

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

Santa Susanna, Spain 23 September 2024

CAS Team

- Frank Tecker
- Christine Vollinger
- Delphine Rivoiron
- Maria Filippova
- Noemi Caraban Gonzalez



TeachingAccelerator Physics
Linear Colliders

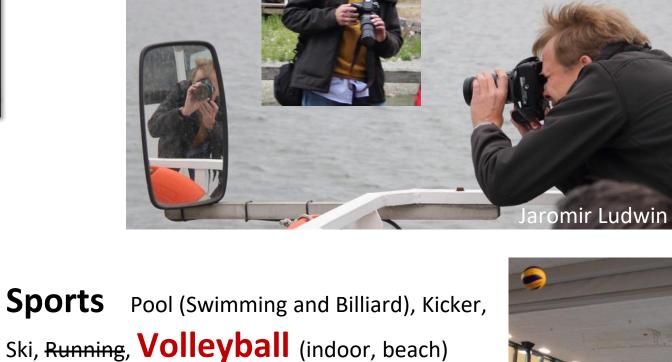
Frank Tecker

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



Enjoying life

Travelling Good food! Nice wine, ...



Taking pictures

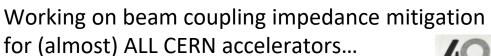


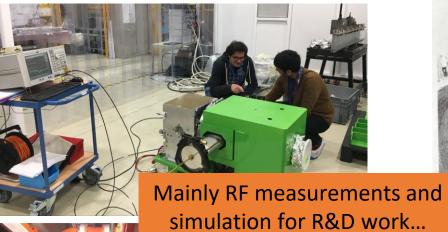
more over a glass of wine...





Christine Vollinger from CERN – RF Group



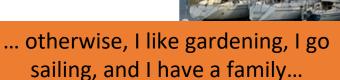


... and CAS!













Dolphin Delphine RIVOIRON





















Maria Filippova

At CERN since 2008



2008-2015: quality assurance assistant at CLIC study responsible components (splitters, bi-directional couplers, high-power loads): specifications, procurement, contract follow-up, qualification chu shipment, document management.

Oct 2018-present (50%):

CAS administrative assistant

- registration and payment follow-up
- travel arrangement for lecturers
- certificates of participation
- formatting of proceedings.







Cross-stitching









Lecturers

- Irina Shreyber
- Suzie Sheehy
- Wolfgang Hillert
- Gijsbertus de Rijk

Teaching

- Particle & 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
- MBA Energy Management 💻









Sports

Powerlifting, Skiing,

Running

Enjoying life

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

•••

Posing for pictures









Melbourne Accelerator Physics Group in the "X-LAB"



Twin/body double (which one is me?)



I love coffee.

A request:

Please send me stories of women in physics (especially historical ones) from your country!

Dr. Suzie Sheehy





Physicist, 98, honoured 75 years after discovery





Gijs de Rijk

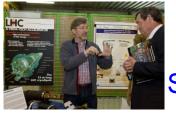


MSc Leiden univ. Exp Physics 1981, PhD Univ of Amsterdam 1986

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, guiding at CERN
- Consulting for a high-tech firm that produces Antennas & waveguides for telecommunications, small geostationary telecommunication satellites.











email: gderijk@protonmail.ch

Students

In groups of 6 people come forward

- Bernardo Abreu Figueiredo
- Yujung Ahn
- Ryan Allinson
- Bilal Al Tarawneh
- Gemma Antonino
- Aliakbar Babaie

Bernardo Abreu Figueiredo

- Doctoral Student at CERN (BE-ABP-CEI) since 01/08/2024
- Major in Computer Science
- Interested in:
 - piano
 - fencing
 - video games
 - travelling
 - learning new languages



Yujung Ahn







Current Position

Research Fellow,
Accelerator Operations Team
Institute for Rare Isotope Science /Institute for Basic
Science (IRIS/IBS)

Daejeon, Rep. of Korea Feb 2023 – current

Education

University of Science and Technology, Department of ICT Advanced Device Technology, **Doctor of Philosophy (Ph. D.)** in Engineering

Rep. of Korea March 2018 – Feb. 2023

Busan National University, Department of Physics Bachelor of Science (B.S.) in Physics

Rep. of Korea March 2014 – Feb. 2018

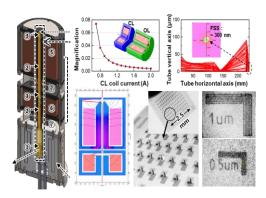
Research Field

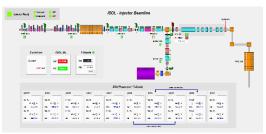
Development in field emission electron based x-ray source X-ray imaging system / Electron Optics

NOW) EPICS-based control systems for the accelerator's operation

Interest

CrossFit, Netflix, Travel 📦









BILAL AL TARAWNEH

ELECTRICAL ENGINEER-MAIN CONTROL ROOM OPERATOR AT ESS

Who am I?

Bilal, 28 years old, electrical engineer. I come from Jordan. I love science, math and sports, especially football. I am happy and excited as we are in Barcelona to watch my fav team!



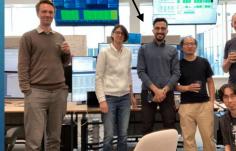
Experience:

- SESAME light source-Jordan: iternship at the diagnostics group dealing with electronics mostly.
- MAXIV Laboratoy- Sweden
- -Engineer within the Accelerator development group to work on a project with some of their undulators
- -Service engineer Floor coordinator within the beamline office group to provide user support



- Main Control Room Operator to monitor and maintain the machine during commissioning and operation

together with shift leaders and system experts.



Me standing in the ESS tunnel to help with preparations for coupler conditioning





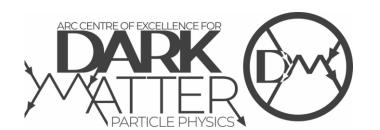
Celebrating reaching nominal current & longest pulse length on the DTL4 FC

Gemma Antonino

- BSc in Physics from the University of Melbourne
- Research year with Dark Matter group
- Operator at the Australian Synchrotron











Outside of Physics I am cooking, playing music and having lots of coffee!

Aliakbar Babaie

Bachelor of Science in Electrical Engineering

Master of Science in Nuclear Engineering, specialized in Radiations Application

Thesis: Designing a digital processing FIR filter and beam dynamic calculations for longitudinal bunch-by-bunch feedback system of the Iranian light source facility





Students

- Amaury Beeckman
- Fabio Cismondi
- Miguel Diaz Zumel
- Yusuf Khalid Ahmed Fazlee
- Juan Carlos Fernandez Ortega
- David Gancarcik

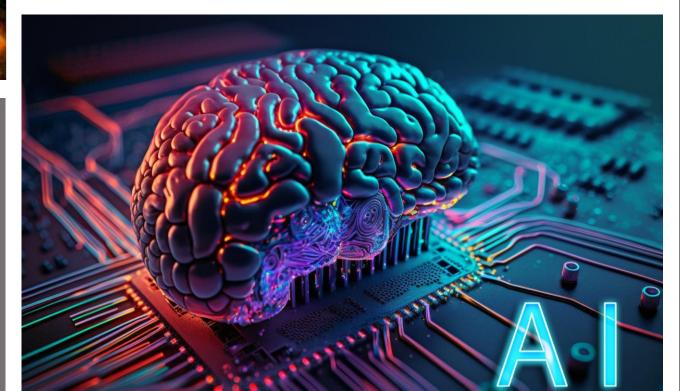




Amaury Beeckman

Quest at CERN in BE-OP

Focus on Longitudinal Beam
Observation in the accelerator
complex



Fabio 1 slide 1'

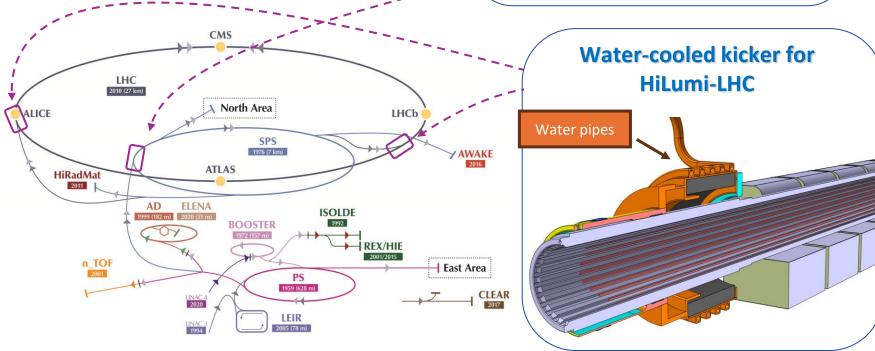
- Fabio Cismondi, 46 years old, married 2 children
- Nuclear engineer (neutronics, thermohydraulics), PhD in signal and image processing, currently working at Fusion 4 Energy
- 15 years working on nuclear fusion technologies (for ITER project), since 5 years on LIPAc (D+, CW 125mA accelerator in support of fusion development)
- Multi-cultural engineer (5 years in France, 5 years in Spain, 3 years in Japan, 9 years in Germany)
- Love sport (running, cycling, mountains, ski touring etc)

Miguel Díaz Zúmel

Kicker magnets at CERN (SY-ABT)







La vie francogenevoise





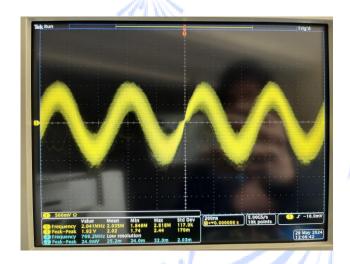
Khalid Fazlee

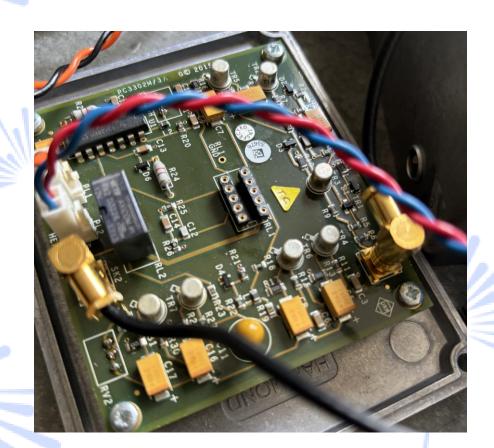
Diagnostics Electronics Engineer



Science and Technology Facilities Council

ISIS Neutron and Muon Source







JUAN CARLOS FERNANDEZ IFIC-UV

Bsc. Electronic Engineering

PhD. Electronic Engineering

Msc. Electronic Systems



ONGOING...





Hobbies









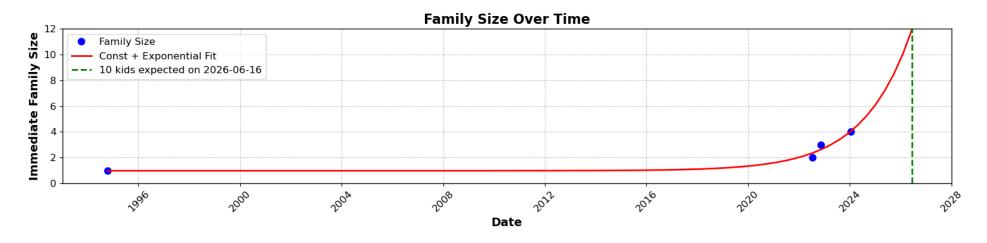








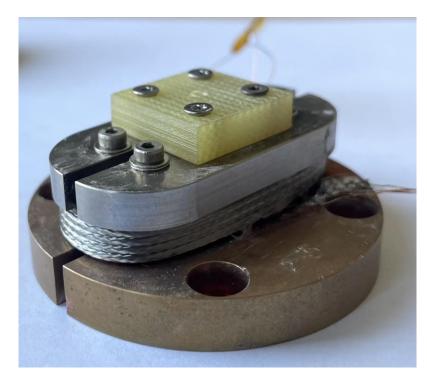
1 slide = 1 minute: David Gancarcik



Thesis:	Bachelor	Master	Doctoral
with	ATLAS (AFP detector)	CMS (BRIL project)	LHC (TE-MPE-CB)







Students

- Dora Gibellieri
- Florian Göppert
- Eunhun Im
- Ronald Joseph
- Markel Lacabe
- Ronaldo Mercado

Born in Rome, where I obtained my BSc in Physics

Dora Gibellieri

PhD Student in Particle Accelerator Physics



MSc in Applied Physics in Geneva



Bouldering



Hiking

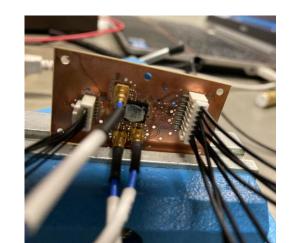


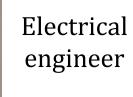














Florian Göppert

Passionate dancer

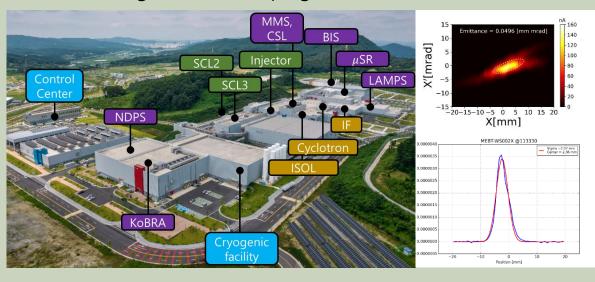




EUNHUN IM Institute for Rare Isotope Science/Postdoc

Work

- Working in diagnostic group at RAON
- Measurement of beam parameters such as emittance, profile
- Build a diagnostic control program based on EPICS



Hobby

- Computer games like Lol and some Steam games
- Play tabletop board games
- Play badminton



What I want to say...

I am pleased to be attending the school and hope that it will be an opportunity to learn a lot about accelerators.

However, I ask for your understanding as communication may be difficult due to my limited English skills.

Ronald Joseph

GSI Helmholtz Centre for Heavy Ion Research Darmstadt Germany (2014-)

PhD- Kumamoto University, Japan 2011 (Telecommunication- Microstrip Antenna Design)

Past – Fraunhofer FHR, Bonn (2012-2014)

Hobbies- Badminton, Reading, Gardening

Previous CAS- Beam Instrumentation June 2018 FINLAND















- Teulu
- Hobi
- Dawnsio







Students

- Dani Metin
- Oghenesuvwe Ogagiyovwe
- Giusy Valeria Passarelli
- Anna Piccoli
- Sabiene Ross
- Anna Sofija Salosteja









My Name: Oghenesuvwe Ogagiyovwe

I work with STFC-UKRI in their ISIS Pulsed Neutron and Muon Source department.

I work as an Accelerator Operations Duty Technician. My academic background was in electrical and electronic engineering. My work operation involved: providing a safe operation of accelerator and the two target station, providing of safety search of controlled area, assisting in first line of faults diagnosis of the accelerator (electrical and its other components). Also monitoring and documentation of real time data.

I am glad to attend the CAS 2024.







Giusy Valeria PASSARELLI (SY-BI-BP)

> **Doctoral Student in Accelerator Physics**

CÉRN

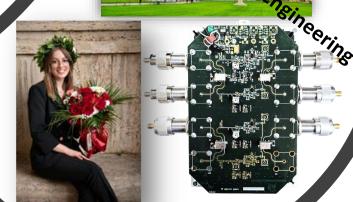


High-Frequency BPM











Member of JAI

My Hobby



and



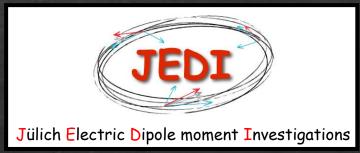




I'm Anna. I'm Italian. I'm 26 years old.



I was born in Mantova, but I live in Ferrara.
I'm a PhD student at the University of Ferrara.
I'm part of the JEDI collaboration.



My PhD activity is about the realization of simulations at the hybrid storage ring for EDM investigation.



I love sports (watching them on tv... (1)

My favourite ones are football, F1, MotoGP and tennis.



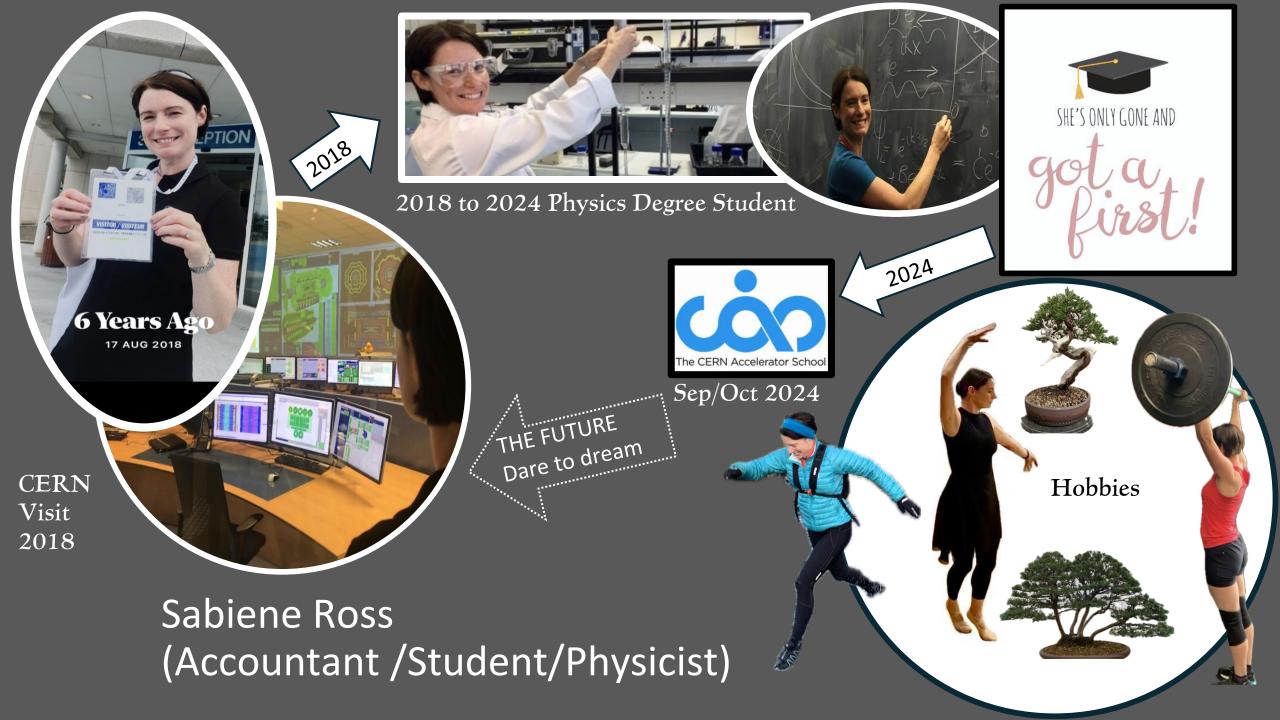


I enjoy relaxing with Lego and puzzles.











Sophie Salosteja

Graduate Electronics Engineer



Science and Technology Facilities Council



Students

- Yu Tang
- Christoph Julien Wegmann
- Jiao Xu
- Eloise Yang
- Kirill Berestov
- Laura Karina Pedraza

Getting to know Tang Yu

Born in: Sichuan, China







Hobbies:









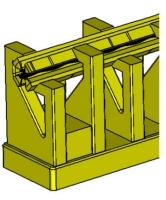
School: Institute of Modern Physics (Gansu, China)





Research keyword: RFQ/Per-buncher/RF-Chopper





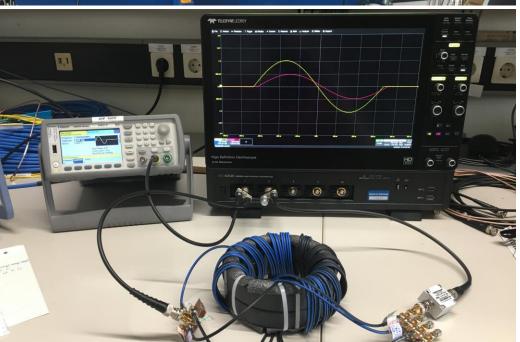




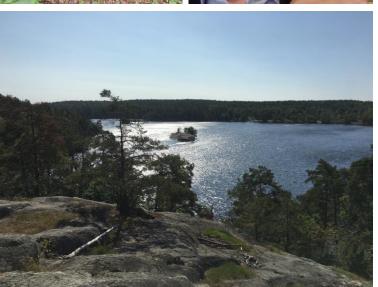


MY WORK AND MY HOBBIES















Samuel C.C.Ting

--- winner of the 1976 Nobel Prize in Physics



Self-introduction of Xu Jiao



Academic background



Sichuan University

Institute of Modern Physics

2018.09-2022.06

2022.09-now



- √ Mentor: Zhao Hongwei
- √ Research Direction: Beam dynamics of the high-gradient ion linear accelerator

Hobbies

- √ Travel
- √ Billiard
- √ Ancient Clothing Culture



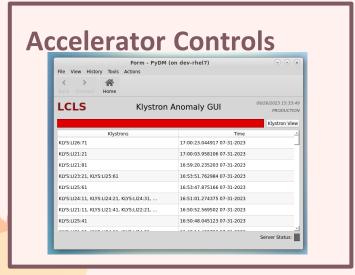




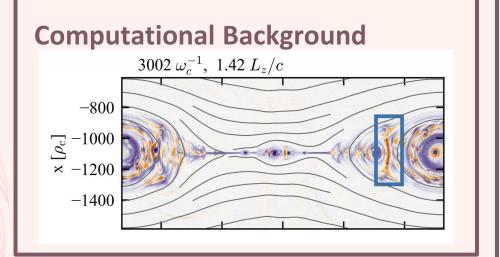
During my studies in the field of nuclear physics, I have always been full of enthusiasm, curiosity and a desire to explore!

Eloise Yang



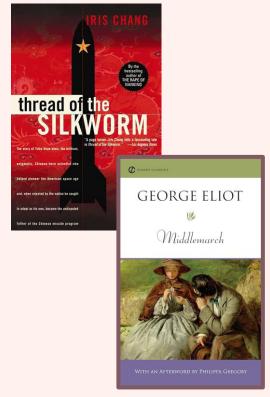








What I'm Reading



Kirill Berestov, JINR, Russia

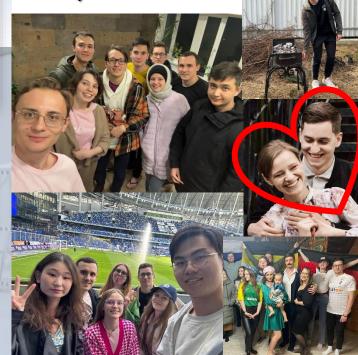
- Engineer in the Ion Source Group at the Laboratory of Nuclear Reactions
- PhD Student in Plasma Physics at Tomsk Polytechnic University
- Master's in Technical Physics, Bachelor's in Nuclear Physics





But my life is more than just work...

Activities: soccer, board games, camping, BBQ, hookah



One slide one minute: Laura Karina Pedraza (CAS - Intro to accelerators) centralelille am from Colombia Classe Prépa in Strasbourg Engineering School in Lille **®KEK** Vniver§itat dÿValència PhD on beam position monitors in Valencia, in collaboration with ATF, Tsukuba



Master's Engineering Physics in Lund

Students

- Suaad Meerkhan Aldosakee
- Juergen Kocks
- Miguel Navarro Baeza
- Vasiliki Stergiou
- Ilaria Balossino
- Alessandro Frasca



m y

Story

- PhD. Medical Radiation Physics. Lund University
- Work in Academy, Duhok University
- PCR Lab. /Lab manager
- ESS, MCR Operator, courses and training in ACC physics

Married, Mother for

Suaad Meerkhan Aldosakee



- Began with a passion for cycling, developing an appreciation for speed,
- Followed by planning transport solutions for road and agriculture
- Applying this experience to the field of particle accelerators, contributing by managing critical components





FAIR — Facility for Antiproton and I Research in Europe

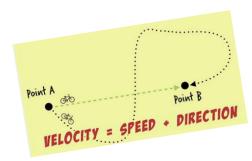


The new large scale accelerator facility in Europe





- Ensuring the timely delivery of critical magnets and components
- Overseeing procurement, logistics, and material planning to manage suppliers effectively
- Enhancing project efficiency and delivery through strategic planning and process improvement.
 - 35 Years in Vehicle Manufacturing, Material Planning, Order management and Corporate Strategy
 - Extensive experience in optimizing resources and production scheduling









- The last third of my career has begun with my role at FAIR, project management within a high-tech research environment
- The course will enhance my ability to collaborate with physicist colleagues and improve support for technical project aspects.

Connect with me:

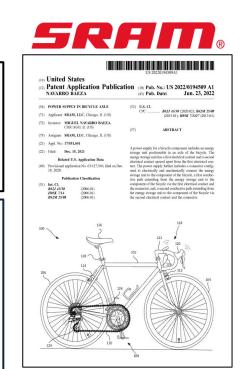
Miguel Navarro Baeza



- Born and raised in Madrid
- Industrial & Mechanical Engineer graduated in IIT
- Currently working at CERN in the HL-LHC project office
- Moved to **Geneva** 4 years ago, still discovering the region
- Currently trying to improve my Italian and Catalan
- 240 rating at **Chess**.com, always eager to improve
- Inventor with 3 patents at SRAM (Bikes!)
- Cyclist with over 100 activities logged on Strava in 2024
- Probably eaten over 100 tiramisus
- I really miss seafood
- Just came back from an incredible vacation in Iceland
- It's been a while since I studied physics...













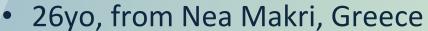






Hi, I'm Celia!

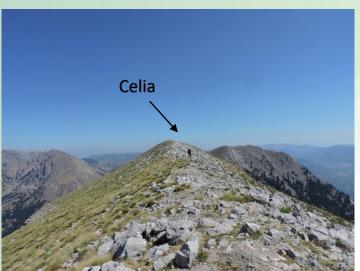


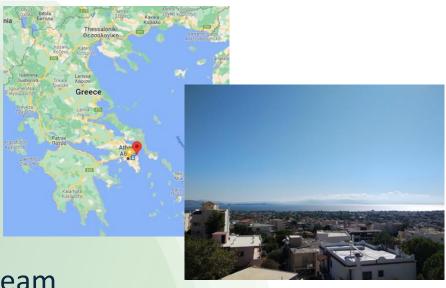


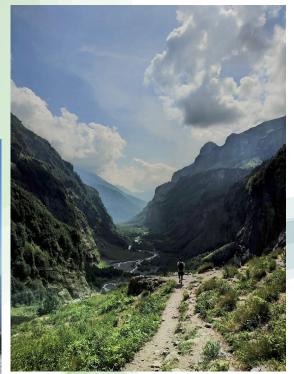
 PhD - Experimental Astrophysics and Beam Instrumentation

Hobbies: hiking, painting, singing, knitting























Beamline technologist @ INFN LNF

INTERNATIONAL PROJECTS

NATIONAL LABORATORIES





BEAM LINE





and electronics







or 2 languages













中国科學院為能物理研究所 Institute of High Energy Physics Chinese Academy of Sciences

cows (for now)













Alessandro Frasca





- from Modica, in southern Sicily, in southern Italy
- to Milan, in northern Italy, to attend Politecnico di Milano
 - bachelor degree in materials and nanotechnology engineering
 - master degree in nuclear engineering
- to CERN, in Geneva
 - technical student: study of collisional losses in the LHC for Pb-Pb and p-Pb operation
 - phd student: radiation studies for the FCC-ee
 experimental insertion regions
- now pursuing a PhD in Physics at the University of Liverpool
- no space to fit all my interests, come and speak to me to find them out!

Students

- Fabio Cavallaro
- Nasim Fallahi
- Daniel Söderström
- Ameya Ashwin Patwardhan
- Ilia Polishchuk
- Pietro Tarassi



ONE SLIDE PRESENTATION - FABIO CAVALLARO



Fabio Cavallaro

ASG Superconductors

Biomedical Engineer

About me

Born in Caserta (Italy) 01/06/95 I love to travel, watch movies, swimmin, reading and play videogames.

Moreover I'm not so good in make power point (as you can see)

Education

2014-2018

Bachelor Degree in Biomedical Engineering (Naples University) 2018-2021

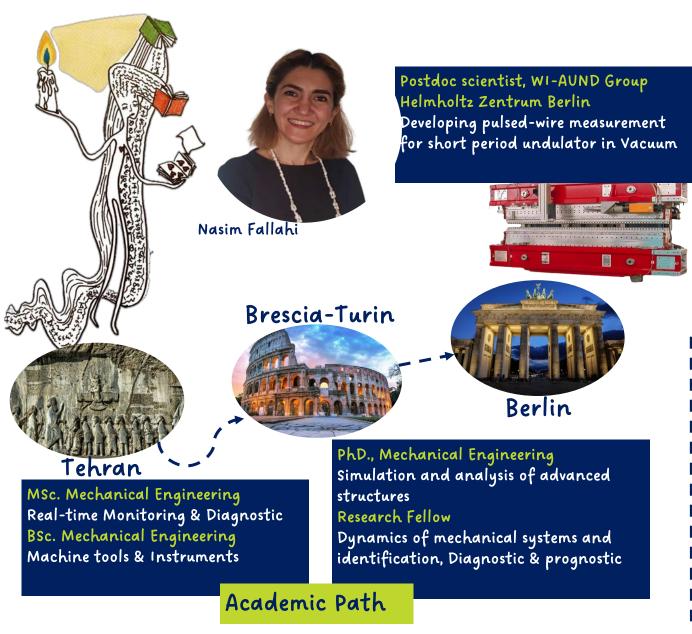
Master's Degree in Biomedical Engineering (Bio-mechanics and Bio-materials) (Politecnico of Milano)

Experience

2021-20222

Compilation of technical documentation for the sale of class I, IIa and IIb medical devices at BIOH filtrazione (Milan) 2023-today

R&D specialist, Magnetic and cryogenic design of innovative superconducting magnet for medical, high energy and scientific research at ASG Superconductors (Genoa)



Achievements

- Winner of Five international public and private Scholarships-Italy.
- Winner-project collaboration-LNE, Paris, France.
- International academic and industrial collaboration.
- Winner team for start-up in collaboration with: CERN Idea Square, Innovation4Change, United Nations, and Polito.
- Academic Mentorship, Polito (Italy), LNE (France), INSA (France).
- Level III in Acoustic Emission (AE)- DEKRA Certificate.
- Peer-review, International and conference publications.



Languages

English Italian German (Beginner) Persian



Hobbies

Nature hiking Writing Reading books Painting

















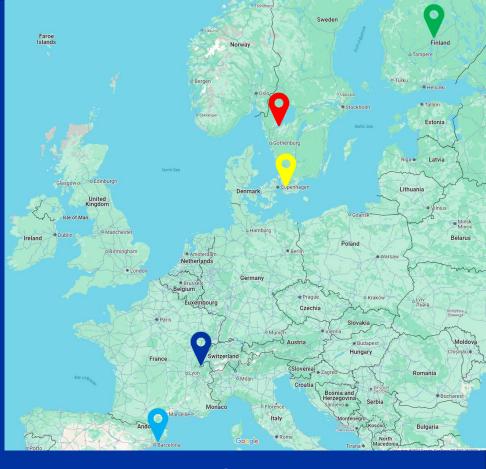
Daniel Söderström

- From Vänersborg, Sweden
- Studied in Lund, Sweden (engineering physics)
- Did a PhD in Jyväskylä, Finland (radiation effects on electronics)
- Currently working at CERN, Switzerland (?)
- Now we are at CAS, Spain

At CERN, I do radiation dosimetry (for instance around the LHC), and work with radiation to electronics (R2E) issues







I play squash in the CERN squash league, and enjoy racquet sports in general (tennis, badminton, table tennis, ...).

I also enjoy skiing and hiking, so the CERN area is a good place for this!

Nice to meet you all!

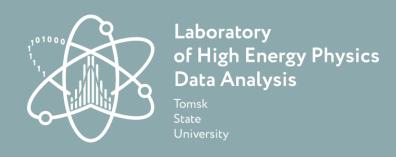
Ameya Patwardhan

- Doctoral Candidate at the Eindhoven University of Technology
- Currently working on the ultracold electron source
- Enjoy opening electronic instruments, often breaking them in the process \blacksquare
- Contribute to open-source software occasionally



MY NAME IS ILIA

- I am a 4th year bachelor student at Tomsk State University
- I am a member of the ATLAS LHC and SPD NICA collaborations
- I often spend my free time meeting with friend, reading literature and playing board games





ONE SLIDE PRESENTATION - PIETRO TARASSI



Pietro TarassiASG Superconductors

About me

Born in 1997 in Genoa (Italy)
I love to spend time with my friends, travel and taste local food, play football and enjoy motorsport (Ferrari supporter

Education

2016-2019

Bacherol Degree in Physics (Genoa University)

2019-2021

Master's Degree in Physics (Genoa University)

Experience

2019-2021

Academic advisor

2021-today

Cryogenic Field Engineer at ASG Supeconductors

Students

- Martin Hardieck
- Pablo Ignacio Araya Carmona
- Marek Skiba
- Dong Geon Kim



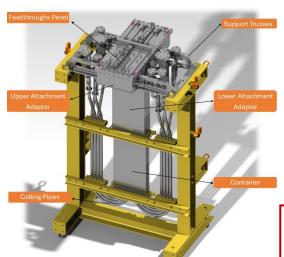
Pablo Ignacio Araya Carmona – Predoctoral Researcher – IFMIF-DONES



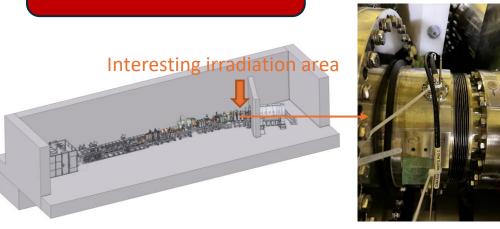




STUMM - PROTO







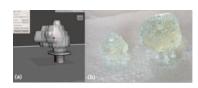


The main question to be answered is whether current-mode MICs can be sensitive to pulsed beam regimes compatible with the early stages of Phase IV DONES Commissioning, where the beam will be run in pulsed mode.



Name: Dong Geon Kim (D.G. Kim)

च्या अप्रवाद अप्रव अप्रवाद अप्रवाद अप्रव अप्रवाद अप्रवाद अप्र
The same











2013 - 2017Hanyang University, Republic of Korea

Department of Nuclear Engineering

Hanyang University, Republic of Korea 2017 - 2024

Ph.D. Department of Nuclear Engineering

Thesis: Rare Isotope Production and Identification with KoBRA at RAON

2017 - 2021 Ph.D Student, Hanyang University, Republic of Korea

Radiation Detector R&D

(3D Printed Plastic Scintillator, Neutron Detectors, RIID Detector, etc.)

2021 - 2024 Ph.D Student, Institute for Basic Science

Rare Isotope Science Project

Topic: First Beam Commissioning of KoBRA for RI Production



Institute for Rare Isotope Science, Institute for Basic Science

Operation and Maintenance of KoBRA, Ion Beam Optics,

Planning for RI Production and Related Research

2024.07 – Present Research Fellow

Institute for Rare Isotope Science, Institute for Basic Science







Welcome drink!