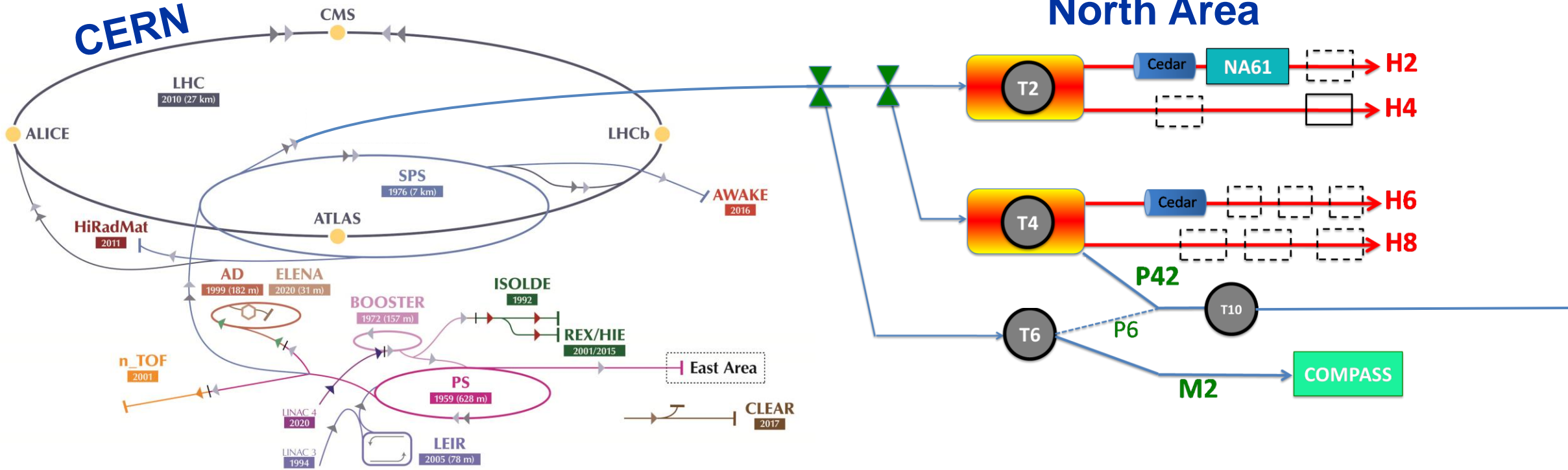


I can understand at least four languages.
But speak only two.



[1] Steblevska *et al.*, Nuclear Instruments and Methods in Physics Research, 2023.

Introducing... Florian Stummer



K12 beamline

SHADOWS

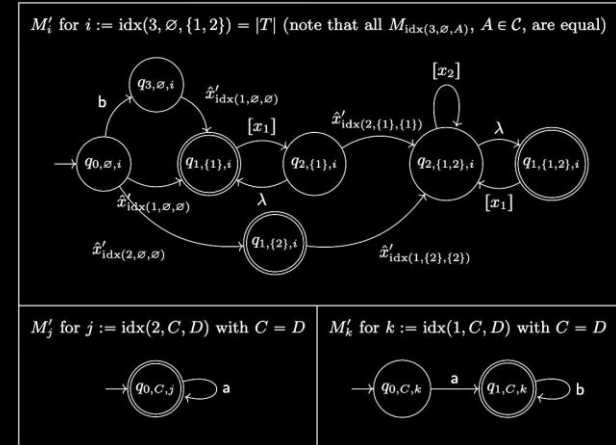


Szymon Łopaciuk

Fellow @ BE-ABP-CEI



I'm a developer with Xsuite



PhD in Theoretical Computer Science



I do improv at CERN



Also interested in retrocomputing

Valerio Pagliarino

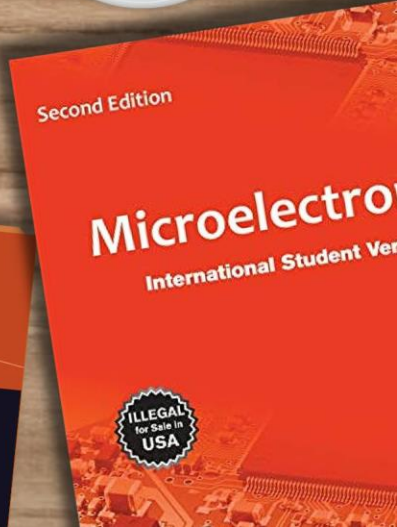
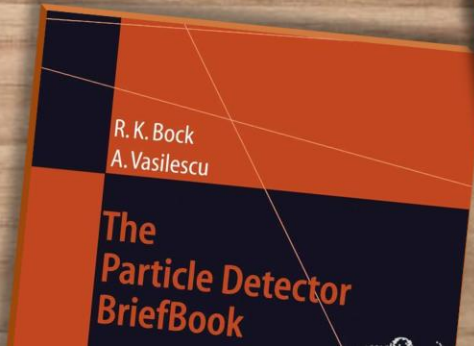


- ❖ Student (MSc in Physics) at University of Turin
“Nuclear / Biomedical curriculum”
- ❖ Personal interest in microelectronics, FPGA programming, design of electronic systems, data transmission, computing
- ❖ BSc thesis on FPGA-based beam position control system for the GSI “Cave M” facility (particle therapy)
- ❖ Collaborating with an academic spin-off named “RandomPower” that uses detectors from particle physics to create true random numbers generators for Monte Carlo simulations and IT security, as an electronic designer
- ❖ Playing the drums in a small orchestra & working as audio technician
- ❖ Photography & video making
- ❖ Love for mountains!
- ❖ Cooking

Physics

Work

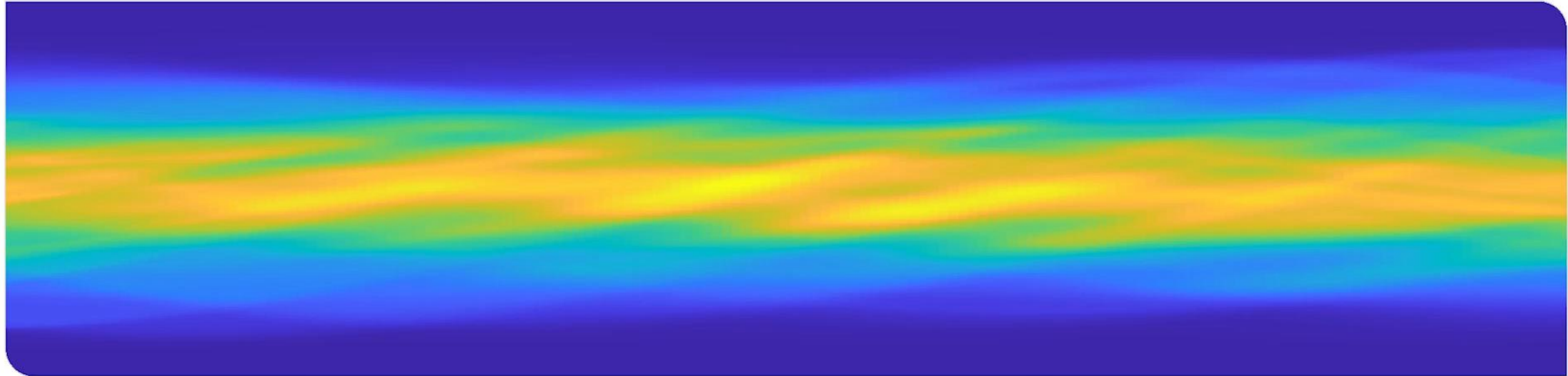
Hobbies



Storage Ring, Phase Space and Tomography

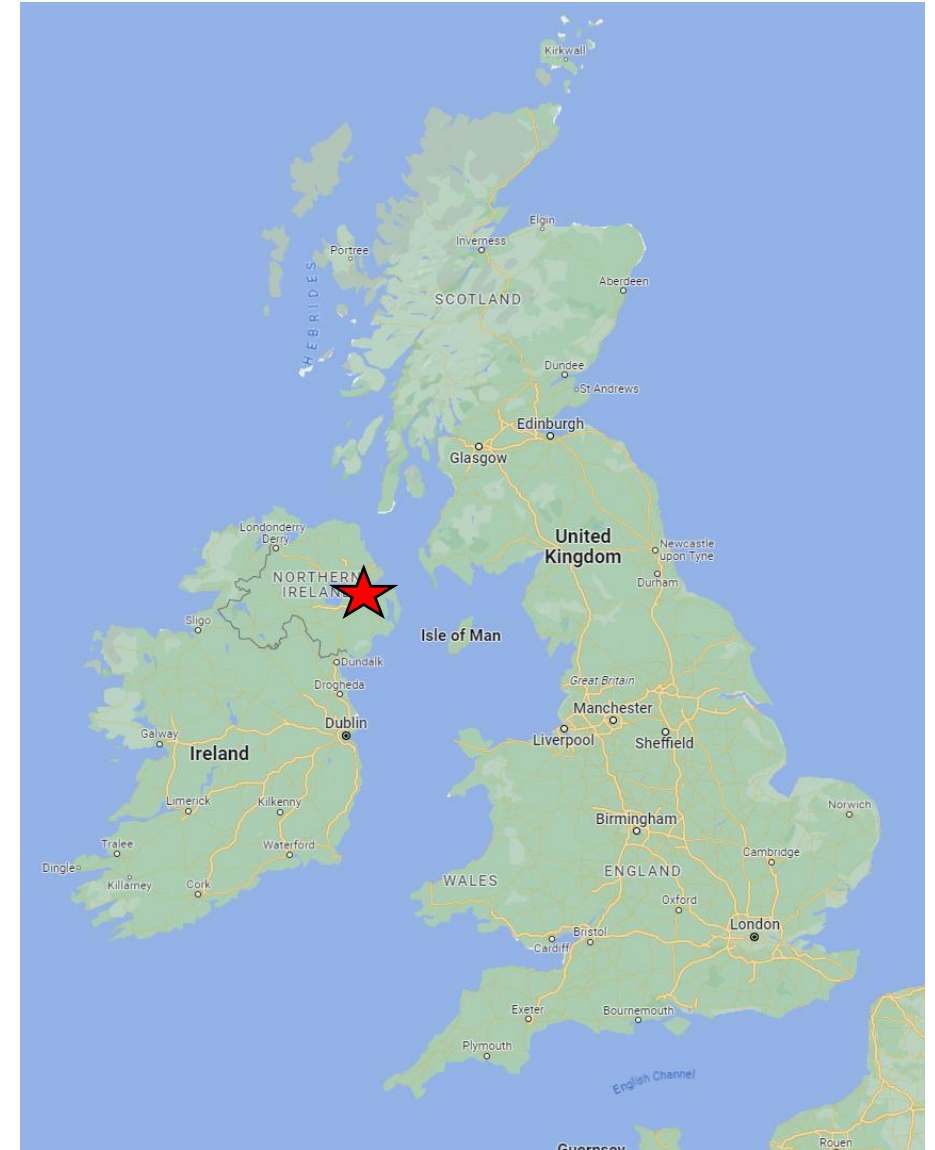
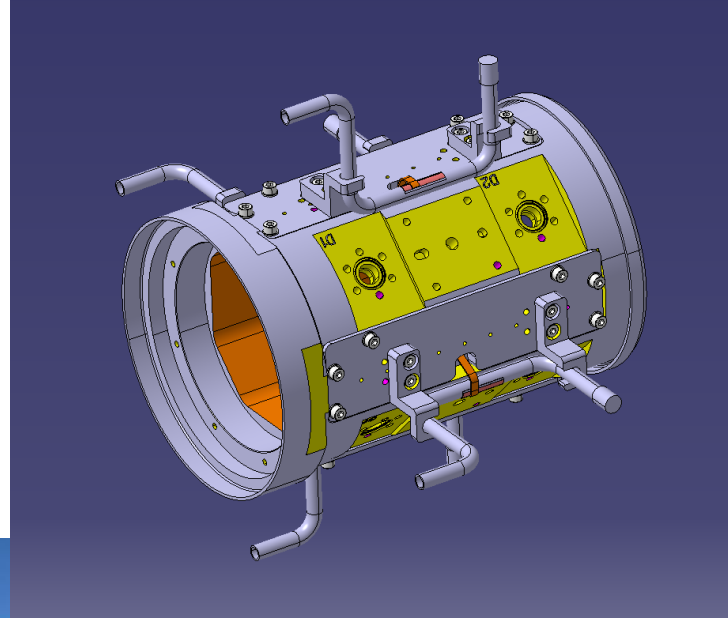
CAS 2023

Felipe Donoso | 26 September 2023



Emma Quinn

SY-BI-ML



Students

- Colas Droin
- Chirag Banjare
- Olivier Danna
- Heli Huttunen
- Rahma Siddeeq
- Shamin Chowdhury



Hi! I am Colas

30 yo



My small family

What I do

Working at **CERN** on beam-beam effects in the BE-ABP INC section as a senior applied fellow

What I studied

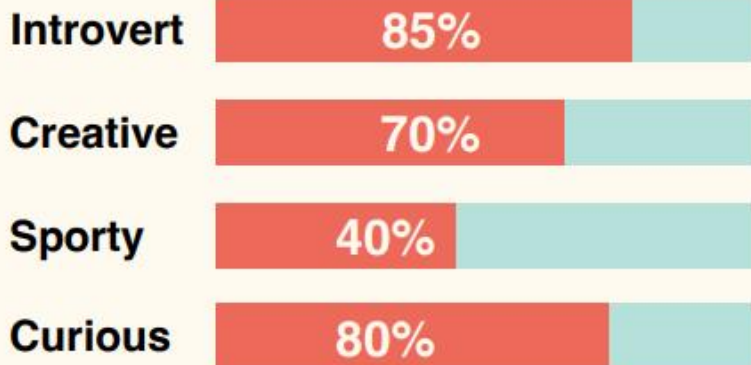
PhD at EPFL
Computational
biophysics

Professional interests

Data science
Data visualisation
Computational physics
Web development



Who I am



Hobbies

Video games, yoga, cinema, psychology, philosophy, personal development



You can reach me at colasdrouin@gmail.com



Chirag = ? Light

Development of Photocathode for DESY SRF gun, PhD @ 6 months

0 •
Zero Decimal



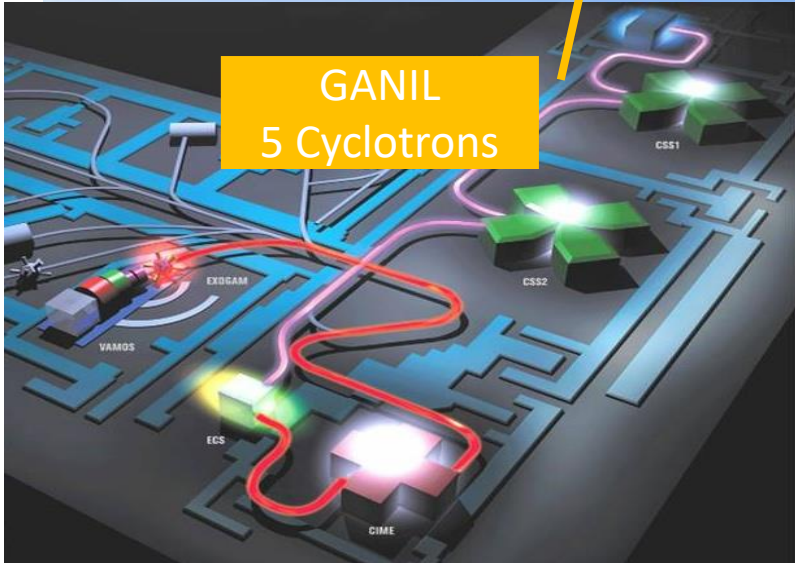
GANIL in Caen (Normandy)
A Nuclear facility designed
for Nuclear Physics



Normandy Famous For

SPIRAL 2
1 LINAC 200 kW

GANIL
5 Cyclotrons



CAS 2023 Introducton to Accelerator Physics Santa Susanna

Olivier Danna

danna@ganil.fr

GANIL in Caen/Normandy/France

Operation group leader

Staff (20): operators and engineer

Married, 2 (big) children

Hobbies : always close to the sea

Heli Huttunen

BE-ABP-INC, CERN



- Master's Programme in Materials Research, Medical Physics studyline, University of Helsinki
- At CERN optics design of He-synchrotron for cancer therapy
- Free time: outdoors, music, arts, reading



We shouldn't seek ourselves out but rather than begin the process of BUILDING it.

22 Years



Biophysics Major
Alexandria University

High School

An Explorer, Challenger and
Knowledge Seeker

It's Rahma

An Arabic word that means
(Mercy, Grace and Compassion)



Former intern as
Medical Physicist

Seeking a career in
Medical Accelerators
development



Share the same
memory of Dory



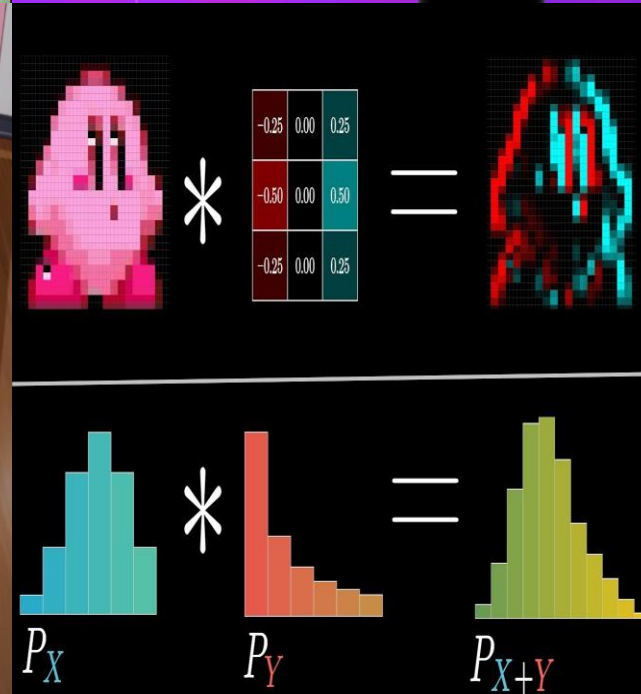
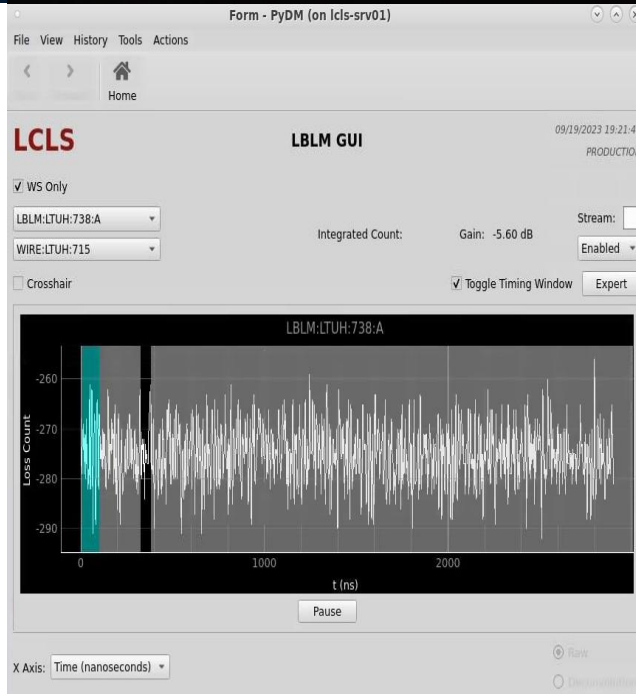
2020-2021

Cal[®]



SLAC

NATIONAL ACCELERATOR LABORATORY



Students

- Alejandro Borjesson Carazo
- René Steinbrügge
- Antoni Simelio
- Saeed Haghtalab
- Philippe Velten

Alejandro Börjesson Carazo

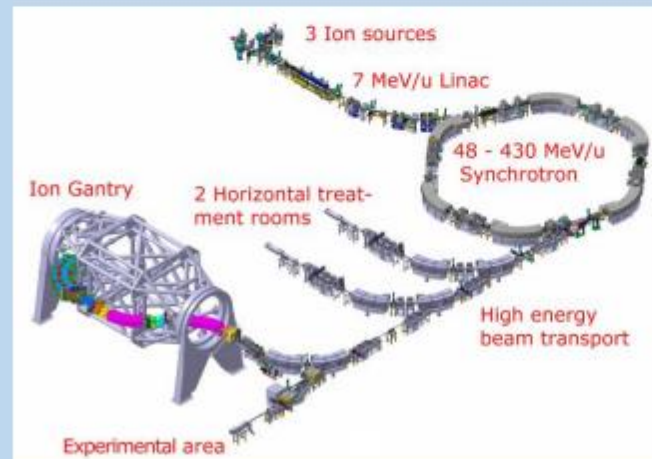
- Tech Student at BE-ABP-LNO
- Working on machine learning for optic correction in the LHC

René Steinbrügge

What I do



- Since 1,5 years at HIT
- working on accelerator control system
- Implementation of multiple energy extraction



What I did

- PhD in physics at Heidelberg University
→ X-ray spectroscopy
- Postdoc at Texas A&M and TRIUMF
→ mass spectroscopy



- Postdoc at PETRA III at DESY
→ nuclear resonant scattering



Two truths – one lie:

- I walked on the red carpet of the Oscars.
- I watched a solar eclipse
- I won 500€ in a poker tournament



What else I like to do

- Cycling
- Play boardgames
- Relax at the beach

Antoni Simelio

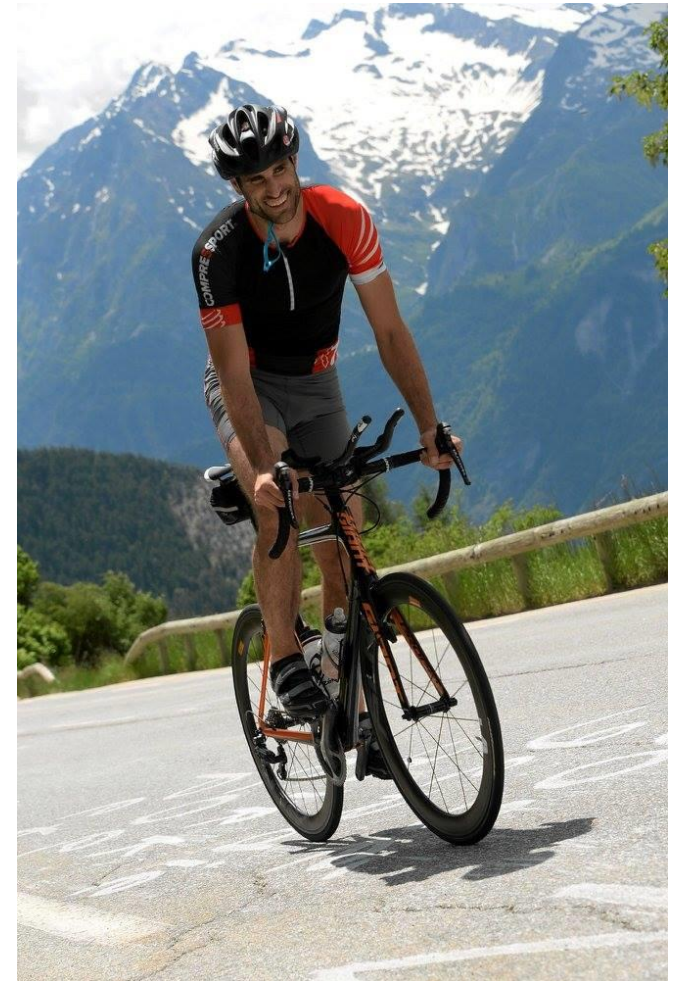
CAS Course : One Slide / One minute

Labour:

- Control System Engineer / Automation Engineer
- First Job : heavy machinery in Barcelona
- Spacial domain : Technical Center South America
- Fusion Reactor wannabe : South of France
- Neutron Source : Sweden

Free time:

- Biking !
- Lego





Saeed Haghtalab

Control system engineer
Project manager

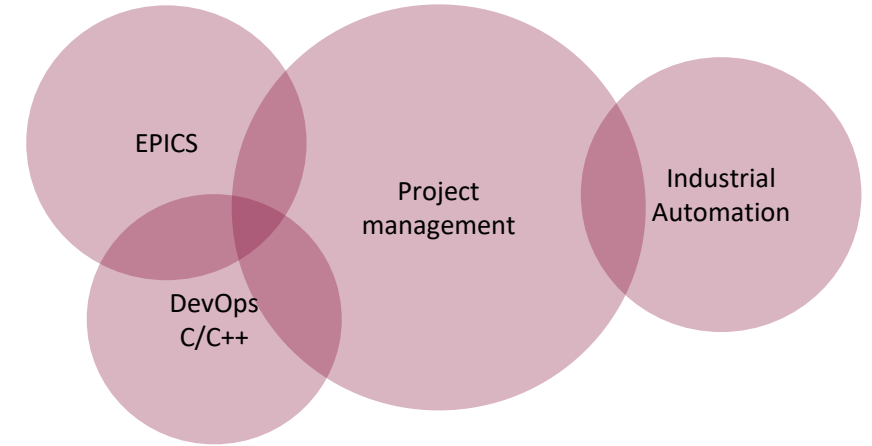
 saeed.haghtalab@ess.eu

 [linkedin.com/in/saeed-haghtalab](https://www.linkedin.com/in/saeed-haghtalab)

Education

- 2014 - 2017 **M.S. in Nuclear Engineering Applied Radiation**
Tehran, Iran
- 2010 - 2014 **B.S in Electrical Engineering Power systems**
Mashhad, Iran

Skills (Or what I'm dealing with on daily basis)



Work experience

- 2020 **Accelerator controls WP manager**
European Spallation Source, Sweden
- 2018 **Control system engineer**
European Spallation Source, Sweden
- 2014 **Control system engineer**
IPM, Tehran

Interests



Last one was a road trip to Lapland in winter to see northern light and another later for midnight sun



Well, beginner yet but getting there slowly..

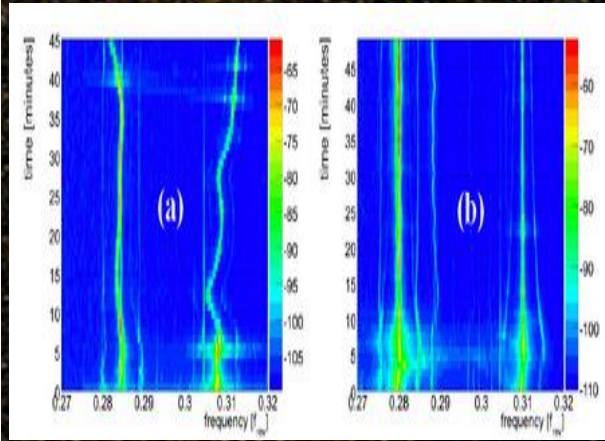


Basically anything that involves racket, ball and net

Lecturers

- Hermann Schmickler
- Irina Shreyber
- Suzie Sheehy
- Gijs De Rijk
- Andrea Latina
- Wolfgang Hillert

PhD in Particle Physics
1986, Then @ CERN



Beam instrumentation

**Control Systems of
Accelerators**



CLIC study



Hermann Schickler,
Retired since July 2022 from CERN
Proud of having always

kept a good balance of life

MUSIC
Opeth

**FROM
HEAVY
(OPETH)
TO HEAVY
(WAGNER)**



HIFI-ELECTRONICS

FOOD

&

DRINKS



Teacher and director

Teaching

- Particle (and a bit) Accelerator Physics
- Electrodynamics/Relativity/QFT
- Public Science Speaker
- Space & Universe Science and Public Talks
- Management and Leadership Skills for Scientists

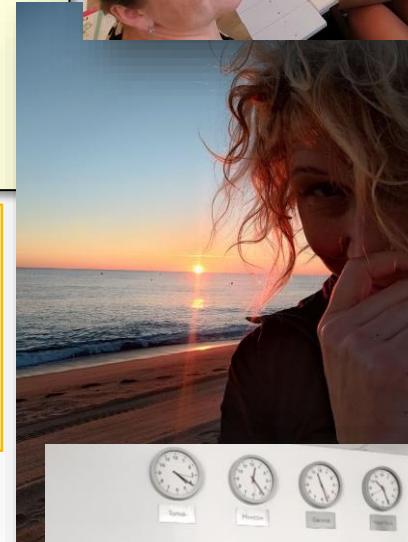
Irina Shreyber



- Particle/accelerator Physicist
- Fermilab, CERN, CEA, UNG/TSU/ITEP
- CDF/CMS/MAD-X/ "Science"
- Global head of the SIG Energy, IPMA
- Science Leadership School Director
- Vienna University of Economics and Business Student ☺



Posing for pictures



MORE OVER A GLASS OF...

Sports

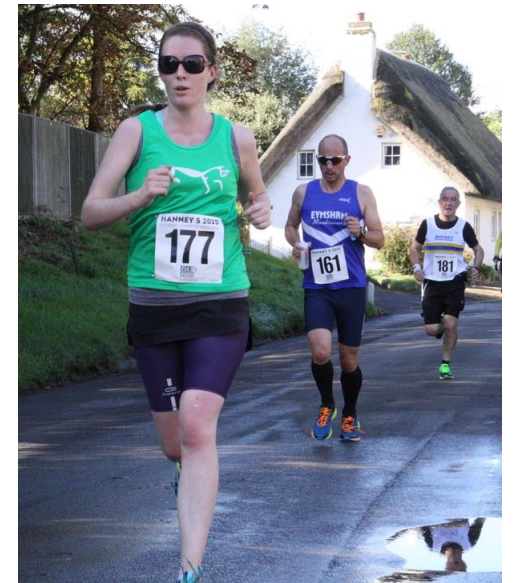
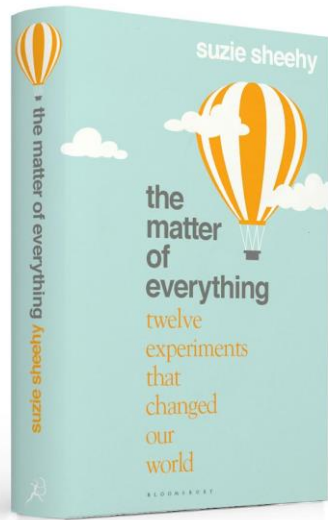
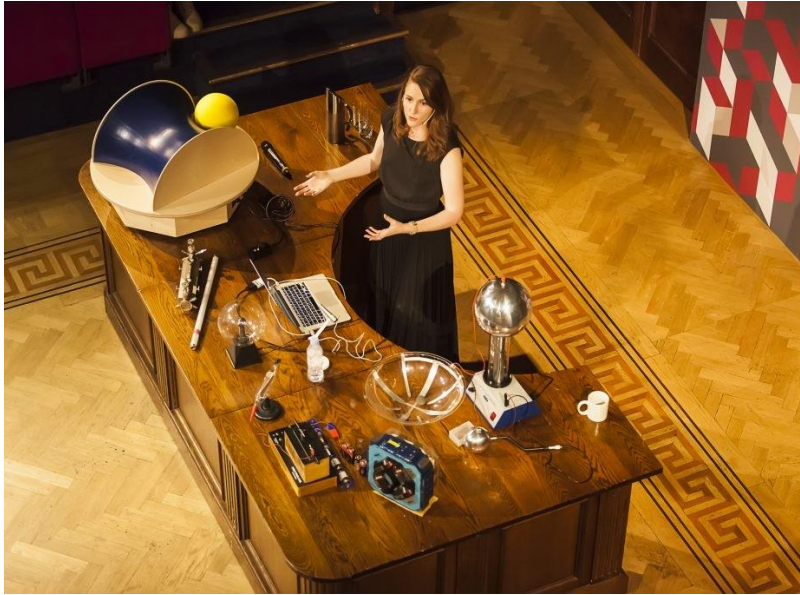
Powerlifting, Skiing,

Running

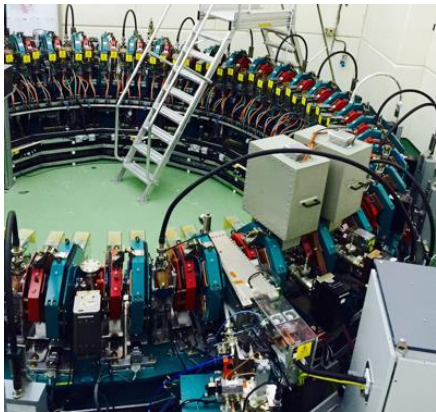
Enjoying life

- Reading
- Travelling
- Good conversation
- Romantic jazz
- Nice wine

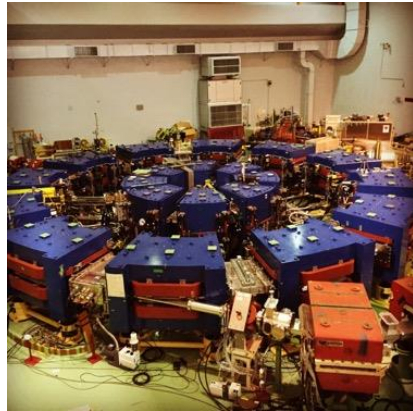
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Release date: 28th April 2022



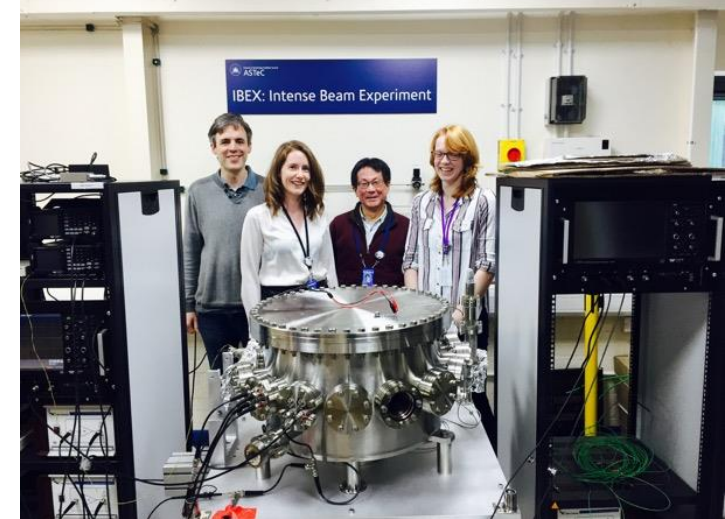
EMMA non-scaling FFA



Kyoto University FFA



My Melbourne Lab: (2021-)
The "X-LAB" w. CERN X-Band test stand



My Oxford Lab: (2015-)
Intense Beam Experiment "IBEX" ion trap

Dr. Suzie Sheehy
@suziesheehy

Gijs de Rijk



MSc Leiden univ. Exp Physics 1981, PhD Univ of Amsterdam 1986

Worked at CERN 1986-2022 on:

- LHC dipole design 86-88 (fellowship)
- Accelerator operations LEP & SPS 1988-1996
- Warm magnets for the LHC ring 1996-2002
- LHC dipole production 2003-2007
- High field magnets (Nb₃Sn and HTS) 2007-2022
- + a few management roles at CERN

Since April 2022 retired: doing lots of fun things:

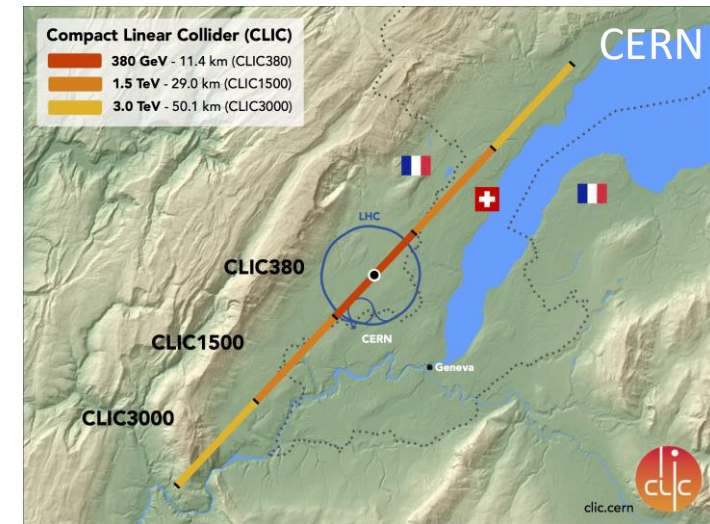
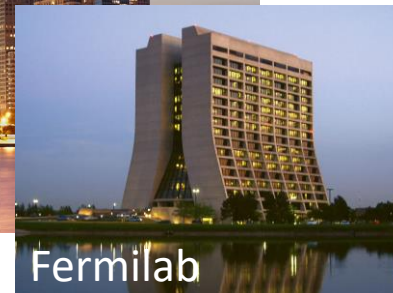
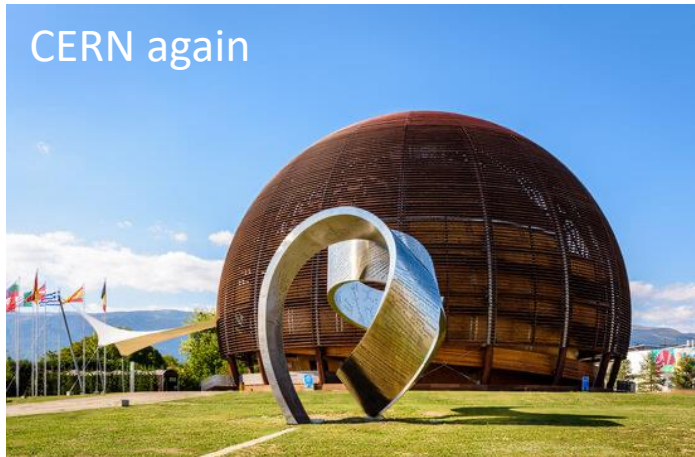
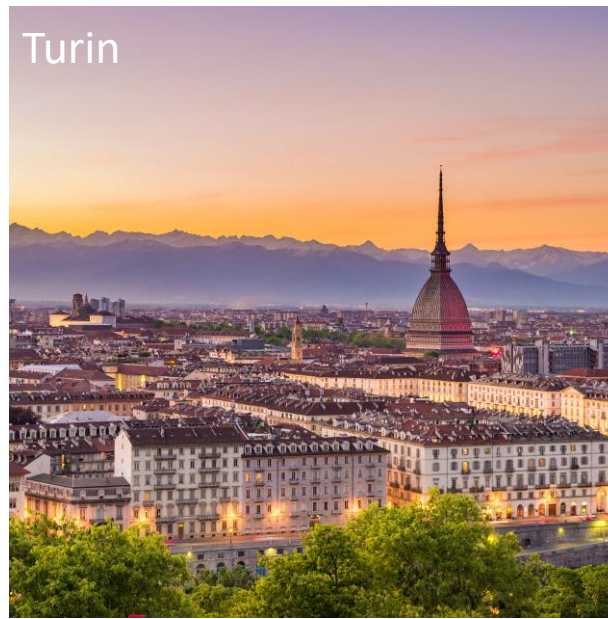
- Sailing (YCC and private boat)
- Skiing, hiking
- CAS school teaching
- Consulting for a high-tech firm that produces Antennas & waveguides for telecommunications, small geostationary telecommunication satellites.

email: gderijk@protonmail.ch

Andrea Latina

Physicist
Cinema, music, art (and cat) lover

Running the Cineclub of CERN ☺





St. Michaelis, Hamburg, 24.08.2023

CAS Team

- Frank Tecker
- Maria Filippova
- Noemi Caraban Gonzalez



Frank Tecker

CAS Director
Accelerator Physicist
Fermilab, CERN
LEP, Recycler, CLIC/CTF3, PS

Teaching

Accelerator Physics
Linear Colliders



Enjoying life

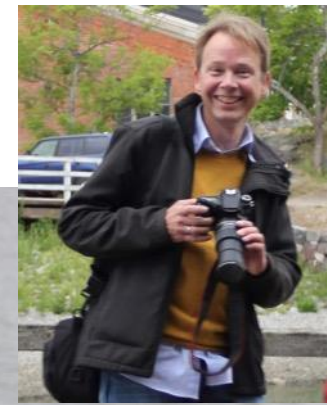
Travelling
Good food!
Nice wine, ...



more over a
glass of wine...



Sports Pool (Swimming and Billiard), Kicker,
Ski, Running, **Volleyball** (indoor, beach)



Taking pictures




Jaromir Ludwin



Maria Filippova



2008-2015: quality assurance assistant at 
study, responsible for RF components (splitters, bi-directional couplers, high-power loads): technical specifications, procurement, shipment, qualification check, document management.

Oct 2018 - present: administrative assistant of CAS
*- registration and payment follow-up
- travel arrangement for lecturers
- certificates of participation and payment
- formatting of proceedings.*

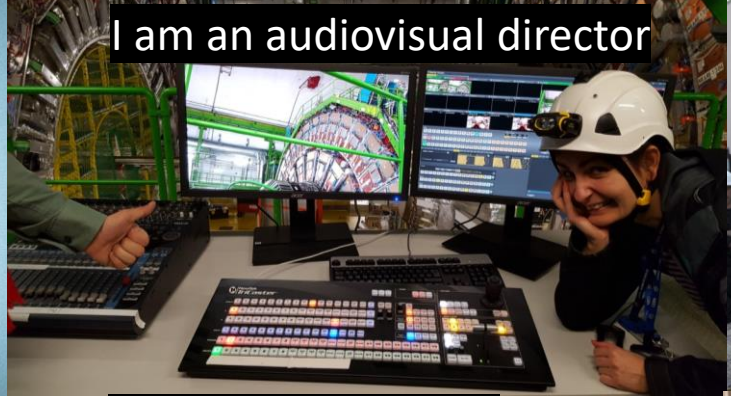


Mor...





Hello, I'm Noemi



I am an audiovisual director



Safety First!



I record



I edit, I publish



I won a Lovie Award for a music videoclip



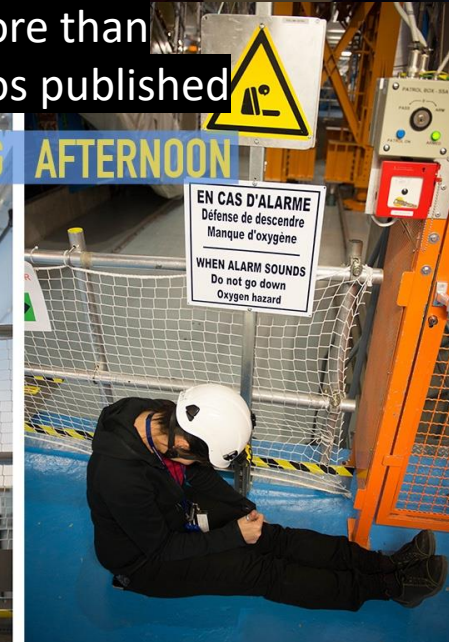
I now work on the CASopedia project !!!!



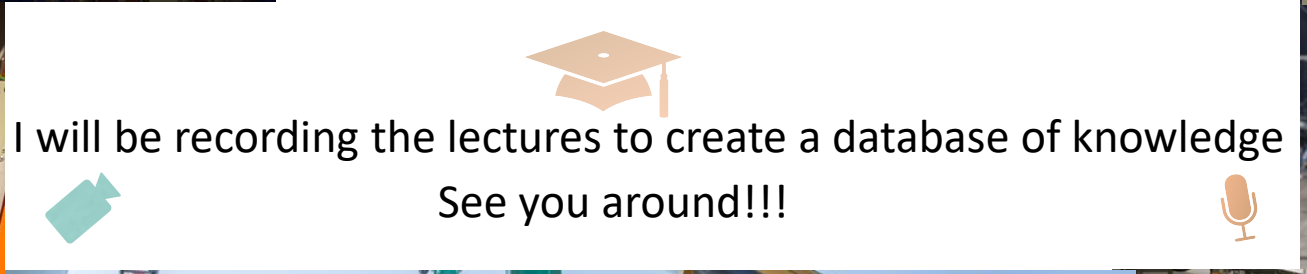
I produce content



I have more than 400 videos published



MORNING AFTERNOON



I've recorded outside



and underground