

One slide - One Minute

Presentation of Students, Lecturers and CAS Team

At the Numerical Methods for Analysis, Design and Modelling of Particle Accelerators

11 -23 November 2018

Thessaloniki, Greece

Students

In groups of 6 people come forward

- Xiaoqiang Chen
- Alessandro Citterio
- Robert Frost
- Sondre Vik Furuseth
- Yunzhe Gao
- Alysson Gold



Name: Xiaoqiang Chen

Email: chenxiaoqiang@impcas.ac.cn

◆ Professional Situation

School:

University of Chinese Academy of Sciences

Major:

Nuclear technology and applications

Degree:

a PhD Candidate (first-year)

Research:

The eddy current effect of vacuum chamber

The simulation of impedance

◆ Personal interests

Running:



marathon



cross-country race

Fishing:



One Slide - One Minute: Alessandro Citterio

CAS Numerical Methods for Analysis, Design and Modelling of Particle Accelerators

Personal Informations:

Surname/First name: **Citterio Alessandro**

Nationality: Italian

Date of birth: 10-08-1980

Work Experience:

Dates: 2008-2018

Employer: **Paul Scherrer Institute**, Villigen, Switzerland

Occupation: Post-doctoral fellow (2008-2012), **Radio Frequency Specialist** (2012-2018)

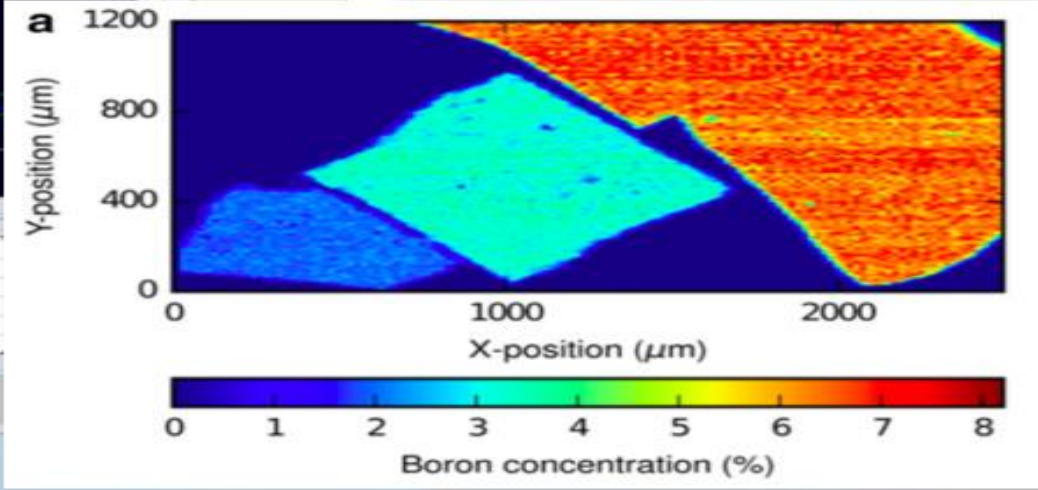
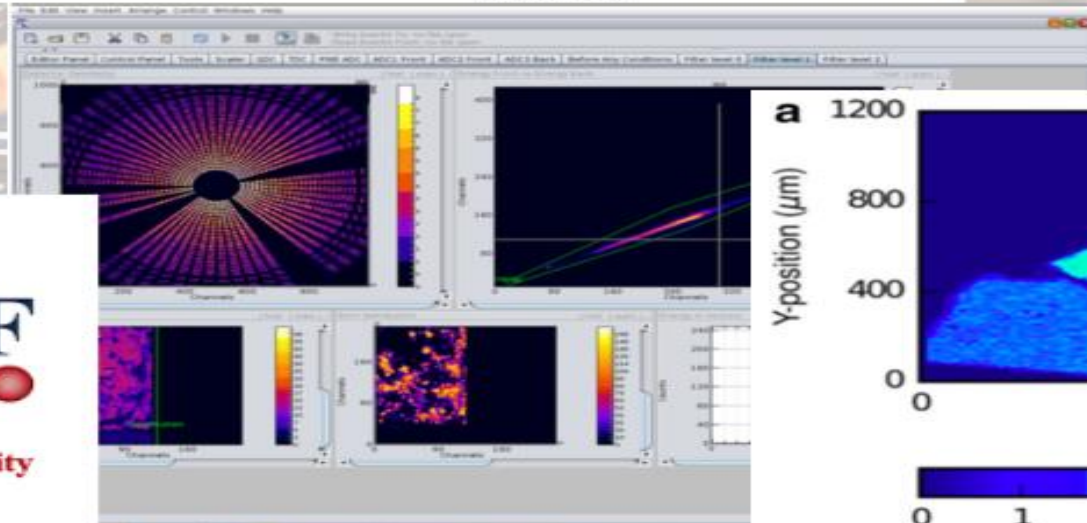
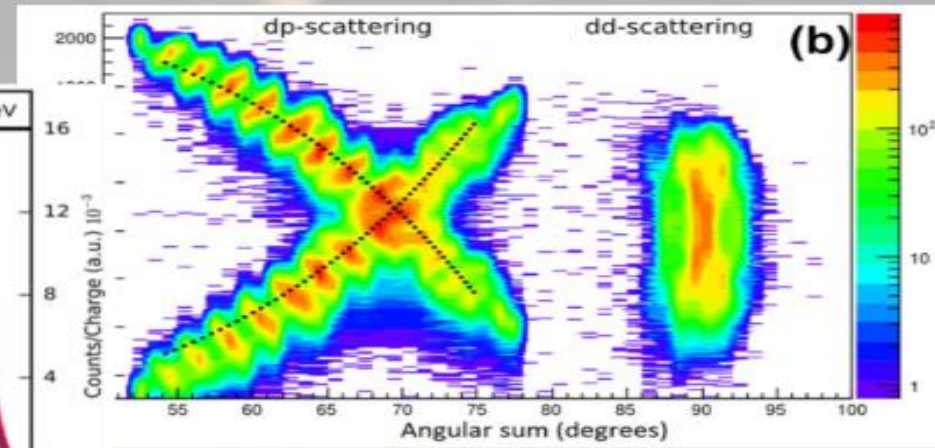
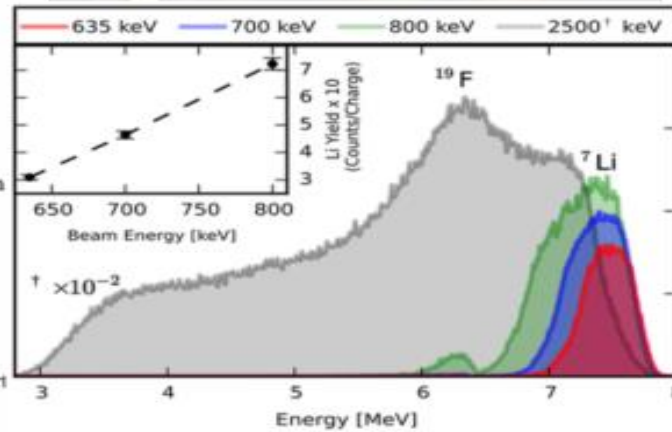
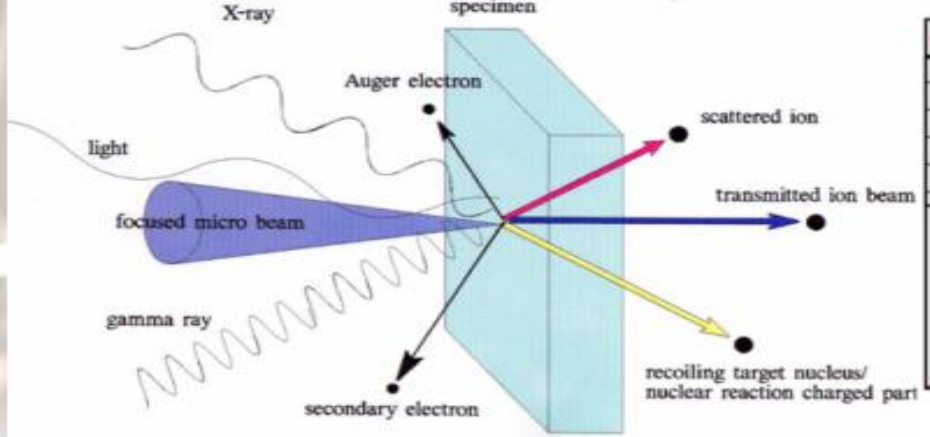
Main activities/responsibilities:

- 2008-2012: Analysis and commissioning of the RF components developed within the **SwissFEL** project.
- 2012-2018: Calculation of instabilities and impedances for the synchrotron light source **SLS2**, RF on call duty service for SwissFEL, RF measurements and quality check of RF components, layout and calculation of RF-systems, assistance for conditioning of the SwissFEL accelerating structures, assistance for high power RF Teststand.

Personal Interests (not work related !): passionate of 19th century russian literature, I like to practice roller hockey.

Robert Frost

Nuclear Microprobe



Thessaloniki: november 2018

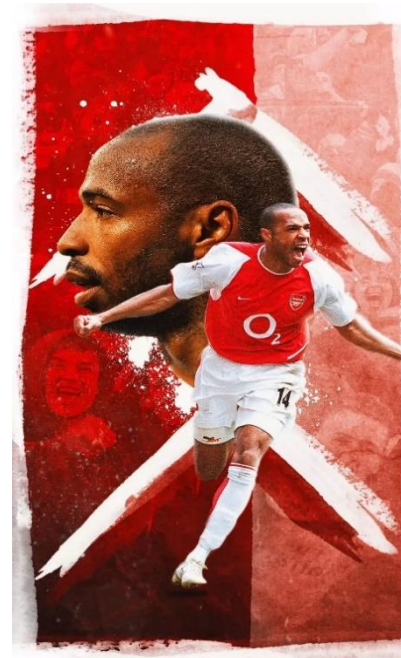
Sondre Vik Furusetth

NTNU, MIT, CERN, EPFL
M.Sc. 2012-17: Beam-beam interactions
PhD. 2018-21: Loss of Landau damping





Adventures in the ordinary life will be the most glorious moments in my life



Badminton
&
soccer

Name: *Gao Yunzhe*

Unit: *Institute of modern physics, Chinese Academy of Sciences(IMP CAS)*

Research topics: *Multiple-energy operation in slow extraction of heavy ion accelerator for cancer treatment*

E-Mail: *gaoyunzhe@impcas.ac.cn*

Alysson Gold

PhD Student, Stanford / SLAC

Thesis Advisor: Sami Tantawi

Thesis Research: Numerical solver for non-linear beam-wave interactions in RF sources

Research Interests:

- Computational Electromagnetics
- mm-Wave and THz RF sources
- Multi-Physics Simulations
- High Performance Scientific Computing

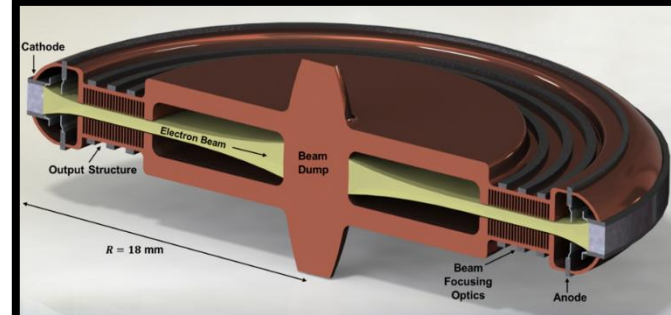
Hobbies:

Backcountry skiing, windsurfing, running, welding

Contact Info:

vrielink@stanford.edu

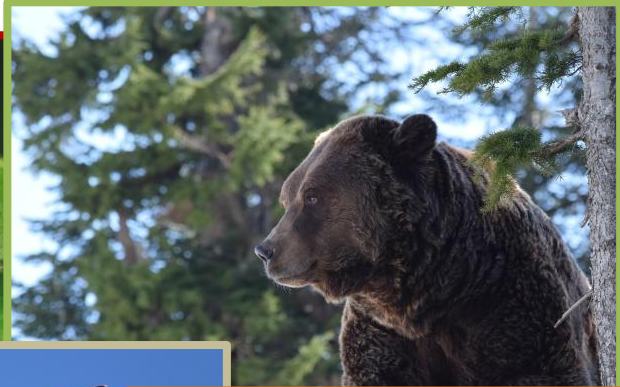
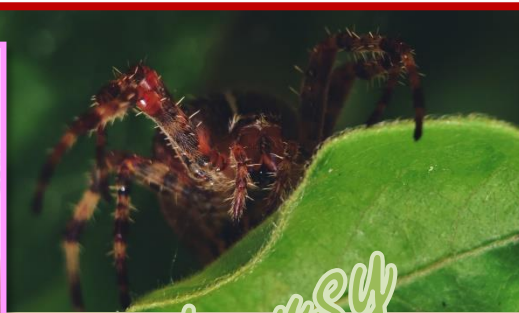
<https://www.linkedin.com/in/alyssonvrielink/>



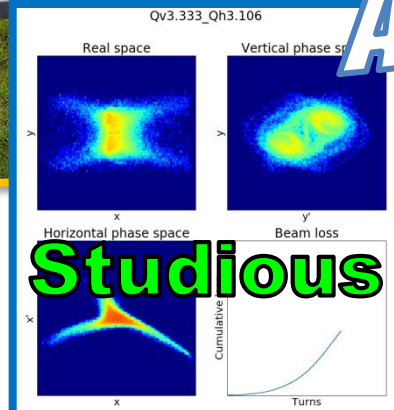
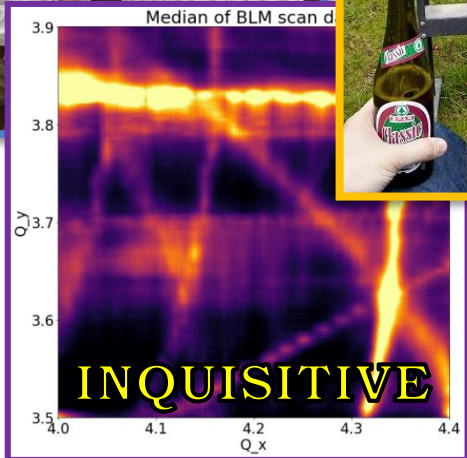
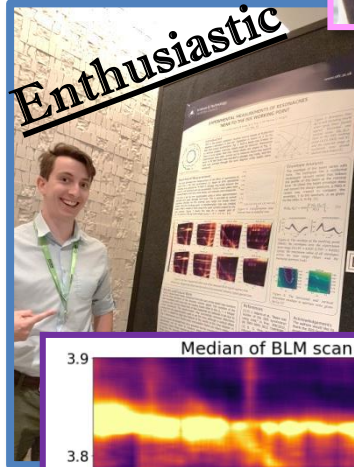
Students

- Peter Griffin-Hicks
- Peiyong Jiang
- Olha Kazinova
- Georgios Kourkafas
- Ji Li
- Yuliya Maltseva

Peter Griffin-Hicks; Accelerator Physicist at ISIS

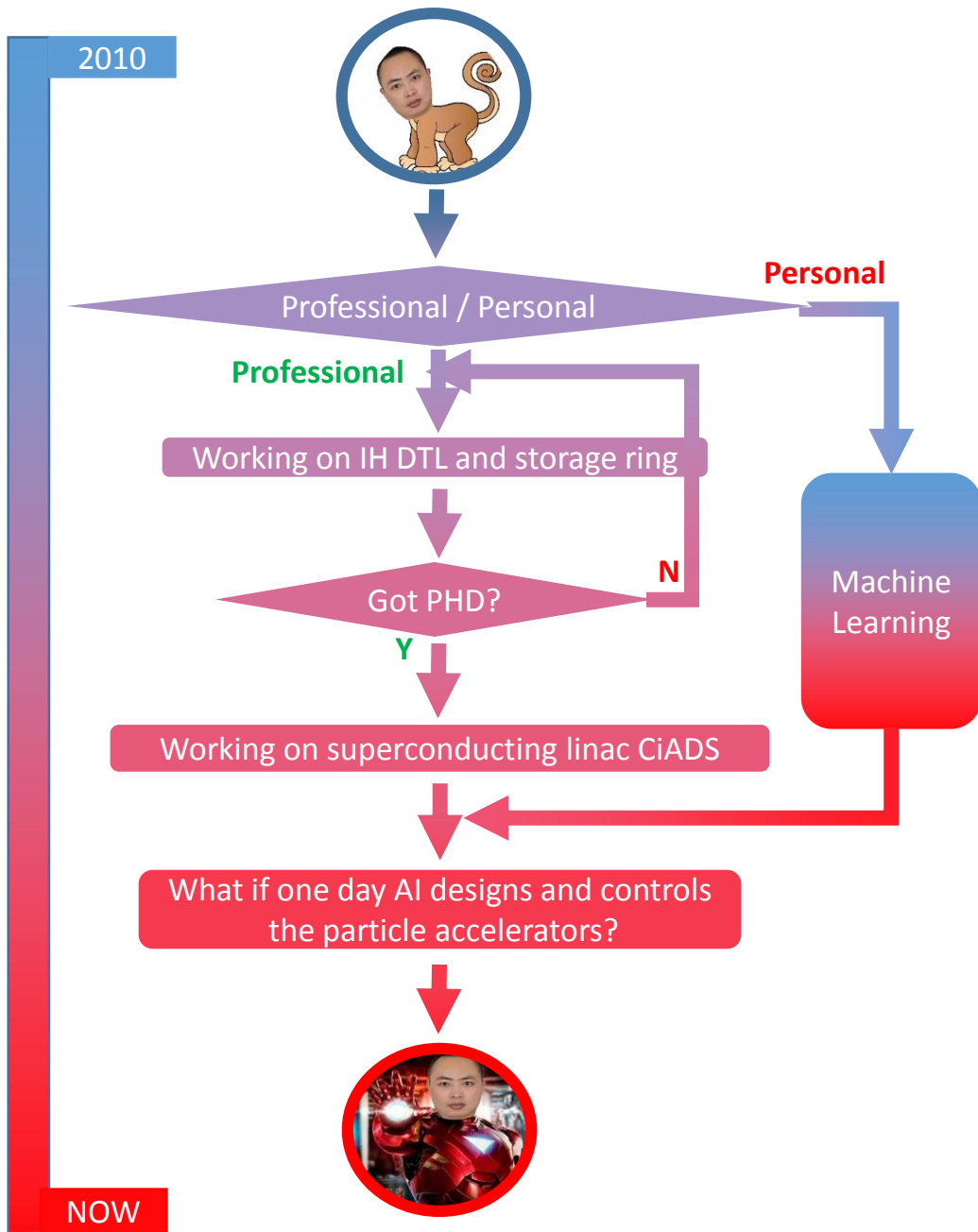


Outdoorsy



Athletic





HelloFriends.py

```
#!/usr/bin/python
# -*- coding: utf-8 -*-
```

```
from God import Life
```

```
class Peiyong_JIANG():
```

```
def __init__(self):
```

```
    self.nationality=China
```

```
    self.employer=Institute of Modern Physics  
                  Chinese Academy of Sciences
```

```
    self.email=jiangpeiyong@impcas.ac.cn
```

```
def Motto(self):
```

```
    for everyday in Life:
```

```
        while(true):
```

```
            self.WorkSmarter()
```

```
            self.PlayHarder()
```

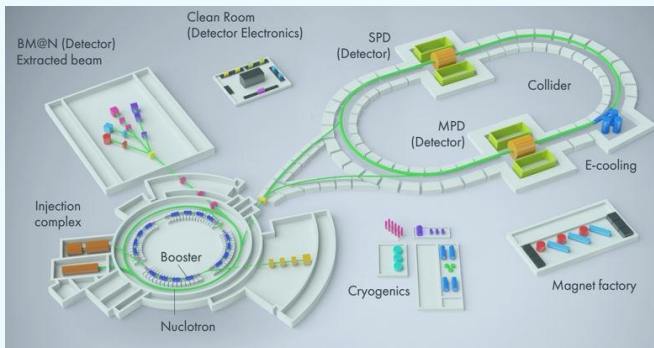
```
            self.LiveBetter()
```

```
            if everyday is_unique:
```

```
                break
```



At work



Olha Kazinova



Reality

Degus as Pets

A Complete Degu Care Guide

The Must Have Guide for Anyone Passionate about Owning a Degu, Includes Health, Diet, Housing and Lots More...



By Susan Moore

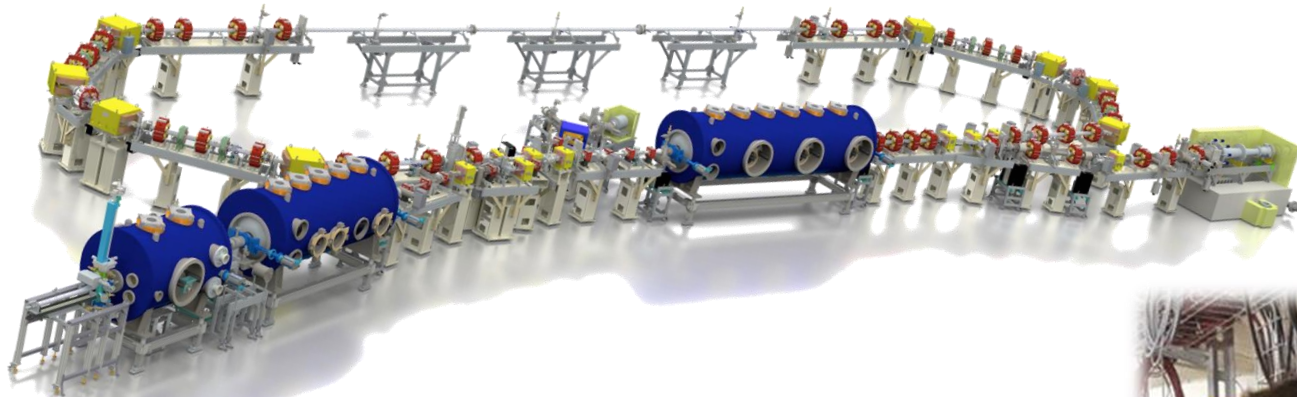
BEING ORGANIZED



WHAT WERE WE SUPPOSED TO BRING TODAY? WHAT'S HAPPENING? WHY AM I HERE?



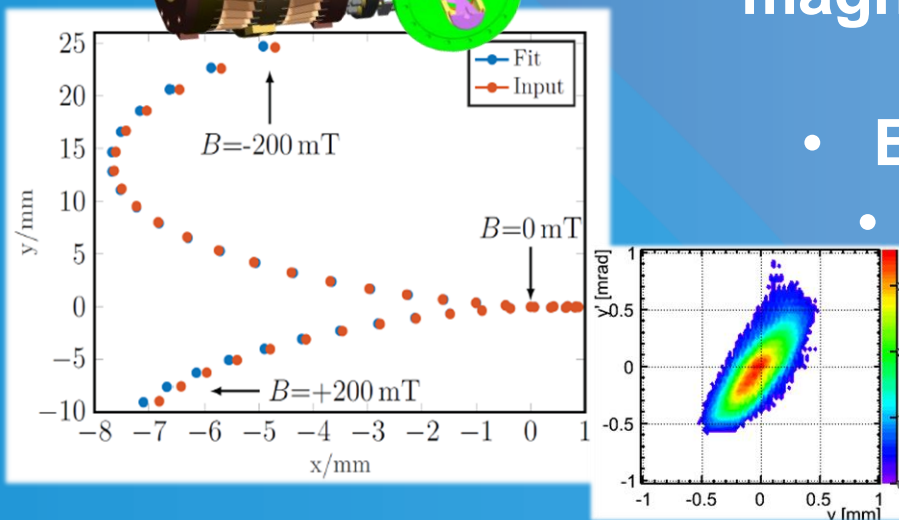
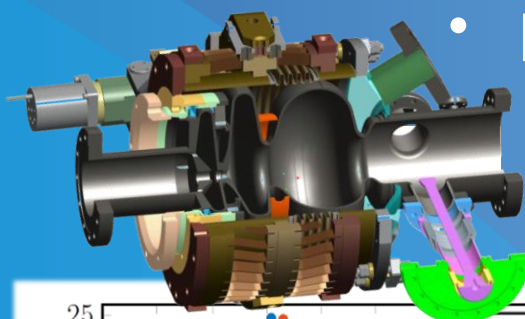
CollegeHumor



Georgios Kourkafas

Postdoc involved with:

- photo-injectors
- beam dynamics
- beam diagnostics
- magnets, cavities



- ERL (HZB)
- FEL (DESY)
- UED/M
- storage rings (LHC, BESSY III)





Ji Li

Institute of Accelerator Physics
Helmholtz-Zentrum Berlin (HZB)

Work responsibilities:

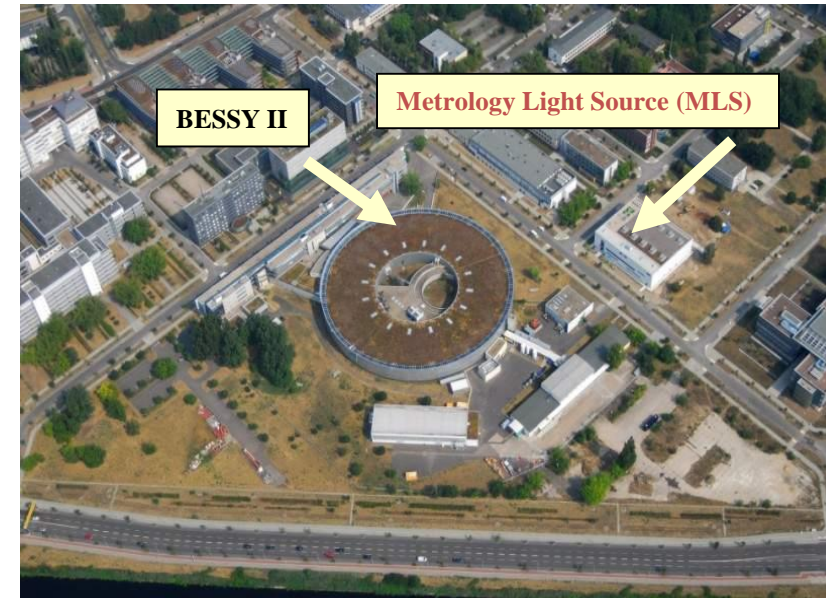
Operation and development of BESSY II and
MLS

Areas of interests:

- Nonlinear beam dynamics
- Online optimization techniques
- Numerical methods for modeling insertion devices

Why am I here?

to enjoy the course and nice atmosphere



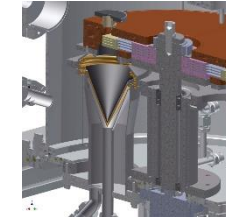
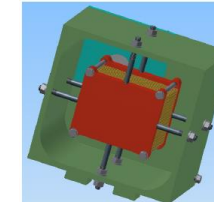
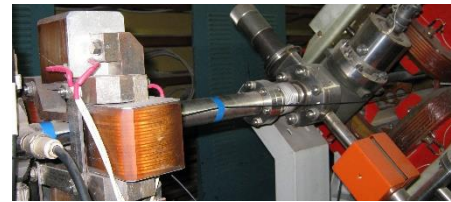
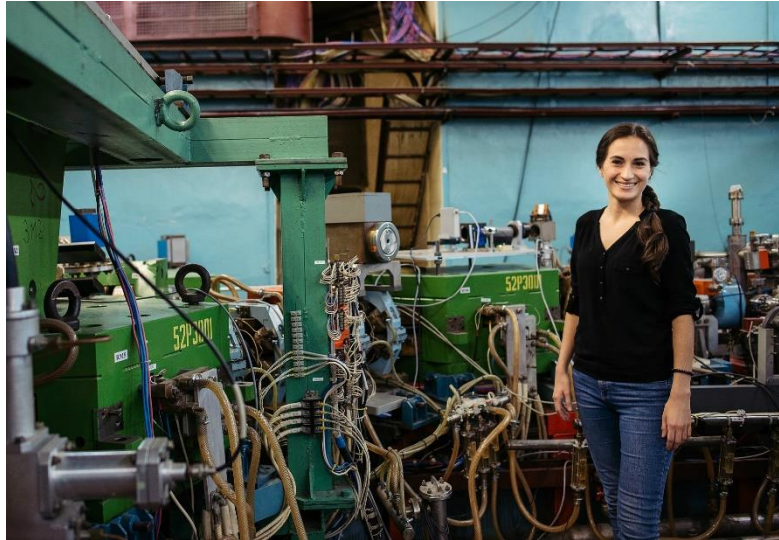
Yuliya Maltseva

Junior researcher at Budker Institute of Nuclear Physics,
Novosibirsk, Russia

B.S., M.S. in Physics, Ph.D. is expected

Field of interests:

- Optical fiber Beam Loss Diagnostics
- Particle interactions with matter
- Particle beam diagnostics and measurements

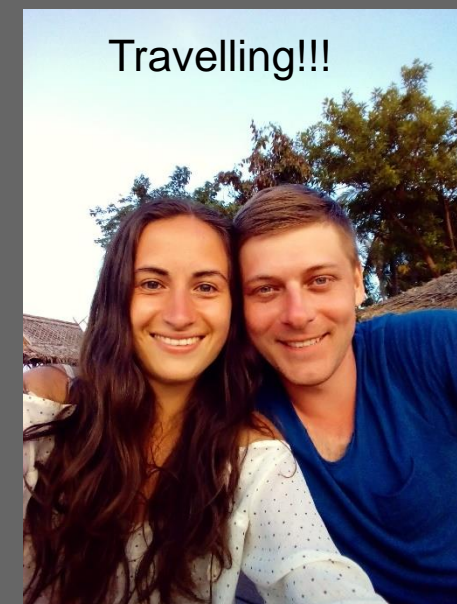


My spare time:

Belly dance



Travelling!!!



Sewing, enjoy making things by hand such as souvenirs, bracelets, etc.



Learn foreign languages

Students

- Fhumulani Nemulodi
- Gustavo Pérez Segurana
- Thomas Pognat
- Davide Reggiani
- Mustafa Murat Sezer
- Liangliang Shi

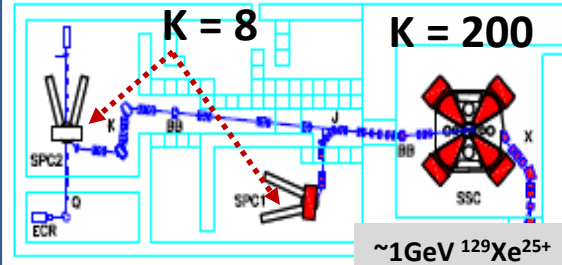
Improving Transmission for Heavy Ions @ iThemba LABS

Fhumulani Nemulodi



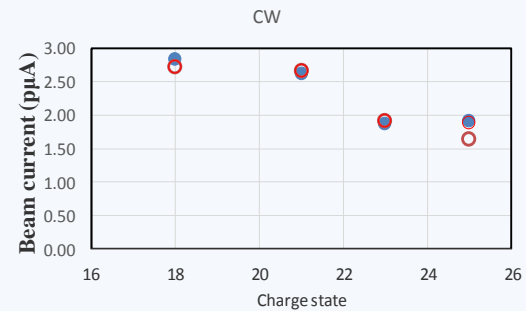
Accelerators

3 cyclotrons

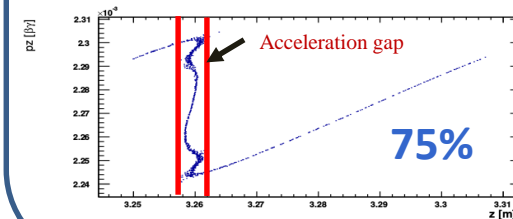
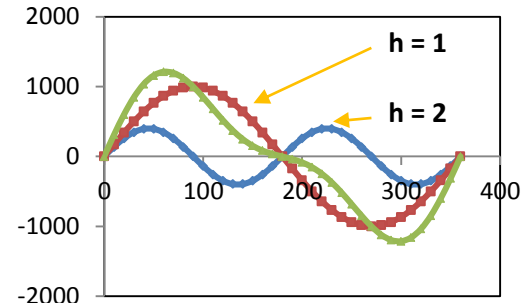
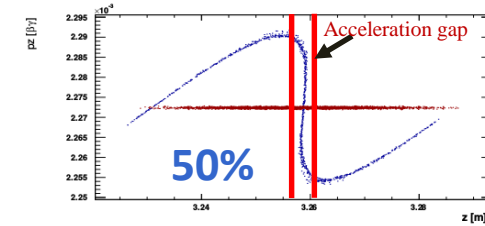


$\sim 1\text{GeV } ^{129}\text{Xe}^{25+}$

^{129}Xe Beams from ECR



Object Oriented Parallel Accelerator Library (OPAL)



science & technology
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA



iThemba LABS
Laboratory for Accelerator Based Sciences

Gustavo Pérez Segurana (Gus)



Born in Salamanca - Spain



MPhys @ Lancaster Uni (UK)



PhD @ CI with Lancaster Uni





Thomas PUGNAT

PHD:

Beam dynamics for LHC upgrades,
at CEA, University Paris Saclay,
(2018-2021)



PROFESSIONAL EXPERIENCE:

- ✓ *Optimising and parallalizing the tracking code Toutatis for beam dynamics in RFQ.*



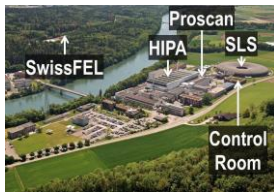
FORMATION:

- ✓ *Theoretical physics*
- ✓ *Applied mathematics*



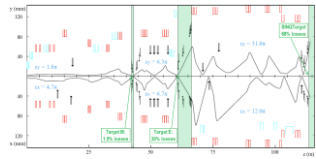
HOBBIES:

- ✓ Hiking
- ✓ Martial Art
- ✓ Calligraphy

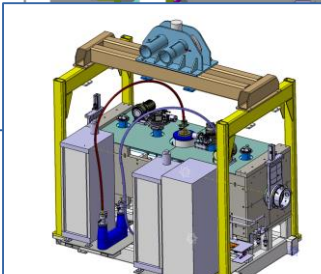
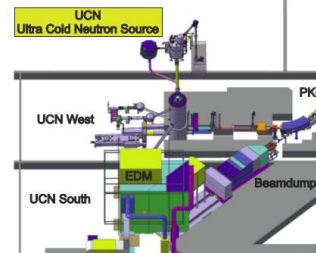


Daide Reggiani, PSI, Switzerland

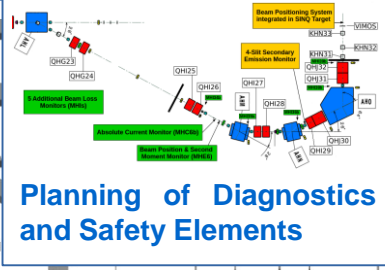
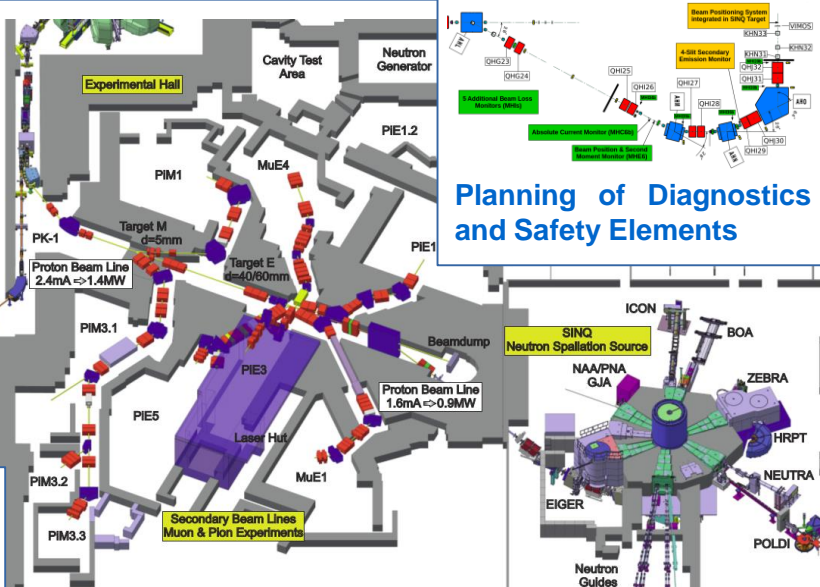
Beam Lines Support and Development



Beam Line Simulations



Design, Assembly, Maintenance of Wien Filters and Spin-Rotators



Planning of Diagnostics and Safety Elements

At PSI:

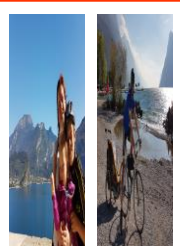
Tuning, Optimization, Development of 590 MeV Proton Channel and 7 Muon/Pion secondary beam lines of the 1.4 MW HIPA facility

Users Support for Experiments and Test Beams

Users Support in SBL



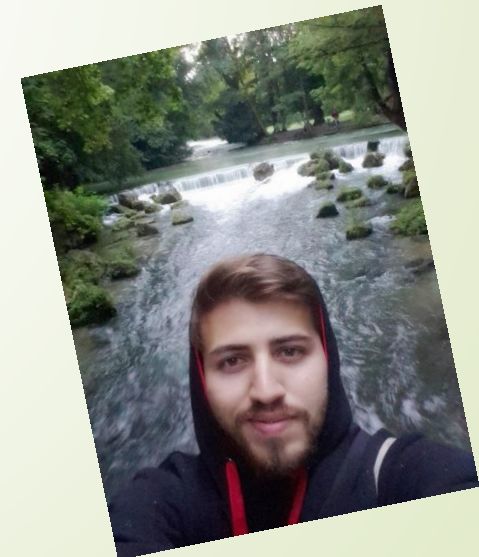
Planning and Coordination of Beam Lines Renewals/Upgrades



Personal Interests:
Sport (Cycling, Running)
Travelling
Reading

Mustafa Murat Sezer

- Born in 1993, Ankara, Turkey
- Graduated from Electrical and Electronics Engineering and Physics at Middle East Technical University
- Currently a Master student in Physics at Middle East Technical University
- Working at ASELSAN A.Ş. as an R&D engineer
- Field of interest: Particle accelerators, electron sources, beam dynamics, power electronics
- Hobbies: Reading, swimming, photography



Dr. Liangliang Shi (Paul Scherrer Institut),
PI of e based THz project



“Twenty years from now you will be more disappointed by the things that you didn’t do than by the ones you did do. So throw off the bowlines. Sail away from safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover.” - H. Jackson Brown Jr.

Students

- Mina Akhyani
- Mariya Arsentyeva
- Sara Dastan
- Zhe Duan
- Alexander Gerbershagen
- Jacqueline Keintzel



Born
1991
Shahrood,
Iran

Move
Tehran

Msc.
Photonics
Laser & Plasma
Research Institute

Thesis

Vacuum
laser
acceleration
[Dec 2015]

Work

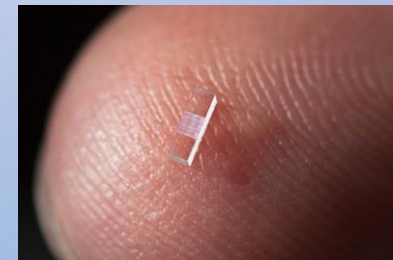
Iranian Light
Source
Facility (ILSF)
[Dec 2016]

Group

Beam
dynamics
Instability
studies in
storage ring

?

Mina Akhyani



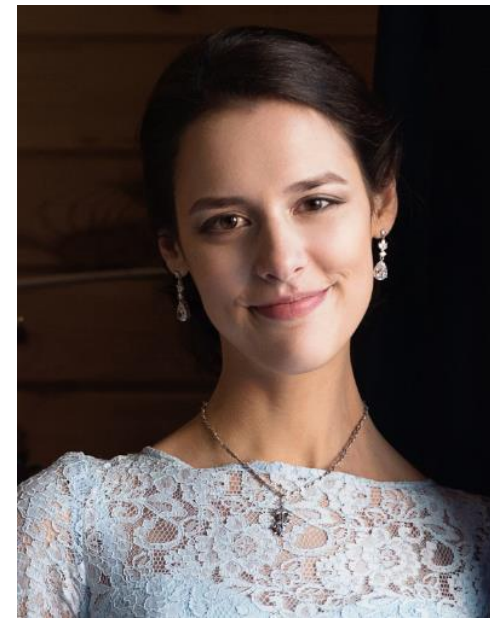
Mariya Arsentyeva

... PhD student

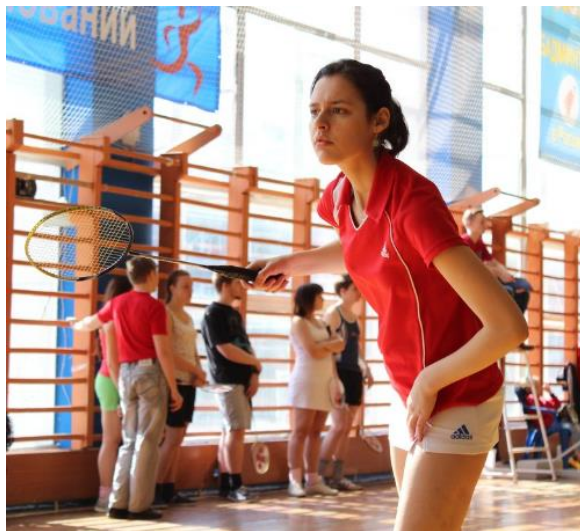
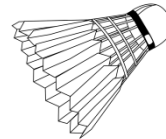


Budker Institute of
Nuclear Physics

... teacher of mathematical analysis



... badmintonist



Main interests

- High-gradient and W-band accelerating structures
- Non-linear beam dynamics
- Beam dynamics and EM simulations
- RF technologies

CERN ACCELERATOR SCHOOL NOV.2018

- My name is **Sara Dastan**
- I'm from **Iran**.
- I'm PhD student and I'm doing my PhD thesis on **Iranian Light source Facility (ILSF)**.
- Since April I have joined to **ESR** (Experimental Storage Ring) in **GSI, Darmstadt, Germany** as a guest researcher.

- In ILSF I'm working on optimization of some parameters like increasing Dynamic Aperture, Touscheck lifetime and etc.
- In GSI I'm doing some ion optic calculation specially Bumps and kickers in ESR.
- I'm working with ELEGANT and MAD-X



Root



Grown up near Xi'an, the historical capital of China, and the home of the Terracotta Army of Emperor Qin Shi Huang

Education



Studied in Tsinghua University and IHEP (1 year in BNL)
PhD in accelerator physics, 2015

Zhe Duan

Work

High Energy Photon Source



6 GeV, 1360 m, 34 pm

- Since 2015, Accelerator Physicist @ IHEP
- Beam dynamics for HEPS (injection scheme, instability, etc)
- HEPS is expected to enter the exciting construction phase late this year!

Family



Leisure



Alexander Gerbershagen

- Born in Moscow, moved to Hamburg in 1999
- Study of theoretical physics in Cambridge
- Doctorate in accelerator physics in Oxford
- Proton Therapy at PSI
- Now staff physicist at CERN, beamlines for fixed target experiments
- Hobbies:
 - Entertaining little people
 - Long distance running





TECHNISCHE
UNIVERSITÄT
WIEN
Vienna | Austria



Name: Jacqueline Keintzel

Age: 23

Nationality: Austria

Profession: PhD Student

Research Interests:
Future Accelerators
Lattice Design
Beam Dynamics

Personal Interests:
Sports and Nutrition
Play the Guitar
Dancing

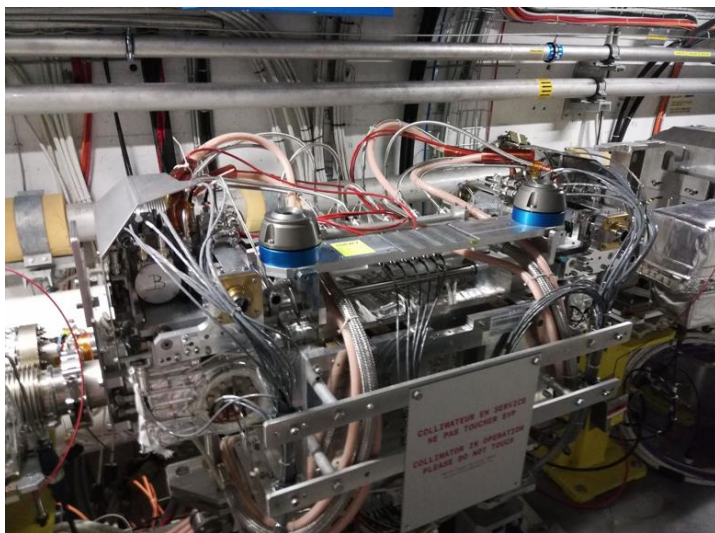
Students

- Axel Poyet
- Haroon Rafique
- Martin Schwinzerl
- Andreas Waets
- Stuart Warren

AXEL POYET – PHD STUDENT

- From Saint-Etienne, France (close to Lyon)
- Studied Nuclear Engineering in Grenoble, France
- 24 years old

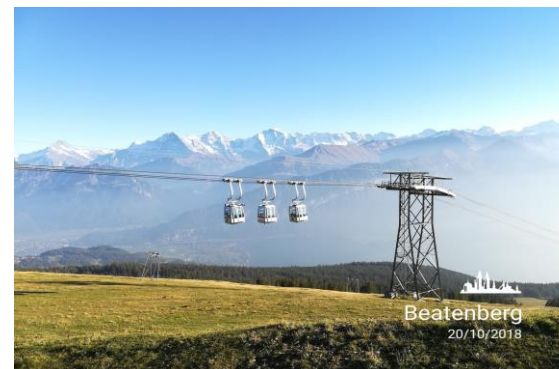
- Work @ CERN in Beam Departments
- BBLR Interaction Compensation Using DC Wires for LHC and HL-LHC
- University of Grenoble, France



- Singer/keyboard player in a post-punk band: The Heck Makers



- Mountain lover



Haroon Rafique



Martin Schwinzerl



M@il: martin.schwinzerl@cern.ch

- What happened until April 2018?
 - Born in Austria 1979
 - Engineering School (Electronics & Comm. Technology)
 - Study Computational Physics (Master)
 - 10 years+ work in industry (HW/SW dev.)
- Since April 2018:
 - Doctoral Student @ CERN (BE-ABP-HSS) / University of Graz, Austria
 - Topic: SixTrackLib[2]
A versatile and scalable parallel/hybrid/GPU computing Implementation of SixTrack[1])
 - Supervisor: Riccardo De Maria (CERN)
Gundolf Haase (University of Graz)

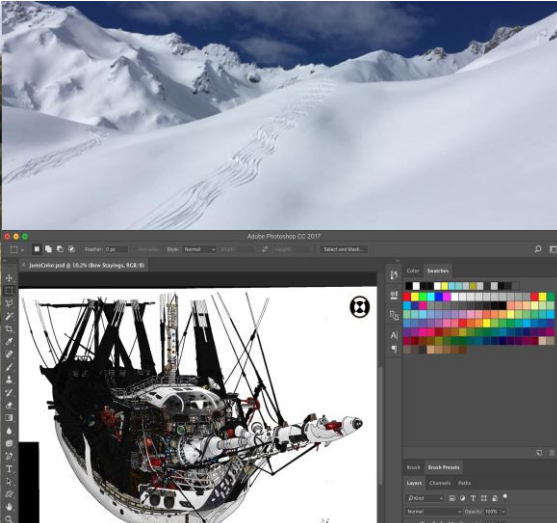
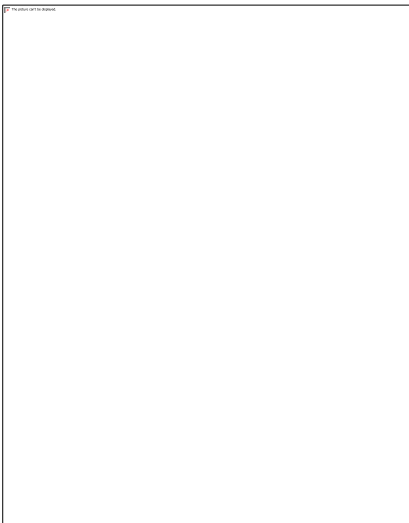
[1] <http://lhathome.web.cern.ch/projects/sixtrack>

[2] <https://github.com/SixTrack/sixtracklib>

Andreas Waets



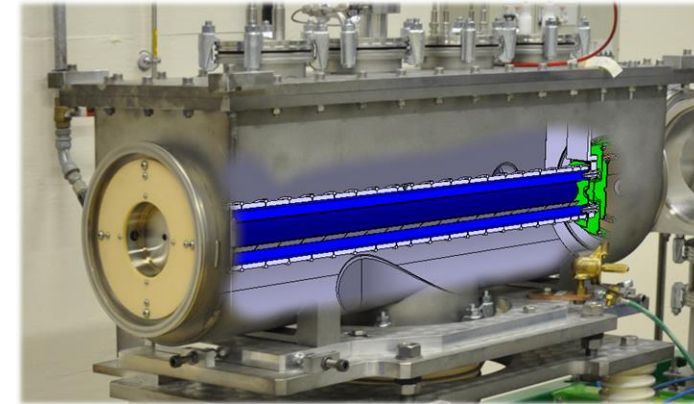
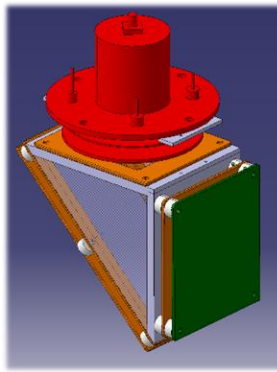
- Antwerp, Belgium
- 26 years old
- Studied nuclear physics (KU Leuven)
- Fellow at CERN (EN-STI-BMI) working on FLUKA simulations for (HL-)LHC collimators
- Space environment R&D at ESA (NL)
- Running, cycling, swimming, tennis, football, skiing, quizzing, painting/drawing, traveling, ...





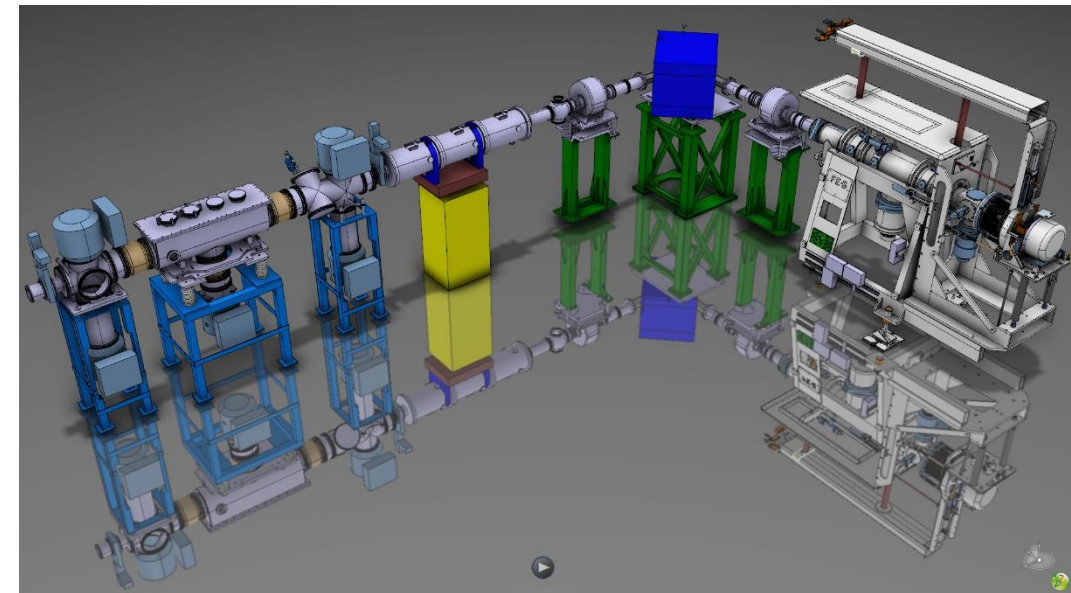
Stuart WARREN, 31, UK

- CERN senior fellow for the Isotope On line facility (ISOLDE)
- Current Projects:
 - Offline 2 – a new mass separator
 - Optics, design, construction, alignment, operation
 - Radio Frequency Quadrupole cooler bencher (RFQcb)
 - Construct, develop
 - Ion bunch Time Of Flight detector (TOF)



Out of work:

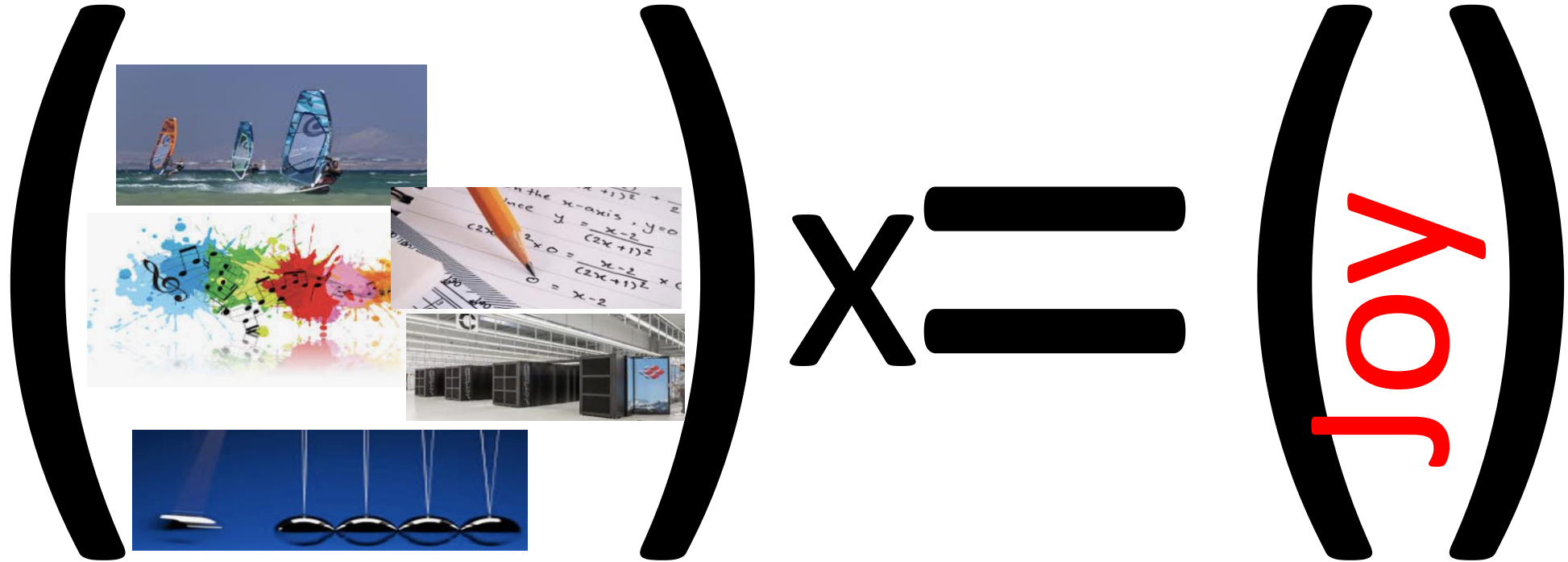
- Climber
- VTT
- Taekwondo
- 3D printer enthusiast
- General shenanigans



Lecturers

- Andreas Adelman
- Etienne Forest
- Yannis Papaphilippou
- Stephan Russenschuck
- Guido Sterbini

Solve for x ...



- Étienne Forest: born in 1959 in Montréal, Québec, Canada.
- Descendant of the first European settlers of Canada in the 1600s including at least one of the 800 virgins sent by Louis XIV in 1663.
- Graduated from McGill University and the University of Maryland after a French baccalaureate.
- Renounced Canadian citizenship, now Japanese citizen and living around Tokyo.
- I like my new homeland Japan, billiards, bunraku, sashimi, good food, good wine, good saké and fishing in Canada.
- I have an American daughter and an American son: they like Trump! (Not their fault, they are Americans!)

Professional stuff:

I consider that my most important contribution is what I will teach here: a hierarchical view of accelerator theory.

Last conference I attended in Europe, I jumped all dressed up in a swimming pool for a beer: I have nothing against a good lively discussion around the bar.

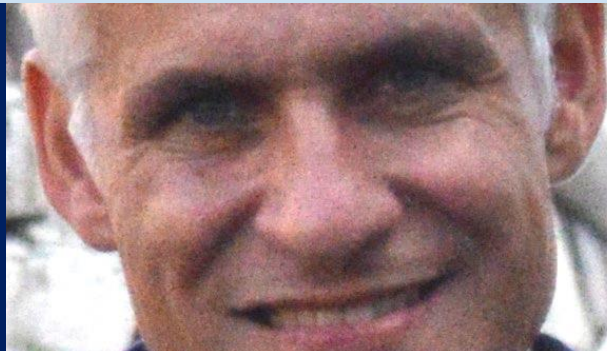
Then, Contact me!

Non-linearpapy@cernobil.com

And remember...

I may not solve your problem....

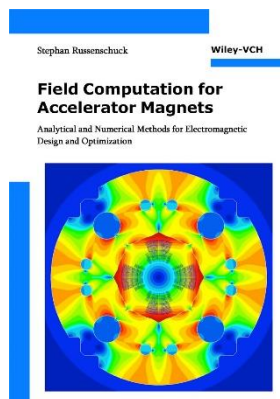
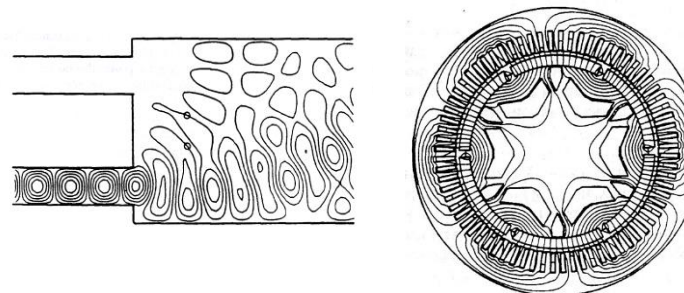
- specialised in the art of storing and colliding hyper-relativistic charges in the land of the Brave and Free (no, not Scotland)...



- superiority of vinyl over CDs (hash Hermann!)
- Chat about Soderbergh movie filmed entirely on an Iphone
- Vote for the best ever Nick

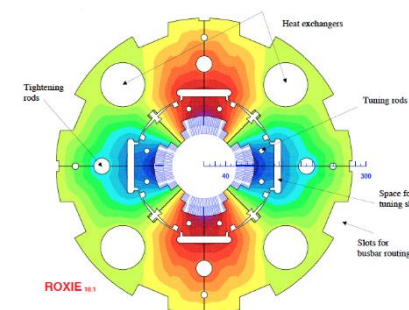
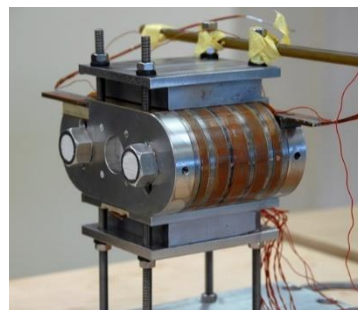
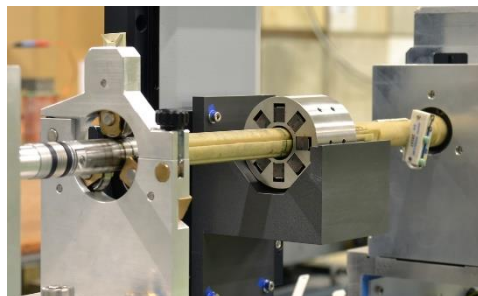
...but I can certainly analyse it!

- [1980-1986] Studies in Electrical Engineering, Technical University Darmstadt (TUD), Germany. [1986-1991] Research Associate at the Institute for Electrical Energy Conversion, “Dr.-Ing” degree.
- [1999] University Lecturer (“Habilitation”) on Theory of Electromagnetic Fields, Vienna University of Technology, Austria



- [1991-1993] CERN Fellow, [1994] Staff
- [1996-2002] Leader for field computation activity. **Creator of the CERN field computation Program ROXIE**
- [2002-2008] Section Leader, LHC-ICP-MF/AT-MEL-EM
- [2004-2009] LHC Magnet Polarity Coordinator

- [2009-2011] Project leader for a insertion quadrupoles for the “next inner triplet” and for development and prototyping of a superconducting wiggler for the CLIC damping rings



- [Since 2010] Chairman, Technical and Doctoral Student Committee (TSC)
- [Since 2011] Section leader magnetic measurements
- For my artistic side, check out my photo website and blog: <http://srussenschuck.com>

Guido



BEAM-BEAM COMPENSATION



LEP TONIC PHOENIX



ANTENNAS



wept



MAGNETS



THE "OLD LADY"



C. BECHSTEIN



SERGIO LEONE



Chopin

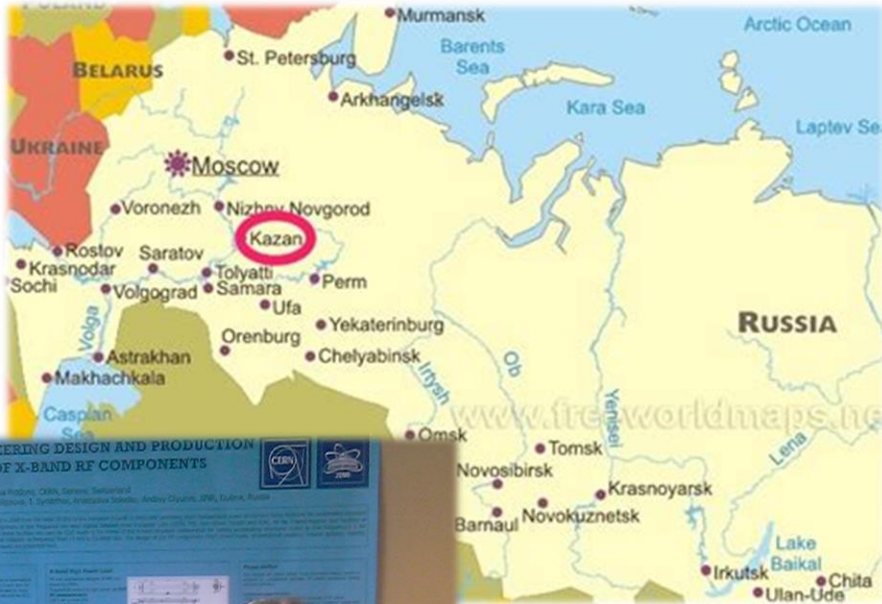


CAS Team

- Maria Filippova
- Delphine Rivoiron
- Werner Herr
- Hermann Schmickler



Maria Filippova – CAS administrative assistant



At CERN since 2008

- 2008-2015 (JINR-Dubna (RU)): quality assurance assistant at CLIC project - document database management, procurement and quality assurance of RF components (writing of technical specifications, contract follow-up, purchasing, shipping, quality control from zero up to installation)

- Oct 2018 – present (Dubna State University (RU)): administrative assistant of 50% CAS and 50% Project Office

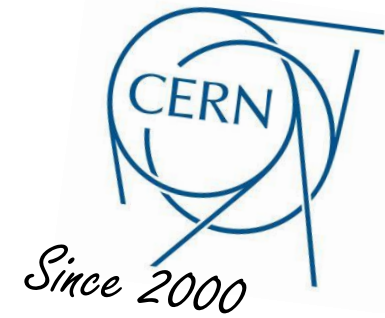


Interests:

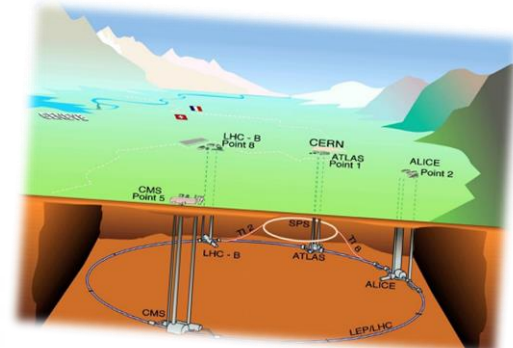
- Fitness, ski
- Embroidery
- Fishing



*Dolfin Delphine
RIVOIRON*



The CERN Accelerator School



FRIENDLY
PHONE CALLS
LETTERS
CALENDAR

Administrative TASKS
Assistant ✓ RELIABLE
✓ PROFESSIONAL

ASSIST
EMAILS
REPORTS
TYPE
TRAVEL ARRANGEMENTS



String 2 (LHC)

Werner Herr

Studied Physics at University Heidelberg, PhD in particle physics

Arrived at CERN 1978

Since 1986 Accelerator physics (SPS,LEP,LHC)

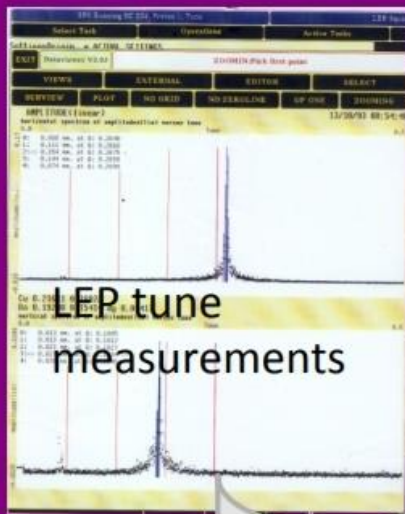
Teaching at CAS since 2001

Deputy head of CAS since 2011

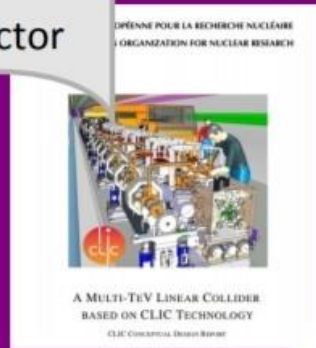
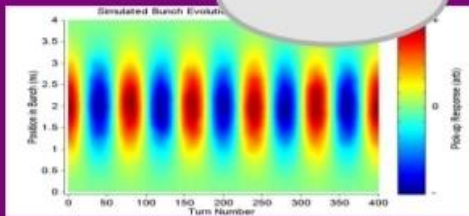
- Main activities:
 - x Non-Linear Dynamics
 - x Multi-particle effects
 - x Beam-Beam effects
 - x Sports and outdoor →
(Badminton, Yoga, ...)



All is in the delicate balance of life



Hermann Schickler
60+ years old
Former head of CERN
beam instrumentation
and controls
CLIC technical director



Chromaticity
Measurement using
head-tail motion

CLIC-CDR

Live Sound

HiFi

Since January 2018 director of CAS