

1 Slide -



Presentation of the CAS Team, Lecturers and Participants
on Mechanical & Materials Engineering for Particle
Accelerators and Detectors

Sint-Michielsgestel, Netherlands

3 June 2024

CAS Team

- Frank Tecker
- Christine Vollinger
- Delphine Rivoiron
- 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

Christine Vollinger from CERN – RF Group

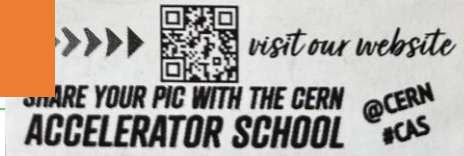
Working on beam coupling impedance mitigation for (almost) ALL CERN accelerators...



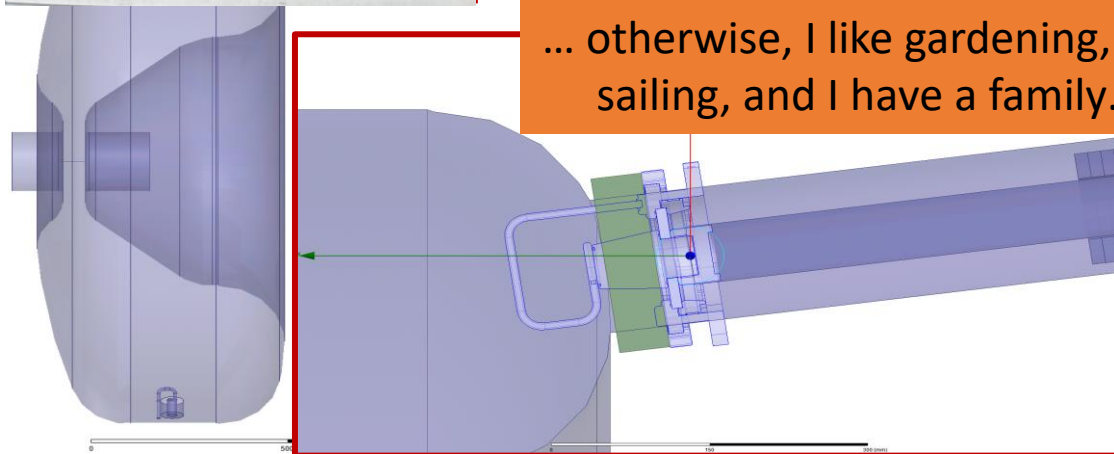
Mainly RF measurements and simulation for R&D work...

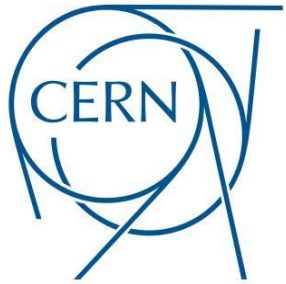


... and CAS!



... otherwise, I like gardening, I go sailing, and I have a family...





Since 2000

Dolfin Delphine RIVOIRON



The CERN Accelerator School
Since 2017





Maria Filippova

At CERN since 2008

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



Cross-stitching



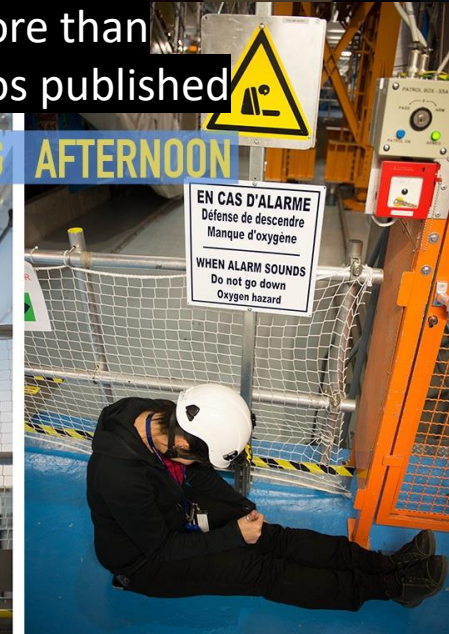
Oct 2018-present (50%):
administrative assistant

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



Hiking





I will be recording the lectures to create a database of knowledge
See you around!!!



Lecturers

- Wilfried van Kessel
- Federico Carra
- Klaus-Peter Weiss
- Ana Teresa Perez Fontenla
- Ignacio Aviles Santillana
- Luca Dassa



Wilfried van Kessel

USA



Trumpet



Family



Beetle



40 years



Travel

Food

Cycling



STRENGTH THROUGH COOPERATION



- Federico Carra – Mechanical Engineer (CERN EN/MME)
- Studied at Politecnico di Torino
- Coordinator of MME engineering unit



Cryogenic Material Laboratory



- Characterize materials at operational temperatures \rightarrow 400 K – 4.2 K



- Advantage of combination of test methods in one lab

Dr. Klaus-Peter Weiss
klaus.weiss@kit.edu



Cryogenic Materialtests Karlsruhe

CryoMaK

Coming from Galicia



Mining Eng. → Materials



Arrived at CERN in 2011



EN-MIME-MM



Elisa



Mateo



ONE SLIDE, ONE MINUTE

FOOTBALL
DJYING





Look for good music!
(credits: Joseph Alessi)



Look for beauty!
(credits: Jean Pierre Augier)

Beauty of mechanics... in some other ways!



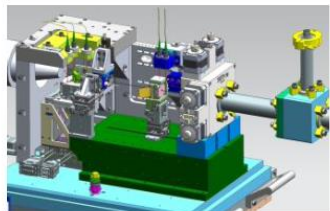
Look for good teachers!
(credits: Simon Henein)

Students

In groups of 6 people come forward

- Carlos Filipe Alves
- Viren Bhanot
- Jonas Buchmann
- Leonardo Carletto
- Mattia Castoldi
- Jon Cawley

Nanopositioning Devices



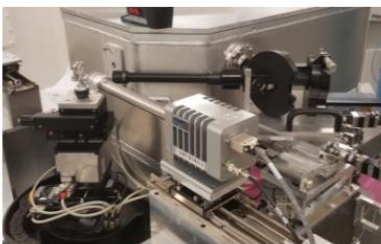
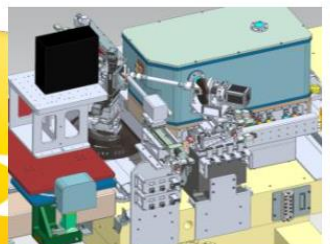
X-Ray shutters



Beam diagnostics



Sample environnements



Some pictures



Education



2006: Master's Degree in Optronics Engineering

1997: BTEC National Diploma

1995: High School Diploma

Work Expérience



1998-2003: CNRS-LURE
Beamlines engineer Assistant



2003-2011: SOLEIL Synchrotron
Beamlines engineer Assistant



Since 2011 : SOLEIL Synchrotron
Instrumentation engineer



1976: 48 years old

Born in Portugal

Hobbies



Cooking, Travel, DIY & Road trip



Sports



Running, Biking & Racing





Born in Delhi

Formula Student for 2 years

CERN **Unpaid Associate** in 2011

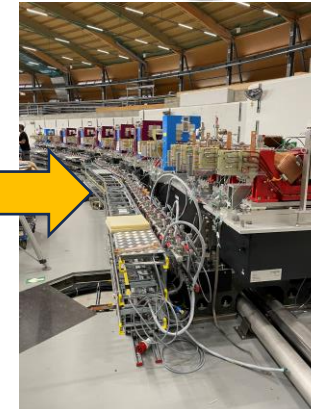
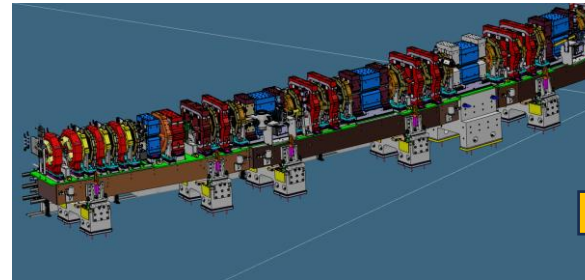
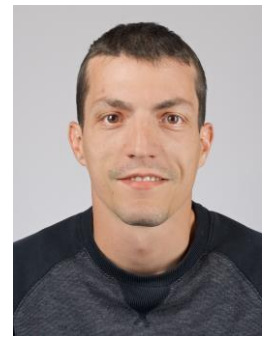
MS at UMD (suburban Washington DC)

Started CERN PhD in 2016. Now LD.

Love ultralight hiking: Huemul Circuit,
Haute Route, Alta Via 1, GR20...

Like writing (isolatedsystem.com)

- Jonas Buchmann
- Bachelor mechanical engineering
- Oberhof Switzerland
- PSI vacuum group
- SLS 2.0 Upgrade
Translation from CAD to accelerator
- Family / Jiu-Jitsu/ Judo



Carletto Leonardo



Hi my name is Leonardo i like play videogames and card games.

My main hobbies are:

-Play videogames;

-Card games.





CASTOLDI MATTIA

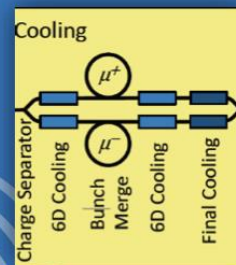
INFN – Milano (LASA) IT

I'm 21 years old and I'm a Mechanical designer

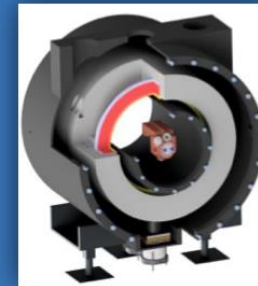
I'm working on the integration of the cooling cell of Muon Collider and in the construction of new closed loop G-He Variable T Cooling Plant



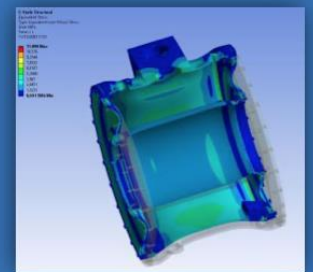
From ideas



to the drawings



and Ansys



In my free time I do karate and I play Soft Air

One slide – One minute – Jon Cawley

• Work

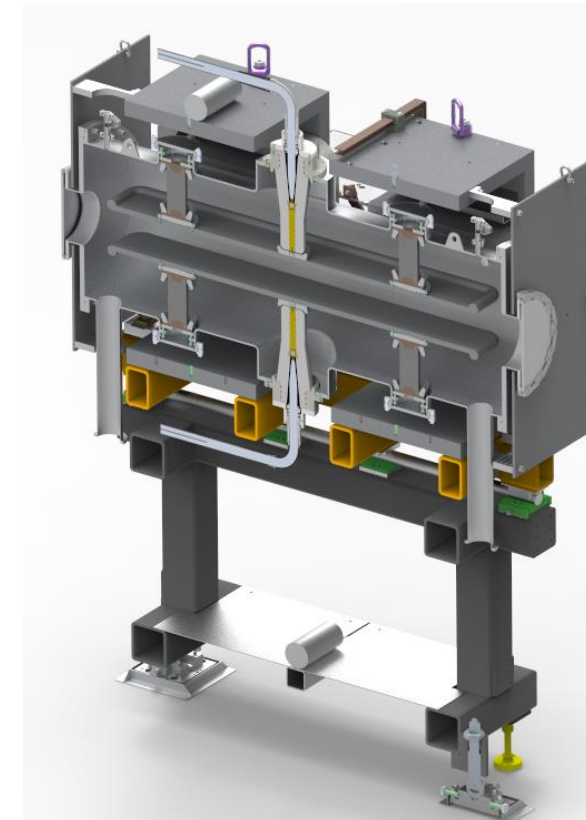
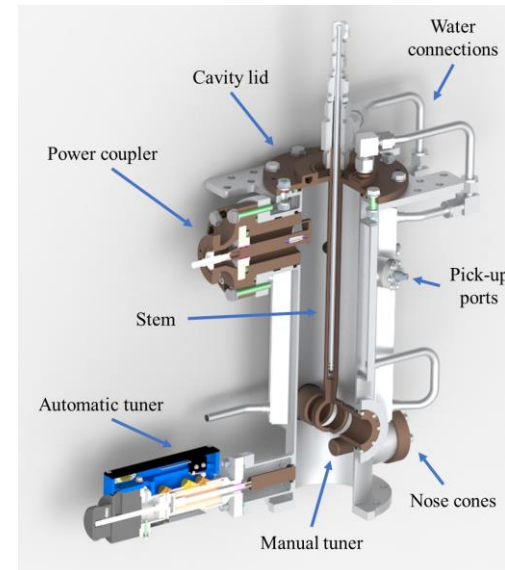
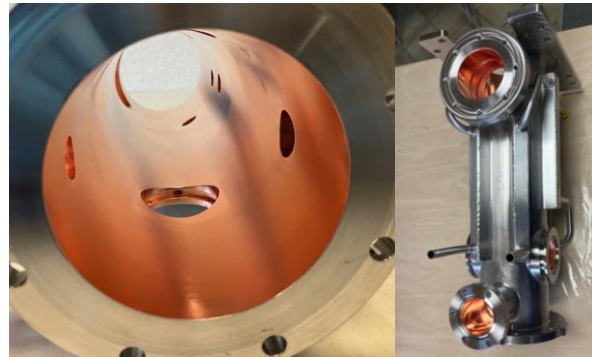
- ISIS Neutron & Muon Source, Mechanical Design Engineer (Accelerators group)
 - Quarter Wave Resonator (Longitudinal RF bunching cavity for new MEBT)
 - Spin Rotator (Vessel with perpendicular electric and magnetic fields to spin muons)

• Education

- MEng Mechanical Engineering – Loughborough University (UK) **(2014-2019)**
- CEng MIMechE **(September 2023)**

• Hobbies

- Football
- Cycling
- Squash



ISIS Neutron and Muon Source

 www.isis.stfc.ac.uk

  @isisneutronmuon

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

Students

- Jaime Cruz Duran
- Lukasz Krzempek
- Miguel Lino Diogo dos Santos
- Asbjoern Lund
- Nagma Mathur
- Sam McEwen

Jaime Cruz Duran – Lead Mechanical Engineer – LBNL – 88INCH Cyclotron



- Born and raised in a small village, Berlanga (Badajoz), at the South of Spain.
- Hobbies: Climbing, skating & flight simulators.



Mechanical Engineer.



Madrid, Spain



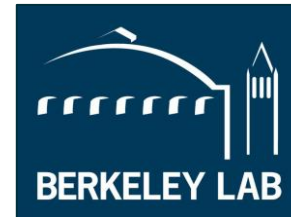
Mechanical Engineer.



La Serena, Chile

- LSST Telescope. Mount design and construction
- ITER. Tritium tanks

- V. Blanco telescope
- DECAM



Lead Mechanical Engineer.



Berkeley, USA

- 88" Cyclotron.
- MARS.
- 20 MeV upgrade



University Carlos III.
Madrid. Spain.
Master Mechanical Engineering

Areas of interest:

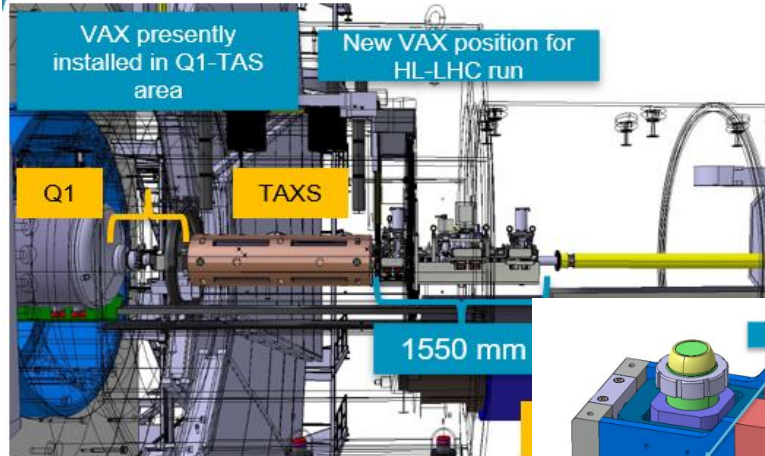
- Cryogenics
- Vacuum
- Precision mechanics
- Particle accelerators
- Telescopes



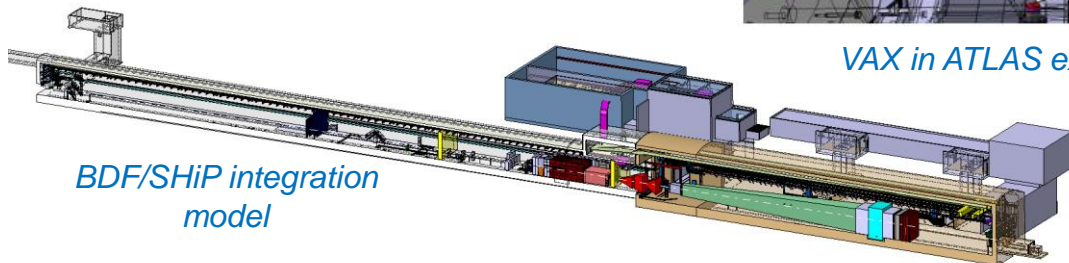
Description	<ul style="list-style-type: none"> Lukasz, Polish, 36 Mechanical engineer (Cracow University of Technology/INFN Napoli) Would-be interior designer, teacher of history, hairdresser
Past projects (Goodyear, CERN vacuum group)	<ul style="list-style-type: none"> Maintenance of truck tyres production line Design, manufacturing and prototyping of vacuum service station – HL-LHC VAX Mechanical strength analysis of remotely motorised jacks – HL-LHC
Current projects (CERN experimental areas group)	<ul style="list-style-type: none"> Scattering and Neutrino Detector at the LHC - SND@LHC Major upgrade of SND@LHC – Advanced SND@LHC Search for Hidden Particles - BDF/SHiP – High Intensity ECN3
Hobbies	<ul style="list-style-type: none"> Race cycling Oil painting Travelling



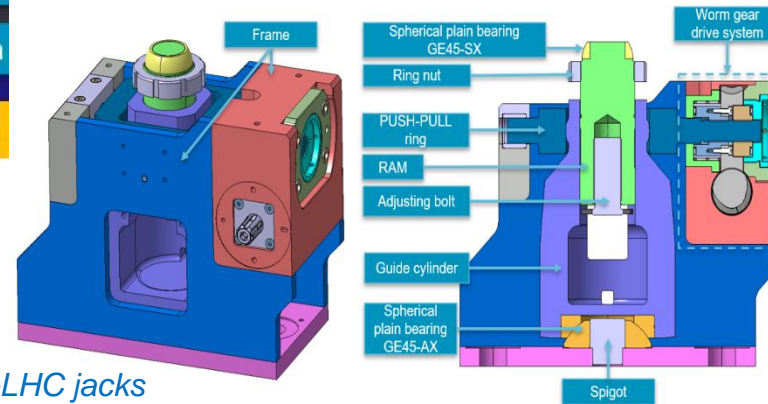
Oil painting, 2024



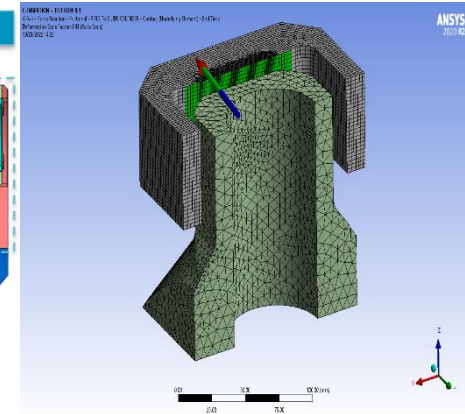
VAX in ATLAS experiment



BDF/SHiP integration model



HL-LHC jacks

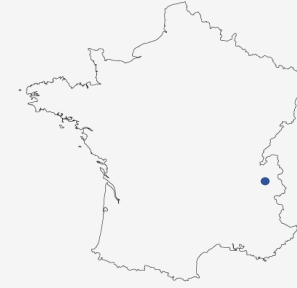
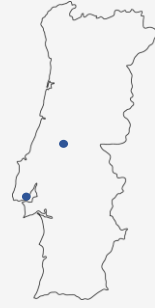


MIGUEL SANTOS

MECHANICAL ENGINEER

Born in Lisbon Portugal - 35 Years old

Master Mechanical Engineering – Project/Production



WHAT I LIKE TO DO:

Being outdoors: Climbing, hiking, ski, fishing...

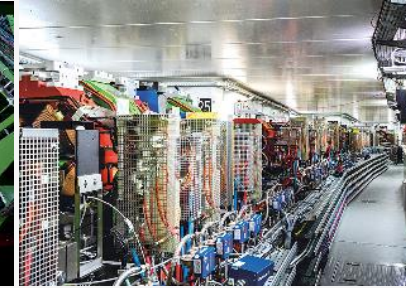
Watchmaking, motorsports, art, pop culture...



OGMA 2015-2016
COMPOSITES



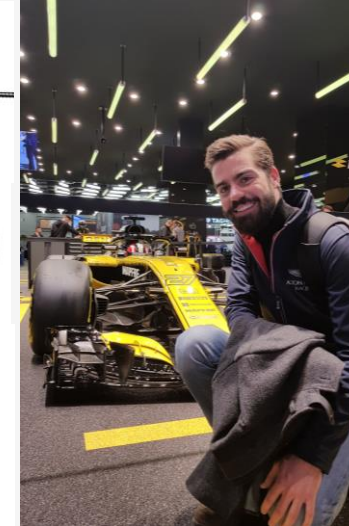
CERN 2016-2019
HL-LHC ABSORBERS

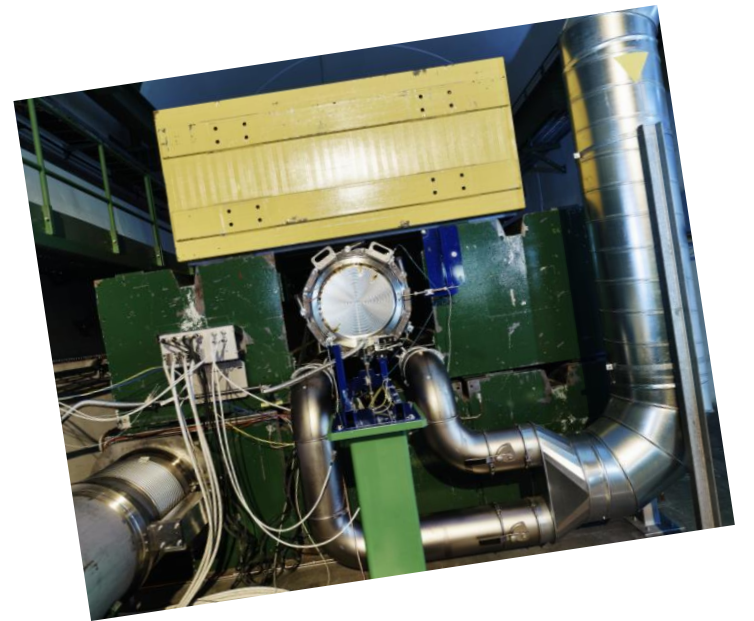
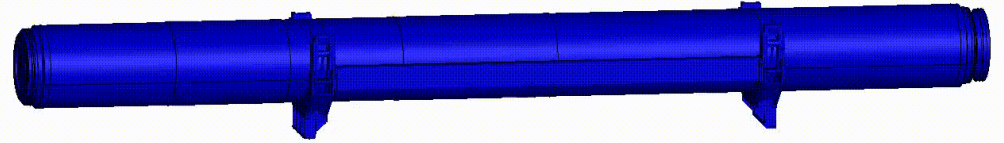
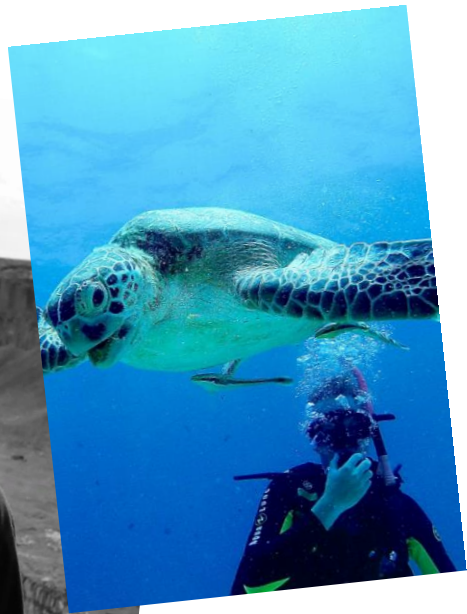


ESRF 2020-2023
EBS-NEW BEAMLINE



CERN 2023-∞
NACONS & HI-ECN3





Nagma Mathur

 **TRIUMF**, Canada

I'm a mechanical engineer-in-training
working with vacuum systems

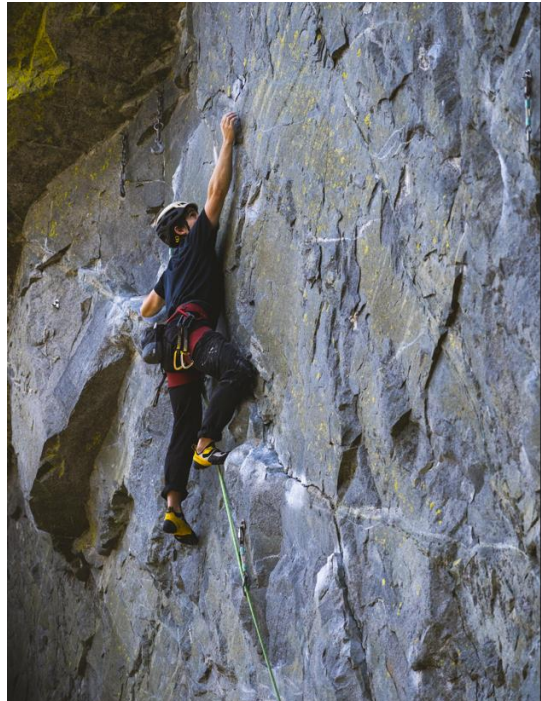
I speak five languages to varying extents

I enjoy the arts and am especially fond
of dancing — Bollywood is my forte





- Mechanical Engineer @ TRIUMF located in Vancouver, B.C Canada
 - Have been working at TRIUMF for ~ 5 years mainly focused on projects related to ARIEL (Advanced Rare Isotope Laboratory)
 - Last 1.5 years I have been focused on ARIEL's Beamline 4 North (BL4N) which will deliver high energy protons (500 MeV, 100uA P+) to ARIEL proton target station
- Outside of work, hobbies include rock climbing and backcountry skiing



Students

- Arsenio Palmisano
- Henry Przybilski
- Alessandro Ruggiero
- Emmanouil Trachanas
- Max van 't Hek
- Vahagn Vardanyan



Istituto Nazionale di Fisica Nucleare



Based in Milan
Class '97
Mechanical designer

Hobbies

- LEGO® constructions



- Go to the pub



- Play Soul like games



- AC Milan supporter



- Play football
(before my cruciate passed away)



-Hiking and Urbex



Henry Przybilski – Cryomodule Installation Lead
European Spallation Source ERIC, Sweden



Alessandro Ruggiero

I am 22 years old.

I work at the INFN in Milan and I am a mechanical designer.

According to many, I'm a funny guy who likes to joke.

My greatest passion is cinema.

I play various sports, such as basketball and tennis and I am a die-hard AC Milan fan.

To conclude, I love writing, I wrote a coming-of-age novel called *The Next Time*.



Professional Experience:



October 2017- Now: Accelerator Engineer (Electrical and Computer): Front End and Magnets Section, European Spallation Source - ERIC (Lund-Sweden).



January 2018-May 2022: Electrical and Computer Engineer : CompactLight Project- Institute of Accelerating Systems and Applications of Athens (IASA).



October 2015-December 2016: Software Accelerator Engineer -Technical Student, Conseil Européen pour la Recherche Nucléaire (CERN), BE-ABP-HSL (Hadron Sources and Linacs) section.



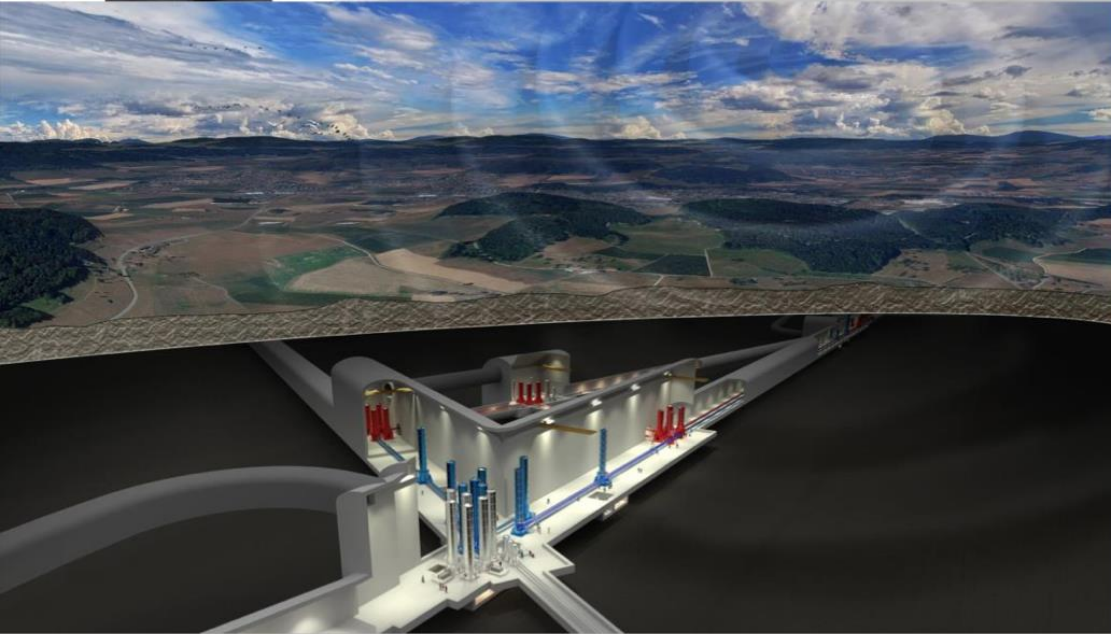
October 2021 - Now : Doctoral Student: National Technical University of Athens (NTUA) - School of Electrical and Computer Engineering- Dissertation Title - *Study of Operational parameters impact on Radio-Frequency Quadrupoles (RFQs) Cu-OFE Copper for linear particle acceletators.*

September 2011 - September 2017: B.Eng. & M.Eng., 5-year Joint Degree, 300 ECTS : National Technical University of Athens (NTUA) - School of Electrical and Computer Engineering.

Major : Energy Conversion, High Voltages and Industrial Applications (Flow Z), Electric Power Systems, Control and Production of Energy (Flow E).

Minor : Computer Systems (Flow Y), E/M Waves and Telecommunications (Flow T) .





Nikhef



Vahagn Vardanyan
Mechanical engineer
SXP Scientific Instrument at the European XFEL

Short Biography

- Since 2021 – European XFEL;
- 2019-2021 – Deutsches Elektronen-Synchrotron- DESY;
- 2011-2019 – CANDLE synchrotron;



Professional interests: Particle accelerators,
mechanical engineering, UHV systems,
materials engineering....

Hobbies: Swimming,
table tennis, classical music
Jazz ...

Students

- Jan van Steenlandt
- Anthony Berlioux
- Cristina Penades Huesca
- Pablo Marin Barbancho
- Simon Perraud
- William Andrezza



To do

- Fix broken setup in Superconductivity lab at University of Twente



- Fix broken bike of housemate



- Eat



- Sleep



1991
Born



2015
Engineer



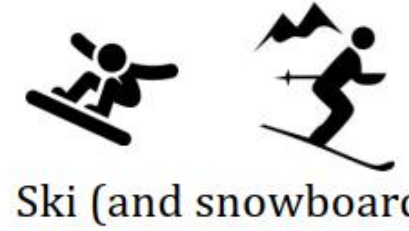
2017
CNRS



2020
SOLEIL



Sports



Ski (and snowboard)



Mountain biking

Hobbies



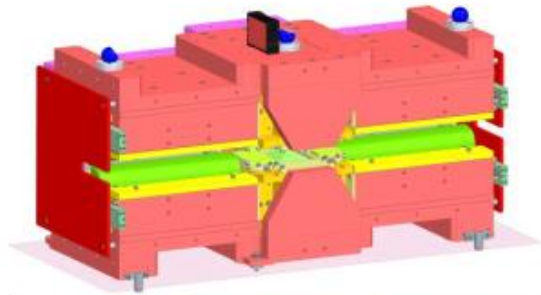
Do-It-Yourself



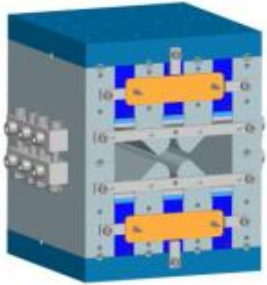
Astronomy



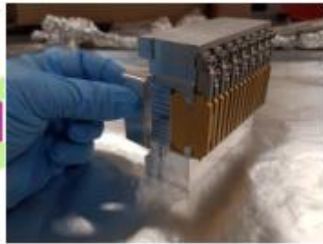
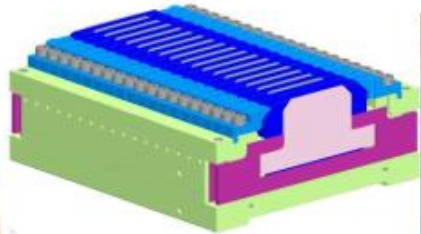
Cinema



☀ Permanent magnet dipoles with 3T superbend



☀ Permanent magnet quadrupoles



☀ Super-module for CPMU12*

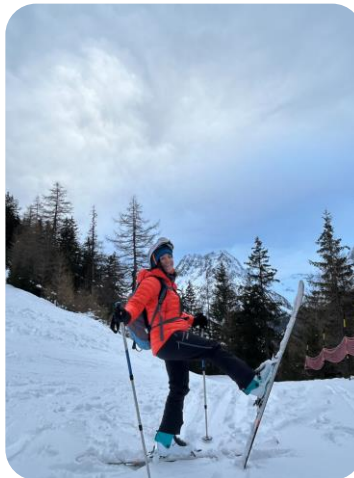
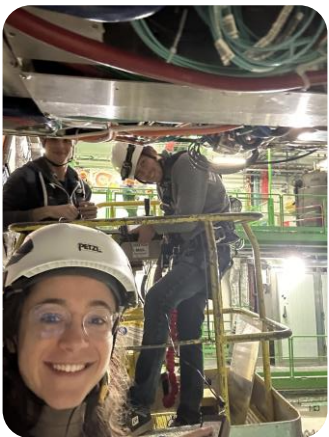
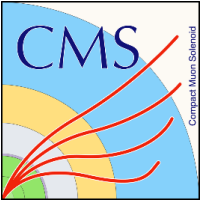
*Cryogenic Permanent Magnet Undulator with 12mm period

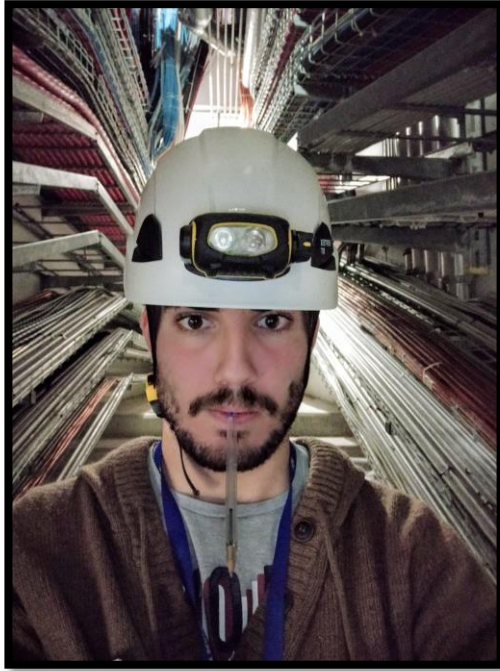


Cristina Penades Huesca



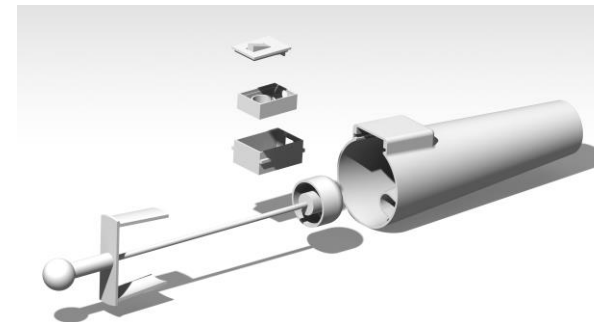
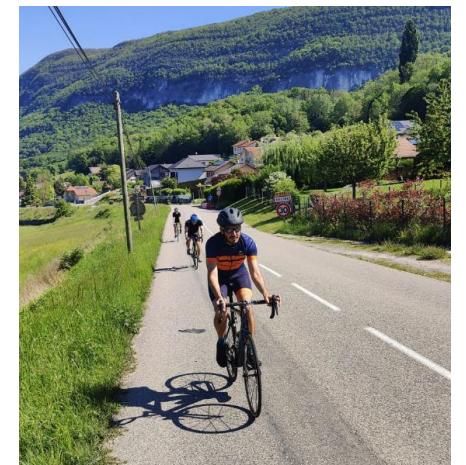
- Born in 1992 in Spain.
- MSc in Mechanical engineering from UPV ,Spain and INSA, France.
- Worked at Ford motor company, Spain and Volvo trucks, France.
- Joined CERN in 2017, EP-CMX-EI.
- Currently working as a mechanical engineer at the CMS integration office design of new infrastructure for the cooling and powering for the next generation of detectors.
- Other interest: hiking, climbing, reading and outdoor active.





Pablo Marin Barbancho

- Background in Industrial engineering, always changing the operation base!
- Mechanical engineer in CMS experiment since 2019.
- Worked in projects in other fields: biotechnology design, divulgation...
- Hobbies: outdoors sports (running, cycling, hiking, ski...)



French research engineer

Work at CEA Paris-Saclay, for the Superconducting Magnet Laboratory

Main activities in the framework of the CERN-CEA collaboration



2-year degree in physics and measurements (Saint Nazaire)

Master degree in mechanics and materials (Rennes)

→ Specialised in mechanics, materials and instrumentation



**Simon
PERRAUD**

NbTi quadrupole for HiLumi and LHC (Q4 and MQ) : Short model development, manufacturing in industry, cryogenic tests...



Nb₃Sn dipole magnet for HFM (R2D2) : instrumentation, mechanical assembly, characterisation...



Fan of sport : Football, tennis, rugby, crossfit...

Practiced artistic gymnastics for 15 years.

Now, coach and referee



Love travelling





William ANDREAZZA

Italian, one wife, two daughters, one black cat.

Enthusiastic, optimistic and curious.

Technical mechanical engineer

Passionate of my job and always looking for new challenge.

Outdoor lover.

24 years at CERN, the last 14 with BI after a decade spent in ATLAS

I design, construct, test, install and maintain beam instrumentation devices throughout the CERN accelerator complex.

Students

- Christophe Tripod
- Carla Piccinni
- Piotr Gebolis
- Maurice Horst
- David Stephan
- Dylan Standen



Christophe Tripod



Furka
Endstation
@SWISSFEL

study of quantum
materials
(tr-RIXS, tr-REXS &
tr-XAS
spectroscopy)



Additive
manufacturing



Software
design &
process
automation



Mindcab
Lead Guitar
Prog Rock



Spotify

PAUL SCHERRER INSTITUT





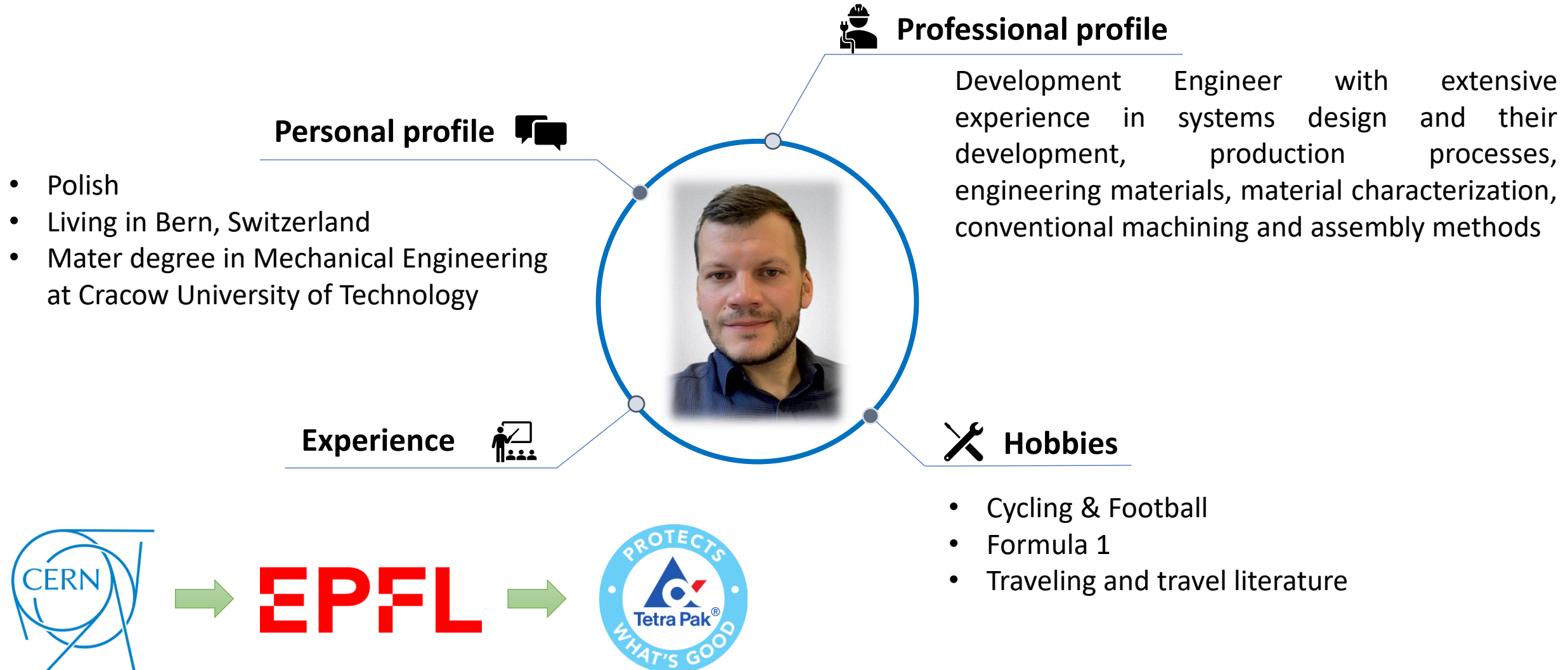
activities in nature (sometimes)



fe, drinks, good



About me – Piotr Gebolis





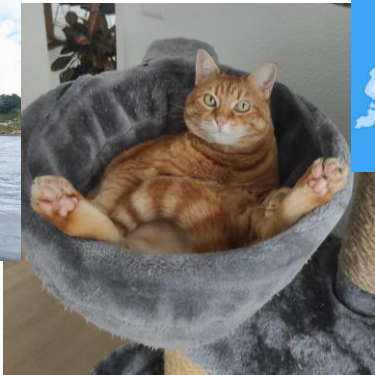
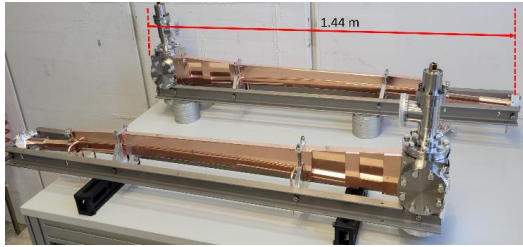
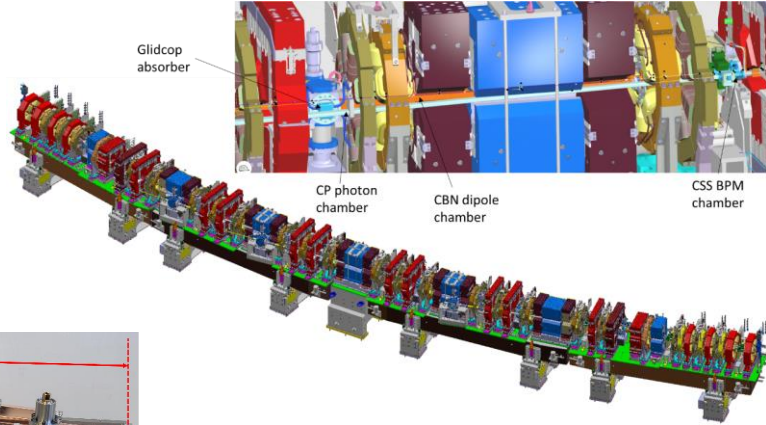
Maurice Horst

- Dutch, 51years
- Mechanical engineer / project coordinator @ High Voltage Engineering
 - Particle accelerators: design, manufacturing, testing, installation



- Ride my race bike (touring)
- Visit concerts (punkrock)
 - Ski (and après ski)
- Play the drums (no sound recordings exist. Fortunately.)







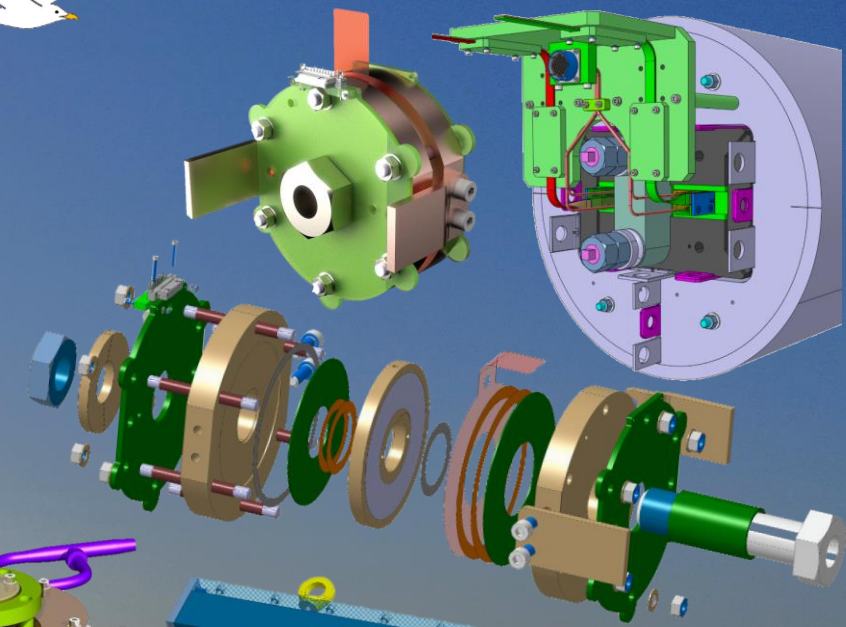
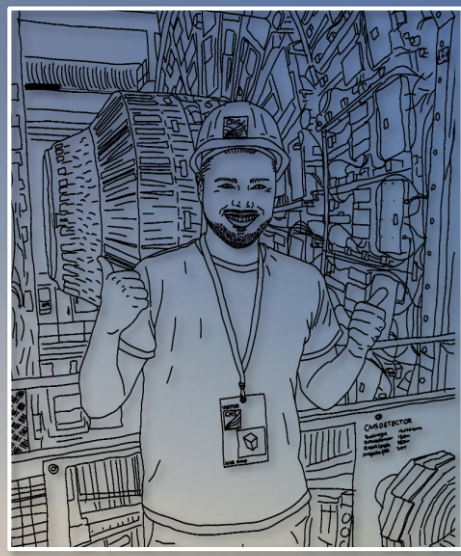
Dylan Standen
SY-ABT-KDC
CAS 1S1M 03/06/2024

Dylan Standen

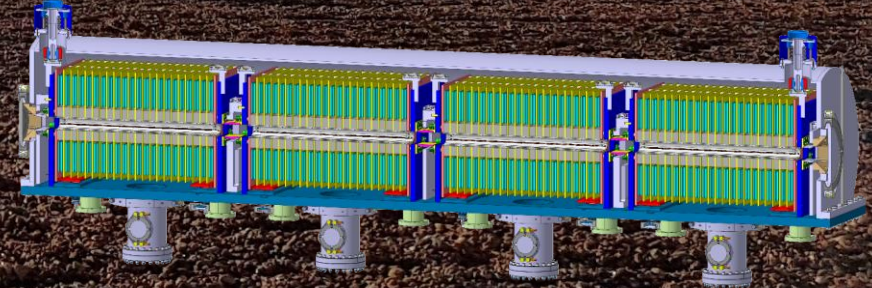
Super conducting research magnets

Hobbies:
Drawing
Photography
Paddleboarding
Snowboarding

Interests:
Movies
Music Festivals
Design
Games



Kicker magnets & pulse generators



University of Brighton



MRI gradient coils



Students

- Paolo Rotunno
- Marco Chiodini
- Diego Garcia Robles
- Benjamin Moser
- Elena Fernandez Mora
- Andrea Bignami



PAOLO ROTUNNO



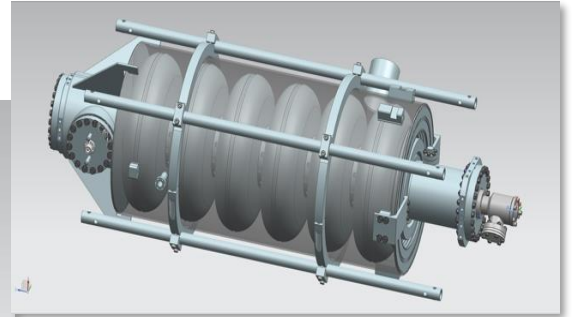
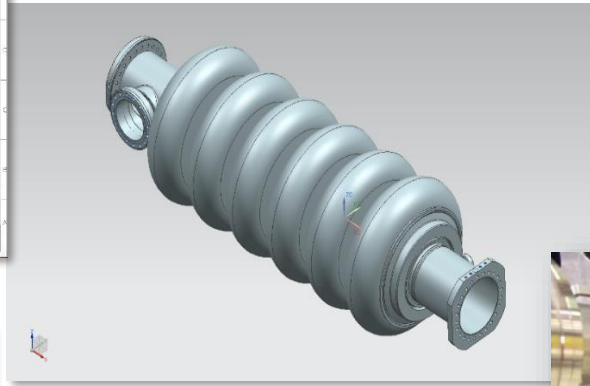
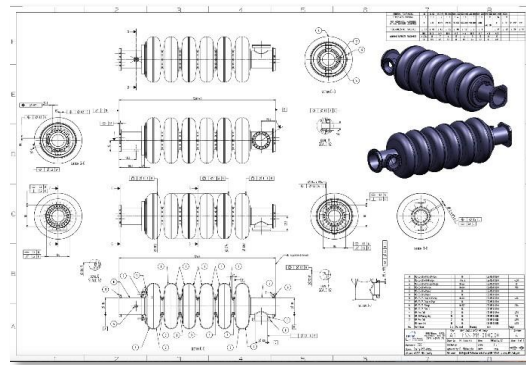
**Politecnico
di Torino**

- Italian, 33 years old
- Master of Science in Mechanical Engineering (2015)
- Work and live in Amersfoort
- Project coordinator / Mechanical designer @HVE
- Particle accelerators
- Hobbies: eating; concerts; short trips; eating



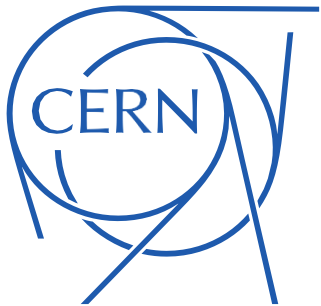
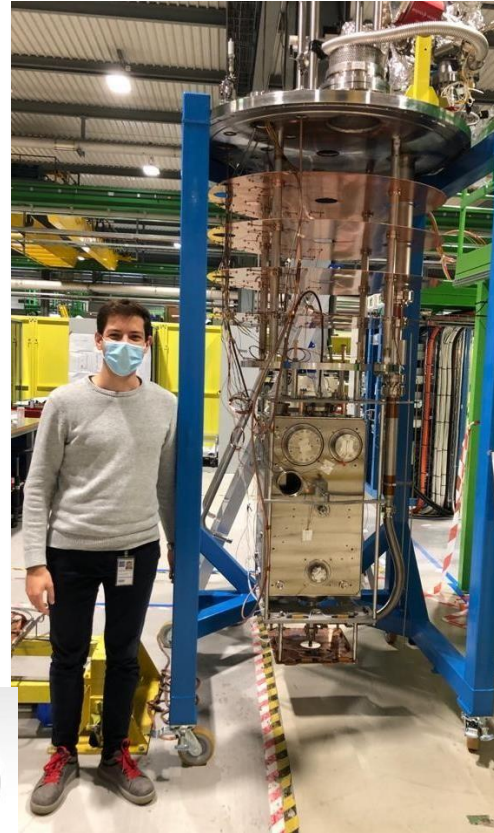
Marco Chiodini

Mechanical Technician – SRF cavities

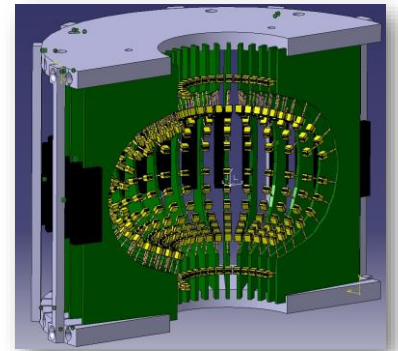


Istituto Nazionale di Fisica Nucleare
Laboratorio Acceleratori e Superconduttività Applicata

2015-2019
XFEL - ESS - PIP II



2019- today
HL-LHC
FCC - LHC - R&D



Hey! I am Diego (Garcia Robles)

I love hiking and discovering the amazing landscapes around Geneva

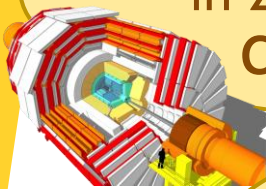
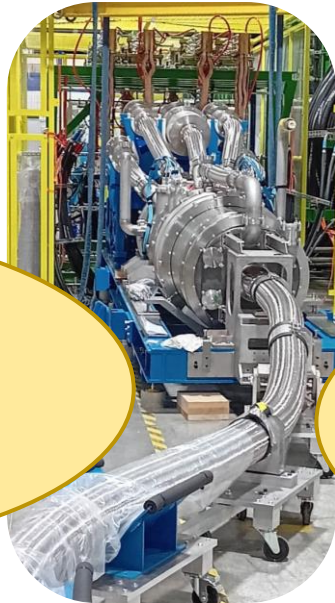
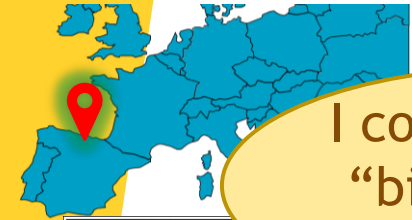
I come from the “biscuit town” of Spain !

Then, moved to Santander to study Mechanical Engineering. And worked there at the University of Cantabria for >5y.

Joined CERN’s family in 2021 to work at CMS detector

I currently work at CERN (TE-MS-C-SMI) Producing cryostats for HiLumi

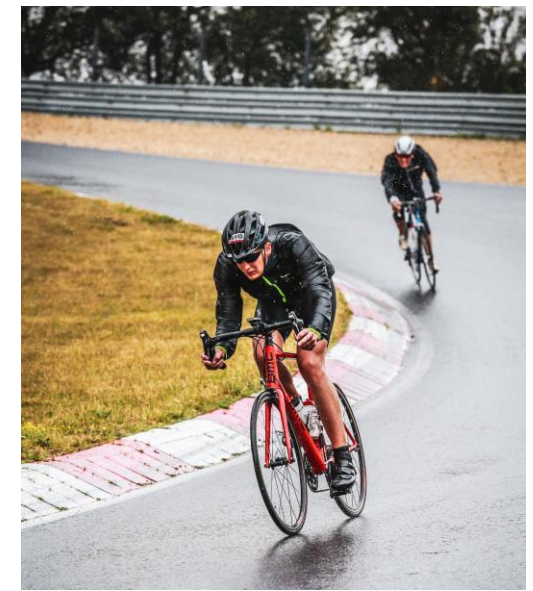
Other passions: Travelling, bouldering, via ferrata, food, adventure, DIY, etc.



Benjamin Moser

ETH zürich

 **diamond**





Elena Fernández Mora

Industrial Engineer | Mechanical Engineer



- More than 5 years of experience in the field of **superconducting magnets**, from design to manufacturing.
- It is an experience gained working at **CERN** and **CEA (Paris-Saclay)**.



- Currently, working as a **Magnet Engineer (TE-MSC-SMT)** at **CERN**.
- Performing task such as:

- **Responsible** for **thermomechanical characterisation** of **Nb₃Sn** Rutherford **cables** through stack samples.



- **Planning** and **supervision** of **winding tests** on various magnet projects (12T, 14T+) within the **HFM framework**.

- **Follow-up** of **coil production activities** (racetracks, cos (θ)).



- **Coordination** and **supervision** of the **electrical insulation thickness measurement** activities in the **SMT section**.



Andrea Bignami

Lead Lab Engineer @ESS



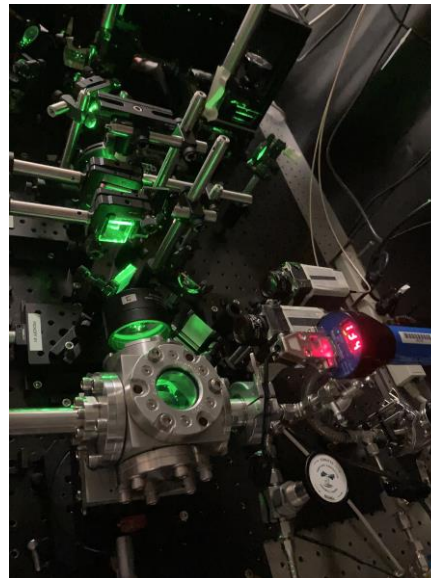
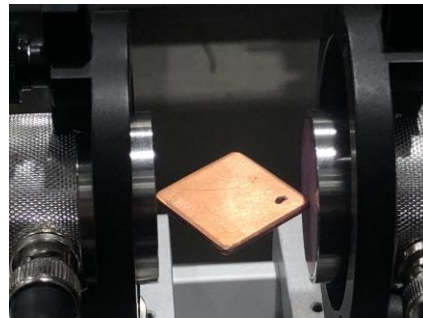
Mechanical Measurements Lab (MML)

- Destructive & non-destructive testing (Modal Analysis, SHM, Strain & Stress, Material Investigation, etc.)
- Support to the Projects (Accelerator, Target, etc.)

- Master's degree in Nuclear Engineering (Politecnico di Milano)
- Work at INFN on Superconducting Cavities Design (XFEL, ESS, PIP-II)

Me, myself and I:

- I love books...
- ... and my (obviously) smart dog!



Students

- Oliver Law
- Mariia Zykova
- Emma Elizabeth Quinn
- Calum Sharp
- Rita Perez Martinez
- Augustin Dubois

OLIVER LAW

Electrostatic Beamlines Engineer

Background

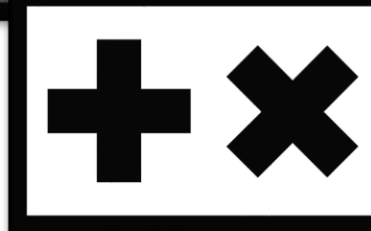
- Bachelor of Engineering (BCIT)
- Professional Engineer (EGBC)
- Aircraft Manufacturing (2 years)
- Particle Accelerators (5 years)

Work Responsibilities

- Design of electrostatic beamline mechanical systems and optics assemblies
- RF/SRF department engineering support (HL-LHC)

About Me

- Birthday: Christmas
- Nationality: Filipino/Chinese
- Hobbies: Climbing, Volleyball, Djing, Automotive, Snowboarding, NBA, F1



Zykova Mariia



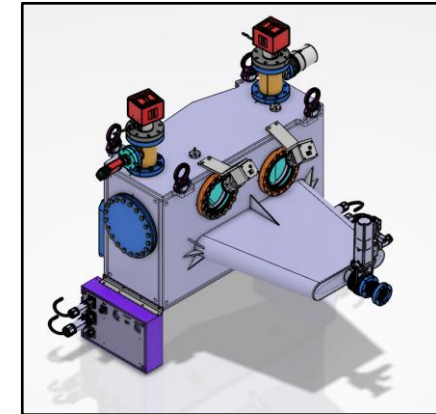
RF Engineer / Paul Scherrer Institute (PSI)

- Designing RF components
- Preparing technical drawings and specifications
- Evaluating mechanical concepts
- Involvement in production and component ordering
- Developing layouts.

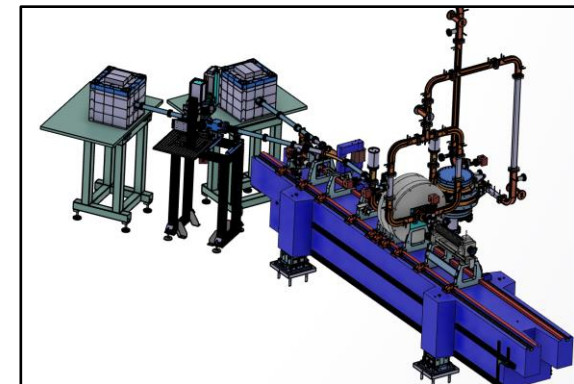
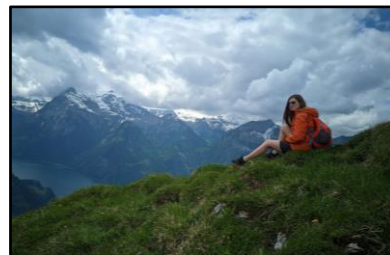


Manufacturing Engineer, 787 Program / Boeing

- Creating technical instructions for mechanics to solve issues during airplane assembly
- Working with various types of drawings, including structures, equipment, connectors, and cables
- Mentoring new staff.

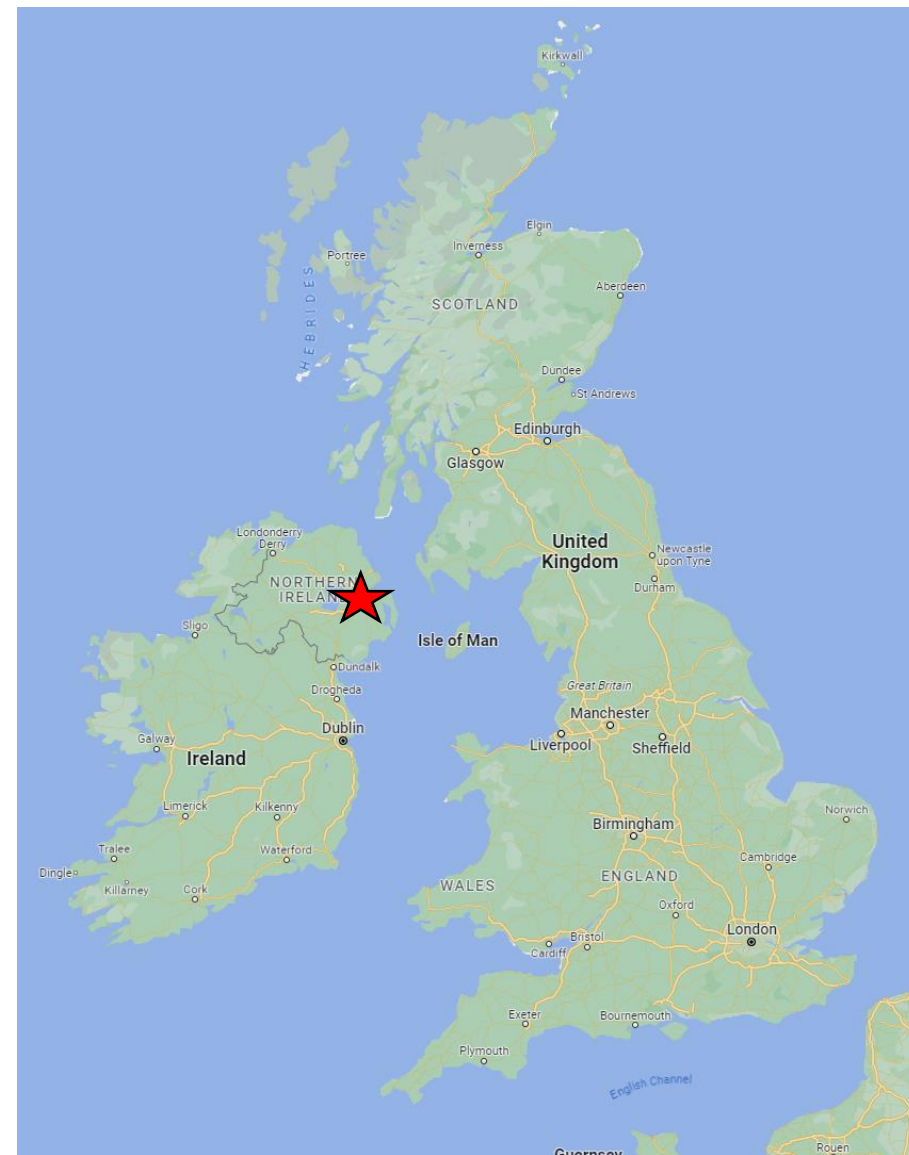
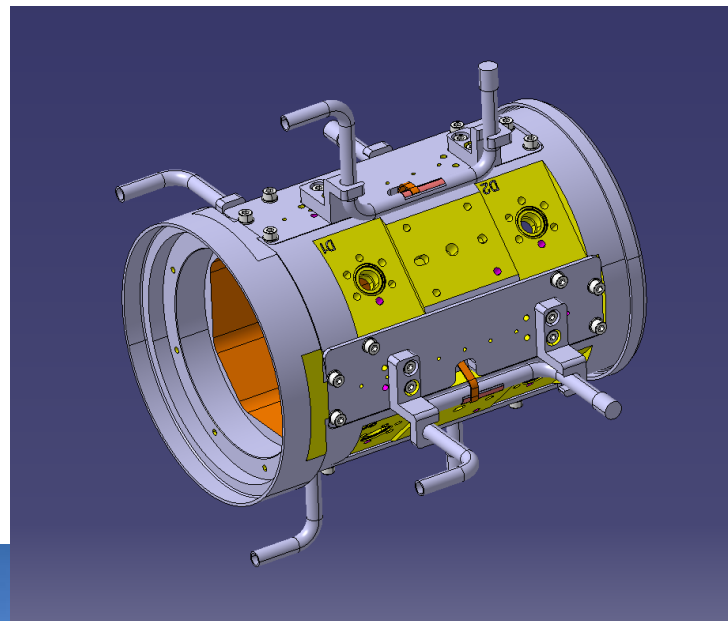


Hobbies: Painting, clothes design, art history and hiking.



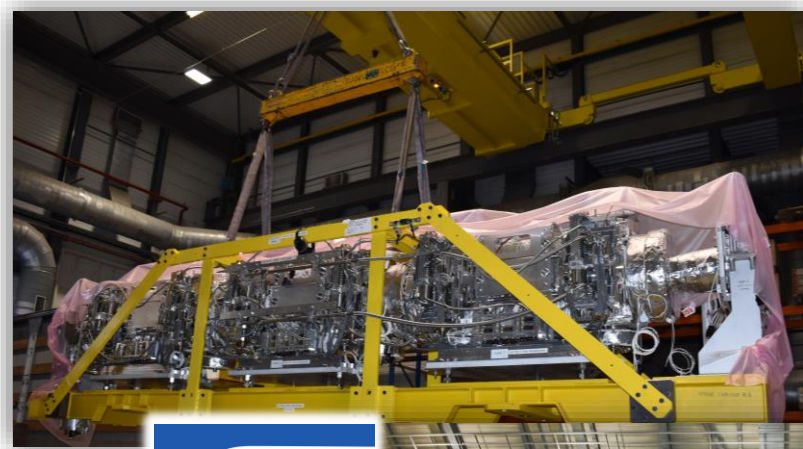
Emma Quinn

SY-BI-ML



Calum Sharp

- 26, from Scotland
- Mechanical Engineer at CERN
- Previously SY-STI-TCD (Targets, Collimators and Dumps)
 - Working primarily on analysis and design of beam intercepting devices in extreme thermo-structural conditions
- Now in SY-RF-AC (Amplifiers and Couplers)
 - Will be providing mechanical engineering support to high power RF systems across the accelerator complex
- Likes skiing and playing the saxophone among other things



LHC-TDIS Injection Protection Absorbers



SPS 200 MHz Solid State Power Amplifiers





Hello everyone! My name is **Rita** and I'm from **Spain**.

- Mechanical Engineer working at CERN, in Magnets group.
- At CERN since 2019.
- I love exploring the area and sports.



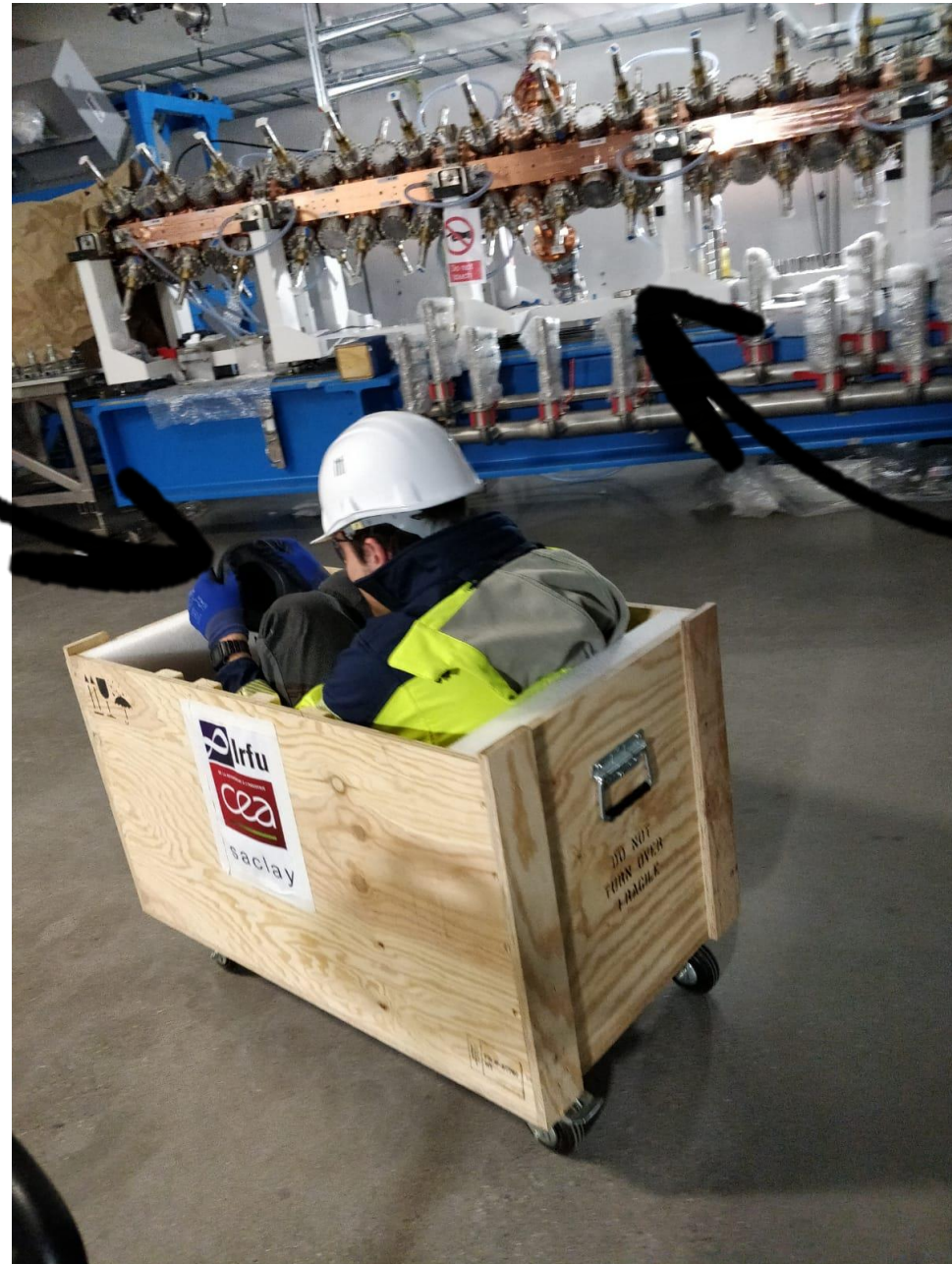
Augustin DUBOIS

CEA Saclay – France

At work :
Mechanical engineer, design and integration
Ion sources (SILHI & Alises)
RFQ (IPHI, ESS & Newgain)
Beam diagnostics (Alison scanner, chopper)



Out of work :
Bikepacking under the rain
Orchestra (violin)
Bouldering
Motorbike



ESS RFQ

Students

- Evgeny Solodko
- Nicolas Misiara
- Alessio Dellacasagrande
- Harry Sullivan
- Laurence Page
- Pedro Morales Sanchez

Transmutex SA (April 2022 – Present)



Mechanical Design of bath cooled superconducting magnet



Mechanical Design of electromagnets



Mechanical Design of car body welding lines



Mechanical Design and testing of light-alloy wheels

Accelerator magnet design and R&D
Mechanical design of RF cavities, electromagnets, and other beam line elements



Thank you!

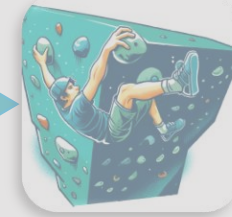
PSI EPFL/PSI
(March 2020 – April 2022)

CERN
(May 2009 – February 2020)

Comau
(September 2008 – February 2009)

“Innotek” / “Polad”
(August 2006 – August 2008)

Bouldering



Photography



Machine learning & NN



Badminton





Nicolas MISIARA

- **Research engineer at CEA Paris-Saclay (permanent position since 2015)**
 - **Systems engineering department**



- **Master degree in Mechanical engineering 2015 INSA Lyon**

- **Music (metal of course!)**
Martial arts, Rugby



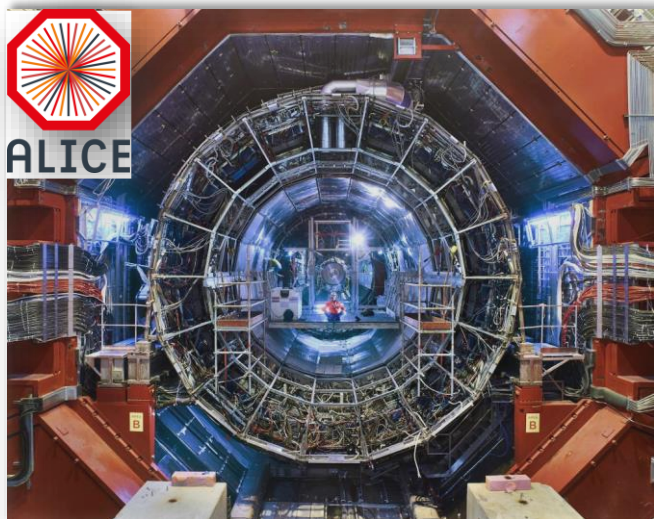
What I used to do:



*What I wish I could do
(more than I already do):*



*What I'm
doing:*



Harry Sullivan

Mechanical Engineer
CERN - QUEST programme
Beam Instrumentation – Mechanics & Logistics



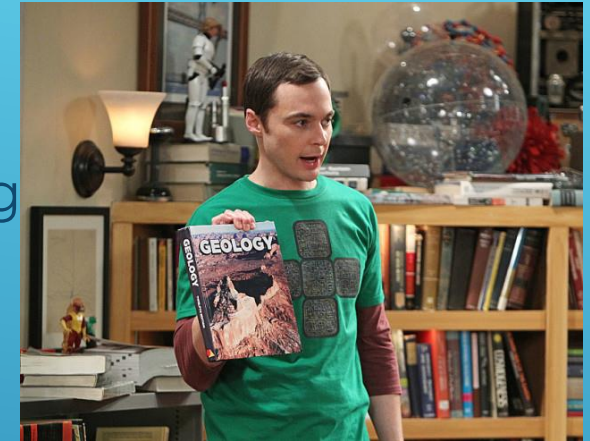
 Science and Technology Facilities Council
ISIS Neutron and Muon Source



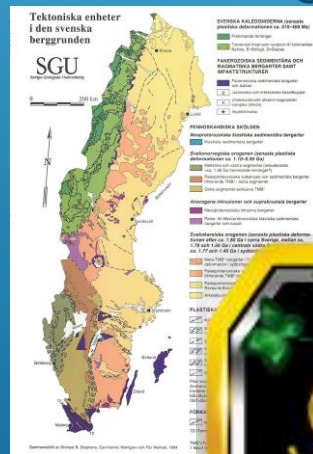
LAURENCE PAGE – VACUUM ENGINEER

EUROPEAN SPALLATION SOURCE

- ▶ 8 yrs at ESS - vacuum responsible for the NCL and all NSS
- ▶ >20 yrs @ Lund University built an ran a UHV $^{40}\text{Ar}/^{39}\text{Ar}$ Isotopic Age dating facility
- ▶ PhD Title: The Structural, Geochronological, and Metamorphic History of the Kebnekaise Region, Arctic Scandinavian Caledonides



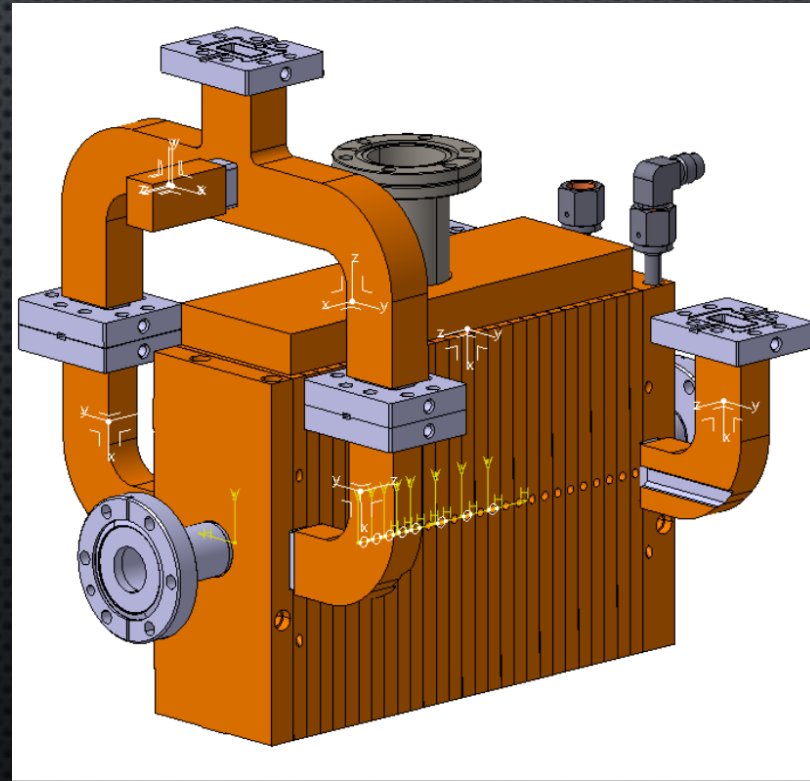
Yes Sheldon, Geology is a REAL science!



Pedro Morales Sanchez – 1S1M

Work related activities

Hobbies

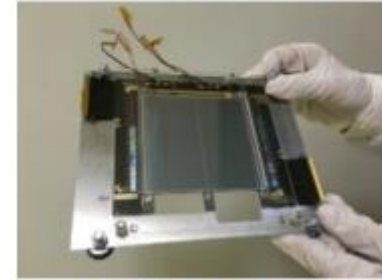


Students

- Pierre Rose
- Emma Bianchi
- Anton Philippe Tanquintic
- Christian Wiebers

Pierre Rose

34 years



1990

Childhood - FR

2010

Engin. Studies - FR

2014

VIA CERN - CH

2016

2016

WHV - NZ



2017

Elec. Engineer - FR

2019

Fellow CERN - CH

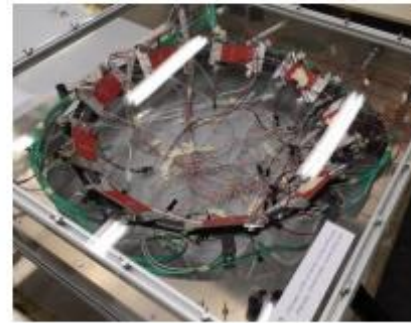
2024

Staff CERN - CH



My project for
CMS Tracker Upgrade Phase 2 :

Mechanical Engineer for Tracker Integration

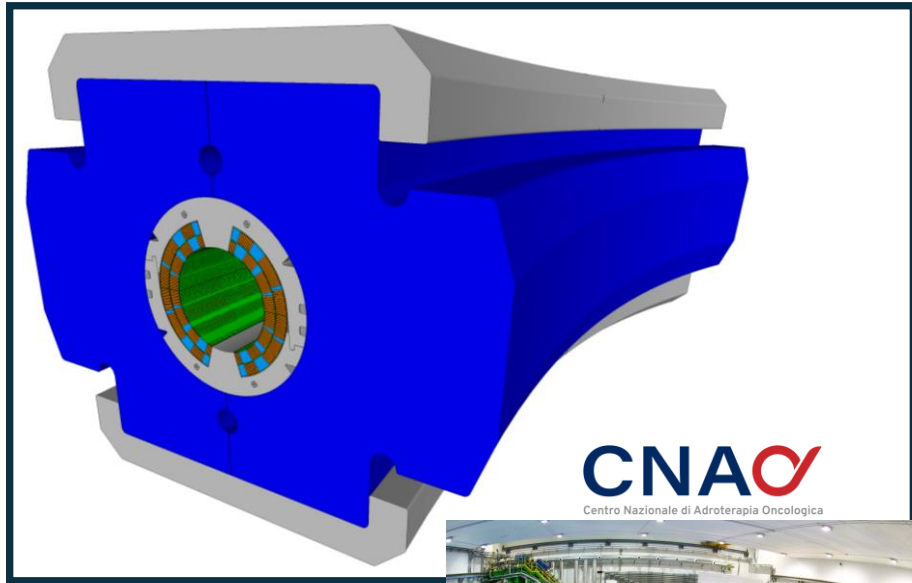


What i'm working on...

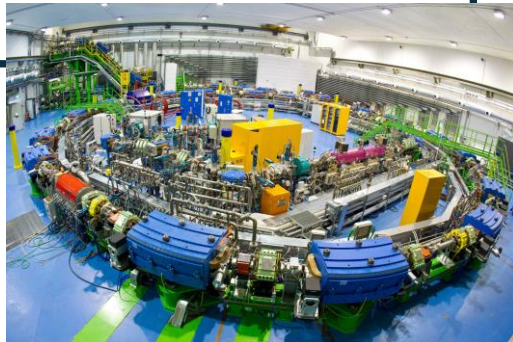


Istituto Nazionale di Fisica Nucleare
Sezione di Genova

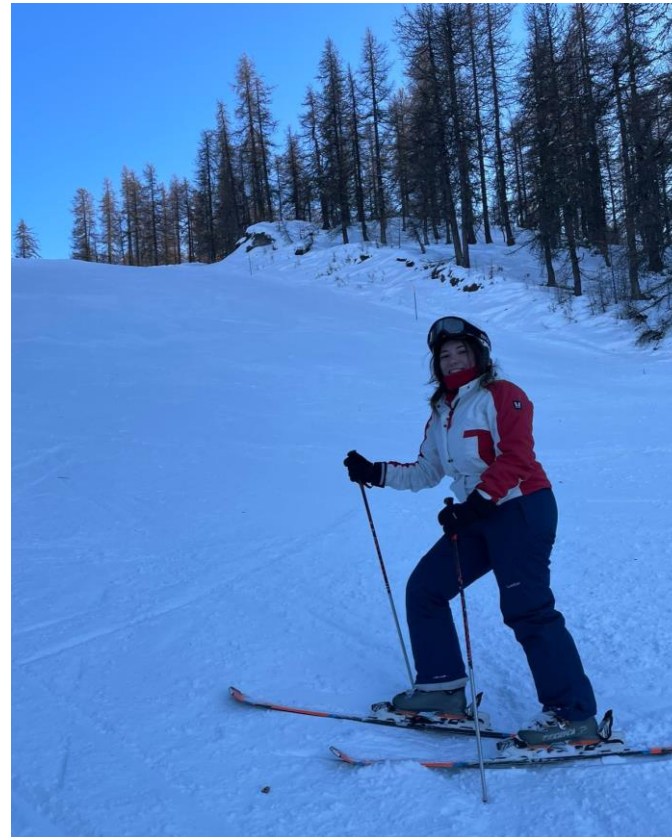
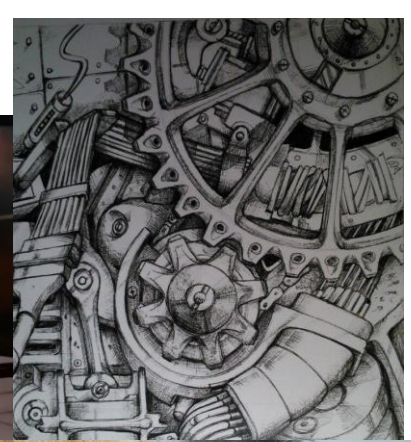
Superconducting
Ion
Gantry



CNAO
Centro Nazionale di Adroterapia Oncologica



... and what i'd rather work on





Anton Tanquintic

Beam Instrumentation Engineer



Belgian Nuclear Research Centre
accelerator-driven subcritical reactor
 Phase I: building a 100 MeV Linac
MINERVA

What I am paid for...

instrumentation, diagnostics & analytical devices

- Faraday cups to energy analyzers
- UV fluorescence monitors to fatigue testers,
- Beam emittance meters to BPMs

What I pay for...

When the wallet runs dry...

Manila, PH

BSc Applied Physics
BSc Material Sci. & Eng.

Nuclear Physics Intern
Radiation Detection & Dosimetry

Previous R&D Experiences...

- ✓ Robotics
- ✓ Atmospheric: Aerosol Monitoring
- ✓ Geophysics: Fracture Mechanics
- ✓ Photonics: Liquid Lenses

Kyoto, JP

MSc Electrical & Electronics Eng.

R&D Engineer
Analytical device development

- ✓ Plasma Physics: Laser Ion Sources
- ✓ Thin Film Coating
- ✓ Instrumentation Development
- ✓ Polymer Engineering

Mol, BE

Beam Instrumentation Engineer
Interceptive & non-interceptive diagnostics

Present Work Interests

- ✓ Accelerator engineering
- ✓ Beam Instrumentation
- ✓ Ion source/beam apps.
- ✓ Industrialization of R&D
- ✓ Systems Engineering

?



Work

Kiel (Schleswig-Holstein)

- *Training* (09.1993 - 02.1997)
Device and precision engineering
- *Studies* (09.2000 - 12.2004)
Precision engineering and mechatronic

Hamburg

- I have been working at DESY since 2005 (Group MDI)
- Engineer for optical diagnostic systems

Berlin

- Today I live in Berlin (since 2008)

Zeuthen (Brandenburg)

- Today I work from DESY Zeuthen for Hamburg (since 2012)



Private





Welcome drink!