

Origins and history of JUAS

Louis Rinolfi

27th November 2024



1989 - 1993

Origins of JUAS

14th April 1989

INSTRUMENTATION ET MESURES

UNIVERSITE JOSEPH FOURIER
GRENOBLE 1

INSTITUT NATIONAL
POLYTECHNIQUE - GRENOBLE

Destinataires : C. BAGLIN, J.L. BELMONT
D. BRANDT, B. GROSSETETE,
J.L. LACLARE, M. MARTINI,
J.P. POTIER, L. RINOLFI

N/Réf. FM/mb 166 Grenoble, le 14 Avril 1989

Cher Collègue,

Je vous confirme que la prochaine réunion de préparation de l'option "accélérateurs" au DEA Instrumentation et Mesures de l'Université Joseph Fourier de Grenoble, aura lieu le :

Judi 27 Avril à 15 H à l'ISN de Grenoble
(1 er étage, dans la petite salle du Conseil)

En comptant sur votre présence et celle de vos collègues intéressés par ce projet, je vous prie de bien vouloir agréer, cher collègue, l'expression de mes sentiments les meilleurs.

F. MERCHEZ
Professeur Responsable du D.E.A.
Instrumentation et Mesures

P.S. : Ci-joint le compte rendu de la réunion précédente et une ébauche du projet

Responsables D.E.A. - Tél. 76 28 40 86 - Secrétariat D.E.A. Tél. 76 28 40 19

I.S.N. - 53, Avenue des Martyrs - 38026 GRENOBLE CEDEX - Tél. 76 28 40 00
Télex 320 301 F - Télécopie 76 28 40 04 - Bitnet FRCPN11

CERN and ESRF accelerator physicists were invited by Prof. Fernand Merchez of the University Joseph Fourier, in Grenoble, to prepare a future course on "Physics of Particle Accelerators"



Objective:
DEA (Diplôme d'Etudes Approfondies)
"Instrumentation et Mesures"

5th - 30th March 1990

COURS : " LA PHYSIQUE DES ACCELERATEURS "

MARDI 6	M	OPTIQUE LINEAIRE	J.POTIER
	AM	ACCELERATION RF	L.RINOLFI
MERCREDI 7	M	LIBRE	
	AM		
JEUDI 8	M	OPTIQUE LINEAIRE	J.P.POTIER
	AM	INSERTIONS	A.ROPERT
M. ABS	IBA *		
S. CLAUDET	DEA		
E. CONARD	IBA *		
M.DE CONTO	ISN	DEFAUTS DIPOLAIRES	A.ROPERT
C.DAVID	ESRF	ET ORBITES FERMEES	M.MARTINI
A.GÖTZ	ESRF	PHEN NON LIN RES.	M.MARTINI
L.HARDY	IBA *	PHEN NON LIN RES.	
J.IVAN	REZ	IMP CHAMP SILLAGE	D.BRANDT
J.JACOB	ESRF	ACCELERATION RF	L.RINOLFI
M.LADEUZE	IBA *	ACCELERATION RF	L.RINOLFI
S.LAYCOCK	IBA *	SEMINAIRE	E.J.N.WILSON
M.MUNOZ	ESRF	RAYON SYNCHROT	L.RINOLFI
E.PARAF	DEA	PHEN NON LIN RES.	M.MARTINI
J.L.REVOL	ESRF		
M.RICHARD	DEA	DUREE DE VIE FAISC.	L.FARVACQUE
J.M.VEUILLEN	ESRF	RAYON SYNCHROT	L.RINOLFI

* : jusqu'au 15 mars

Enseignants:

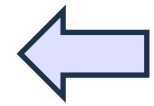
CERN:

D. Brandt
M. Martini
J.P. Potier
L. Rinolfi

ESRF:

P. Elleaume
L. Farvacque
J.L. Laclare
A. Ropert

A first course for this diploma on Physics of Particle Accelerators took place at Grenoble university



List of 16 students who attended the course

PROGRAMME

La formation commencera par un bref historique et une introduction élémentaire sur les différents types d'accélérateurs. Les cours proprement dits, couvriront les domaines suivants :

Espace de phase transverse (25 H)

Optique linéaire : Jean Pierre POTIER (CERN) . Insertions : Annick ROPERT (ESRF) . Injection, extraction: Jean Pierre POTIER (CERN) . Phénomènes de résonances : Michel MARTINI (CERN) . Introduction à l'optique non linéaire : Michel MARTINI (CERN)

Rayonnement synchrotron (15 H)

Généralités sur le rayonnement synchrotron : Louis RINOLFI (CERN) . Utilisation de la lumière synchrotron : Pascal ELLEAUME (ESRF)

Espace de phase longitudinal (20 H)

Accélération RF : Louis RINOLFI (CERN) . Amortissement des oscillations : Louis RINOLFI (CERN) et Daniel BRANDT (CERN)

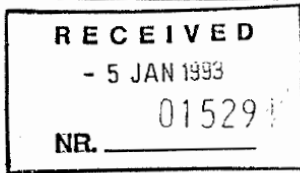
Effets collectifs (25 H)

Impédances, champ de sillage : Daniel Brandt (CERN) . Temps de vie des faisceaux : Laurent FARVACQUE (ESRF) et Jean Louis LACLARE (ESRF) . Instabilités transverses : Daniel BRANDT (CERN) . Refroidissement des faisceaux : Louis RINOLFI (CERN).

Des séminaires et conférences seront donnés, présentant : . La limitation des performances des machines actuelles . Les nouvelles sources de particules . Les nouvelles techniques d'accélération . Quelques projets actuels. Une visite des installations du CERN sera organisée au cours de cette session.

4

18th December 1992



Grenoble. le 18 12 1992

Professor C. RUBBIA
Director
CERN
1211 GENEVE 23
SUISSE

LE PRESIDENT

N Réf. : J.P. LONGEQUEUE

Objet :

Dear Professor Rubbia,

Four universities from France and Germany⁽¹⁾ are considering the possibility of organizing joint courses in Archamps where a university center is presently taking place and two other universities from Italy and Switzerland⁽²⁾ are discussing the possibility of joining them. The main reason of our interest in such an implantation is related to the presence at CERN, at a few kilometers, of physicists and engineers at the highest level in technical fields such as data handling, acceleration of particles with a large number of techniques, supra conductivity...

Our idea would be to give to our students, during the last year of their studies, a formation in one or two domains : techniques of acceleration (including vacuum, supra conducting cavities, beam handling...); high rate acquisition and transmission of data. The courses would last 2 months. Thereafter students would leave Archamps to prepare a project or to have only a period of instruction, either at CERN or in a company related to the high technology researches developed at CERN.

I would like to ask you, in the name of the four universities, if CERN could support such an operation. By support I mean that you would authorize or ask engineers or physicists to give at Archamps between 150 and 200 hours of lectures in each of the 2 fields mentioned above during 2 months (January and february) and that you would accept to receive, during these 2 months, visits of the students in some of your laboratories where they could have a practical view of what they are learning, and finally to welcome some of them for projects or periods of instruction for a length of time going from 4 to 6 months.

There are, at CERN, top level specialists in technical fields and we think important that they communicate their knowledges to students who will be able to use them afterwards. We propose the techniques of acceleration because they are useful, for example, to run small accelerators in hospitals or for sterilization or for various industrial applications of irradiations and to run higher energy accelerators to get synchrotron radiations. In the same way we think that the experience of CERN in handling a tremendous amount of data can be useful in other fields and so we would like to give to our students a formation in these fields. We could also think of other domains, but it seems reasonable to begin with only these two, with groups of about 15 students in each one. Our aim is not to get specialists, but to give to future engineers or physicists, a basic knowledge in fields where our universities or schools dont teach very much.

Please let me know if you want more details on this project. If you could agree with our request, I suggest that the representatives of our universities meet you or your collaborators.

With my best regards

M. Renaud
Président de l'INPG



Letter sent by Prof. Maurice Renaud, President INPG to Carlo Rubbia, CERN DG

Four universities from France and Germany⁽¹⁾ are considering the possibility of organizing joint courses in Archamps where a university center is presently taking place

Courtesy Danièle Lajust

(1) List of the 4 universities :

Institut National Polytechnique de Grenoble, 46 Avenue Felix Viallet, Grenoble.
Technische Hochschule Darmstadt, Hochschulstr. 12, 6100 Darmstadt.
Universität Karlsruhe, Postfach 6980, D-7500 Karlsruhe.
Université Joseph Fourier, BP 53 X, 38041 Grenoble Cedex.



4th February 1993

DIRECTOR - GENERAL



CERN
CH-1211 GENEVA 23
SWITZERLAND

Telephone : GENEVA (022) 767 23 00
Telex : 419000 CER CH
Telegram : CERNLAB-GENEVE
Fax : (022) 767 75 55

Professor
M. Renaud
Président
I.N.P.G.
46 avenue Félix-Viallet
F - 38031 GRENOBLE Cédex

Your reference:
Our reference: DG/CR/fr/15294/8093

Geneva, February 4, 1993

Dear President,

Thank you very much for your letter dated 18 December 1992. Your initiative to pool several High Schools and to organise advanced courses in the vicinity of CERN appeals very much to me.

You may know that CERN supports a very small section running the so-called CERN Accelerator School, which organises courses of various levels at varying places around Europe (and sometimes even beyond), which are addressed to post-graduate staff from laboratories and have no connection with the academic system. There is a very substantial demand for these courses from many countries. While we cannot spend much effort on this activity, this means that a number of accelerator scientists in CERN and some other laboratories have some teaching experience, and that syllabi and some prepared courses do exist which could be used for the purpose you are proposing.

Similarly, some of our research staff are giving lectures on high-rate data acquisition and transmission at the CERN Computing School and at summer schools, so there might be some material which could be put to use.

I would therefore welcome a first round of discussions in order to better define the details of our participation and to prepare a document which I would then submit to our Scientific Policy Committee. I propose that you take contact with P. Darriulat or G. Plass to this effect.

Yours sincerely,

Carlo Rubbia

bcc. Directorate P. Darriulat

Answer sent by Carlo Rubbia, CERN DG to Prof. Maurice Renaud, President INPG

Your initiative to organise advanced courses in the vicinity of CERN appeals very much to me.

I would therefore welcome a first round of discussions which I would then submit to our Scientific Policy Committee.

Between 1990 and 1993, courses on Particle Accelerators, for the DEA, continue at Joseph Fourier university.



DIRECTOR - GENERAL

CERN
CH-1211 GENEVA 23
SWITZERLAND

Telephone : GENEVA (022) 767 23 00
Telex : 419000 CER CH
Telegram : CERNLAB-GENEVE
Fax : (022) 767 75 55

Professor
P. Holmes,
Department of Civil Engineering
Imperial College
Imperial College Road
London SW7 2BU
Angleterre

Your reference:
Our reference: DG/CR/?/?/?

Geneva, September 30, 1993

Dear Professor Holmes,

Your letter dated 20 September 1993 on the Archamps Project 1994 was handed to me by P. Darriulat and G. Plass. I was pleased to see that the organization of the Joint Universities Accelerator School at Archamps by several universities, members of the Cluster Network, had progressed to your satisfaction and to ours.

I see therefore no objection to your informing the universities in time for the School to take place between January and March 15, 1994. As you probably are aware, there are still a few points of detail which remain to be solved but I am confident that M. Rey-Campagnolle on your side and P. Darriulat and G. Plass on ours will take care of them.

I should, however, like to consider the 1994 School as an experiment and to have its success assessed by both of us before extending my agreement to the Project beyond 1994.

I am very pleased that CERN can help in an initiative which has my full sympathy and I am looking forward to the success of the 1994 School.

Yours sincerely,

Carlo Rubbia

c.c. P. Darriulat
G. Plass
M. Renaud

30th September 1993

**Letter sent by Carlo Rubbia, CERN DG
to the Secretary-General of CLUSTER
Prof. Patrick Holmes, Imperial College, London**

I was pleased to see that the organization of JUAS at Archamps by several universities, members of the Cluster Network, had progressed to your satisfaction and ours.

... I am confident that M. Rey-Campagnolle on your side and P. Darriulat and G. Plass on ours will take care....

I see therefore no objection informing the universities in time for the School to take place between January and March 15, 1994.

1994 JUAS was born

The first Joint Universities Accelerator School took place at Archamps from January 24 to March 25, 1994. It was attended by 22 students and included 116 lectures



List of 22 JUAS students

- 1- Isabel CAMPOS
- 2- Francisco CALVINO
- 3- Xavier QUERALT
- 4- Montserrat PONT
- 5- Frédéric ATTALE
- 6- Emmanuel NOLOT
- 7- Josep CAMPMANY
- 8- Thomas HAMPEL

- 9- Ana Maria LABRADOR
- 10- Patrick KNAUS
- 11- Francese PEREZ
- 12- Maria Jose VICENTE
- 13- Philippe CARESMEL
- 14- Joel PARA
- 15- Alessandro COSA
- 16- Sergio IANAZZO

- 17- Miguel TRAVERIA
- 18- Steffen DÓBERT
- 19- Robin FERDINAND
- 20- Marc MUNOZ
- 21- Bertrand RANNOU
- 22- Cécile LIMBORG

*Courtesy Marcelle
Rey-Campagnolle*

SPC document after the first JUAS school 1994

CERN/SPC/686
Original : English
3 May 1994

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

SCIENTIFIC POLICY COMMITTEE
Hundred-and-eighty-second Meeting
Geneva - 20 and 21 June 1994

PARTICIPATION OF CERN IN THE LECTURE PROGRAMMES OF EXTERNAL SCHOOLS (JUAS AND ESI)

The Management seeks the views and advice of the Scientific Policy Committee on the attitude which CERN should take towards its participation in the lecture programme of the Joint Universities Accelerator School (JUAS) at Archamps and its possible extension to a future European Scientific Institute (ESI).

... ↓ *paragraphs inside the SPC document*

3. In 1993, following a positive response of the Director-General to the principle of the initiative, contacts were established between representatives of the four universities and representatives of CERN.
4. A scheme which could satisfy both the wishes of the initiators of the project and the conditions set by CERN was rapidly worked out. The CLUSTER* network agreed to cover the project which was given the name of Joint Universities Accelerator School.

5. The Joint Universities Accelerator School has been considered extremely successful by both the students and the lecturers.

(*) The current members of the CLUSTER network are:

Technische Hochschule DARMSTADT
Trinity College DUBLIN
University of Technology EINDHOVEN
Institut Polytechnique de GRENOBLE
Universität (TH) KARLSRUHE
Ecole Polytechnique Fédérale de LAUSANNE
Imperial College LONDON
Université Catholique de LOUVAIN
Royal Institute of Technology STOCKHOLM
Politecnico di TORINO

Université Joseph Fourier de GRENOBLE is also supporting JUAS

1994 - 2024

History of JUAS

The European Scientific Institute is 20 km South of CERN



E. Métral

ESI was founded at Archamps under the auspices of a group of European physicists under the acronym GREISE (Groupe de Recherche et d'Etude pour un Institut Scientifique Européen) (see CERN/SPC/686)

1994 - 1999 : Denis Linglin
CNRS



ESI organizes “administratively” the JUAS and many other schools on the Archamps campus

1999 - 2002 : Giorgio Brianti / CERN



ESI Presidents

2002 - 2012: Manfred Buhler-Broglin / CERN



2012 - 2020: Hans Hoffmann / CERN



2020 - 2021: Philippe Sabatier / UGA



*Presentation
Bob Holland*

2021 - 2022: Philippe Lebrun / CERN



2022 - current: Jean-Michel Thénard / CNRS



JUAS Directors

1994 – 2000 : Marcelle
Rey-Campagnolle



2001 – 2005 : Joël Le Duff



2006 – 2010 : François Méot



2011 – 2016: Louis Rinolfi



2017 – 2020: Philippe Lebrun



2021 – 2021: John Jowett



2022 – current: Elias Métral



ESI administrative support over the 30 years



Marcelle



Valérie



Bob



Séverine



Heidi



Jean



Tamara



Filiz



Sébastien



Marie



Coline



Marjorie



Stéphanie



Lise



Mélanie



Darina



Florence



Grace



Laly

France



JUAS past and present partner universities

Germany



Italy



Norway

UiO : Universitetet i Oslo



Netherlands



Spain



UNIVERSITAT DE VALÈNCIA



United Kingdom



Erasmus Mundus



Presentation
Joachim Enders

JUAS past and present collaborating institutions and sponsors

Joint Universities Accelerator School

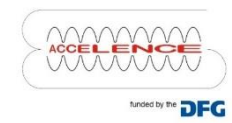
France



Switzerland



Germany



UK



Spain



Italy



Sweden



Belgium



*Presentations
Pierre Védrine
and François de Viry*



La Région
Auvergne-Rhône-Alpes

Three JUAS Anniversaries

2004: 10th Anniversary in Archamps

2014: 20th Anniversary in Grenoble

2024: 30th Anniversary at CERN

Archamps 2004: ESI /JUAS 10 years anniversary

INSTITUT SCIENTIFIQUE EUROPEEN Dixième anniversaire

Le bilan après une première décennie

L'institut, installé à Archamps, a soufflé ses dix bougies en présence de Georges Charpak.

Georges Charpak, le prix Nobel de physique 1992, qui soutient depuis sa création, le pôle d'enseignement de haute technologie, était naturellement présent à cet anniversaire pour affirmer encore « l'utilité de dispenser en un seul lieu des enseignements très spécialisés. »

Utilité non démentie puisque depuis l'existence de l'école et la création de ses deux subdivisions, le Joint universities accelerator school (JUAS) spécialisé dans les accélérateurs et l'European school of medical physics (ESMP), un grand nombre d'étudiants européens et du reste du



Georges Charpak, prix Nobel physique 1992, a appuyé depuis le départ le jeune institut d'Archamps.

monde, sont passés par les formations qu'elles dispensent. Ce qui a très largement contribué à en accroître la notoriété...

Freddy Buhler-Broglin, le président de l'ESI soulignait : « Cet institut a été lancé pour fournir un enseignement de haut niveau à des physiciens grâce à

deux écoles aux formations complémentaires. Et c'est un succès pour les deux qui sont transfrontalières, une partie de leur activité étant exercée au CERN, à l'hôpital et à l'Université de Genève. »

Georges Charpak, qui lui s'est formé "sur le tas", a profité de l'occasion pour souligner combien il est aussi important, au-delà de la théorie, « d'essayer de comprendre par soi-même le fonctionnement des choses, tâtonner, apprendre et penser avec ses mains. » Une méthode d'acquisition par l'expérimentation qu'il développe auprès des jeunes enfants et à laquelle il confie « consacrer l'essentiel de son temps. »

M.U.

*L'ESSOR
SAVOYARD /
LE MESSENGER
Revue de Presse du
jeudi 28 avril 2004*

Grenoble 2014: JUAS 20 years anniversary



JUAS - 20th ANNIVERSARY - FRIDAY 25 APRIL 2014 - LPSC - GRENOBLE - FRANCE



Brochure published for the 20 years anniversary

(8 pages)

CERN 2024: JUAS 30 years anniversary



A JUAS book published
(> 2000 pages)
(including lectures, exercises, solutions and history)

See Elias Métral presentation

One (subjective) slide per director to illustrate the JUAS school

Slides are extracted from the texts written by the directors in the book

La prochaine génération d'ingénieurs et physiciens «accélérateurs»

Comme chaque année depuis 1994, les étudiants de la Joint Universities Accelerator School (JUAS) viennent visiter le CERN et plus particulièrement les accélérateurs profitant ainsi de leur arrêt hivernal. Ils ont la chance d'avoir pour guides des experts dans chacun des secteurs visités (complexe PS, instrumentation de faisceau, cryogénie, cavités RF et aimants supraconducteurs). Des spécialistes du CERN participent également à l'enseignement contribuant ainsi directement à la formation des futurs ingénieurs et physiciens appelés un jour à les remplacer et plus généralement à l'initiation des étudiants aux technologies de pointe développées au Laboratoire.

Complémentaire de l'École d'Accélérateurs du CERN (CAS), «JUAS» est maintenant un programme intensif d'enseignement supérieur de 3^{ème} cycle dans le cadre des programmes SOCRATES de la Commission Européenne. C'est un programme qu'une seule université ne peut offrir et qui est le fruit d'une collaboration entre neuf grandes universités en Europe, l'Institut Scientifique Européen et le CERN avec la participation des divisions «accélérateurs» de l'ESRF à Grenoble et de l'Institut Paul Scherrer à Villigen, ainsi que de celle du département nucléaire de l'hôpital universitaire de Genève.

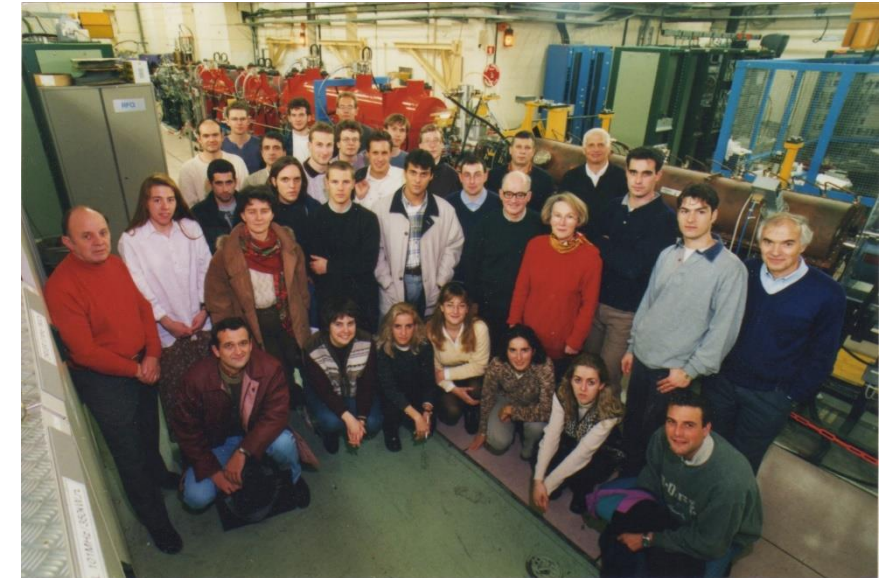
En effet la proximité de ces quatre grands établissements permet de présenter l'état de l'art de ce vaste domaine qu'est celui des accélérateurs tant du point de vue de ses machines de base (RFQ, linac, synchrotron, accélérateur électrostatique, cyclotron, etc.) que de leurs modes d'utilisation (injecteur, accélérateur, collisionneur, anneau d'accumulation, etc.) de leurs applications (source de lumière synchrotron, sources de neutrons de spallation, production

Next generation of accelerator engineers and physicists

As they have been doing each year since 1994, the students of the Joint Universities Accelerator School (JUAS) are making the most of the winter shut-down to visit CERN installations and in particular the accelerators. They are lucky to have as their guides experts in each of the sectors visited (PS complex, beam instrumentation, cryogenics, RF cavities and super-conducting magnets). Specialists from CERN likewise teach at JUAS, thereby contributing directly to the training of the next generation of CERN's engineers and physicists as well more generally exposing the students to the cutting edge technologies being developed at the Laboratory.

Complementary to CAS (CERN Accelerator School), JUAS now enjoys the status of an Intensive Programme of higher education within the framework of the Socrates programmes of the European Commission. JUAS is a programme which no single university could set up on its own and indeed results from the active collaboration of 9 major European Universities, the European Scientific Institute and CERN with the participation of the "accelerator" divisions of ESRF in Grenoble and the Paul Scherrer Institute in Villigen, as well as the department of nuclear medicine at the University Hospital of Geneva.

The close proximity of these four establishments enables JUAS to offer its students an insight into the complete spectrum of what has today become a vast field, from the basic machines (RFQs, linacs, synchrotrons, electrostatic accelerators, cyclotrons ...) to their uses (as injectors, accelerators, colliders, storage rings ...), from their applications (synchrotron light sources, neutron spallation



Inside the Linac 2 at CERN

Complementary to CAS (CERN Accelerator School), JUAS now enjoys the status of an Intensive Programme of higher education within the framework of the Socrates programme of the European Commission.

JUAS is a programme which no single university could set up on its own



BAD STORY

At the beginning of the school, we told students who wanted to go to Geneva to walk to the closest border from Archamps and from there on, to take a Swiss bus to downtown Geneva. Unfortunately, four students from Eastern Europe decided to take a shortcut through some vineyards. At this moment, the custom officers arrived and they took them to the police station (they carried their passports and multiple-entry visas with them) where they were accused of illegal crossing of the border. Later, each four of them received and paid a fine of about 220 euros. This had never happened in the past and it means that we will have to be extremely careful with the next students.

Green transportation

**3 new partner universities
joined JUAS:
Berlin, Genoa, Valencia**

Courtesy Joël Le Duff

CAS

THE CERN ACCELERATOR SCHOOL

JUAS

THE JOINT UNIVERSITIES
ACCELERATOR SCHOOL

Directors: *Daniel Brandt*

François Méot

Nomenclature & Formulæ

This document has been produced by the Advisory and Programme Committee of the Joint Universities Accelerator School (JUAS), under the coordination of the School Director.

It has been agreed between the two Schools, CAS and JUAS, that it should serve as a guideline for the lectures presented both at the JUAS and CAS courses.

- September 2008 -

Introduce one practical day at CERN (4 activities)

Introduce a new practical magnet calculation at JUAS

Introduce one practical day in Bergoz company

Restart the visit at PSI

**1 new partner university joined JUAS:
Heidelberg**





A new web site created

A new computing infrastructure with CERN-IT Department

Organization of the 20th Anniversary in Grenoble

Introduction of a practical day in the control rooms

5 new partner universities joined JUAS:

Liverpool, Rostock, Oxford, Oslo, Paris-Sud-Orsay (today Paris-Saclay)

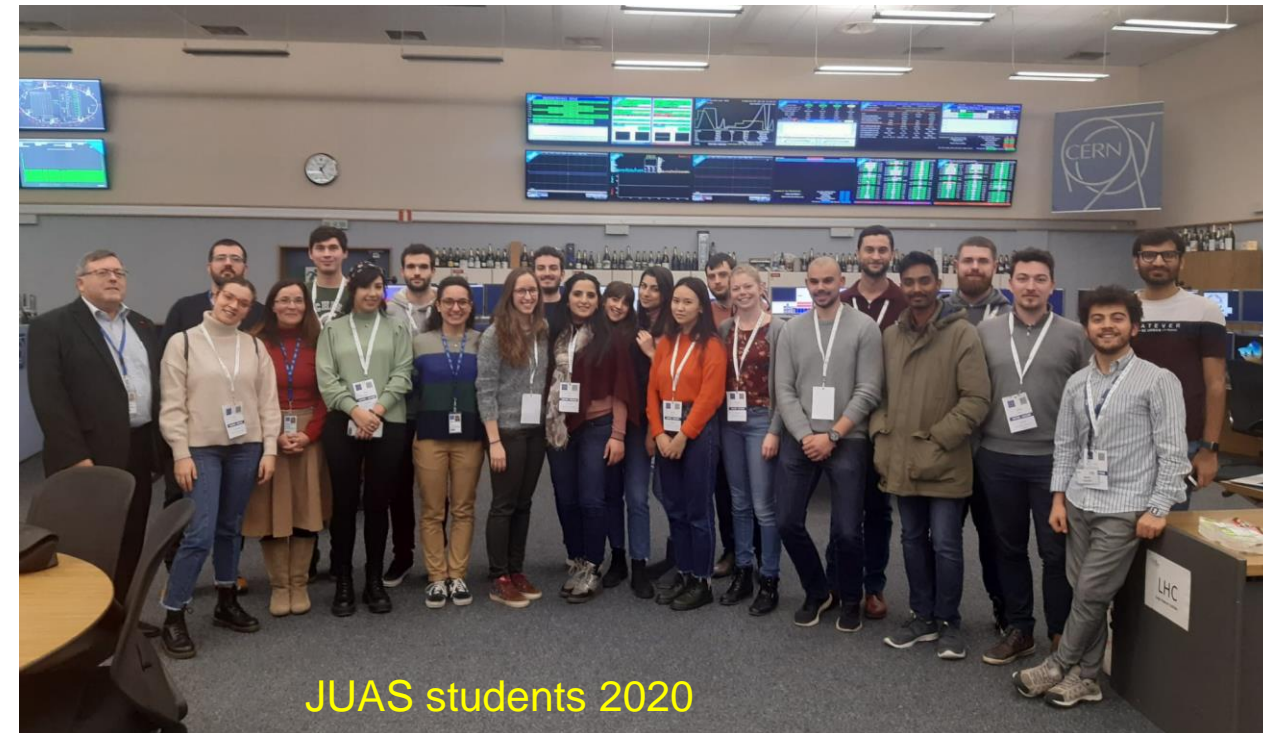
JUAS students “turning knobs and pushing buttons”
on real electron beam



A special, well-attended event, was organized in 2018 to celebrate the 25th session of JUAS.

The school was presented orally in several national and international events: CERN–US–Japan–Russia Accelerator School, FCC weeks, SFP and ECFA meetings.

JUAS and ESIPAP were the subject of letters submitted to the European Particle Physics Strategy Update in 2018, and to Snowmass exercise in the USA in 2020.



Your Faculty during these 5 intensive weeks



During the COVID pandemic there was no presence at Archamps and for the first time, the JUAS faculty, ESI support and all collaborators organised all lectures, practical work, visits and exams entirely **online**.

No compromise of academic standards.

Practical Days at CERN - Magnets





CERN Yellow Reports: School Proceedings

Proceedings of the Joint Universities Accelerator School (JUAS)

Courses and exercises

Editorial committee:

Elias Métral (Chair), Frédérick Bordry, Marco Bozzo, Phil Burrows, Joachim Enders, Angeles Faus-Golfe, Terry Garvey, Sophie Kazamias, Yuri Kubyshin, Philippe Lebrun, Joël Le Duff, François Méot, Luigi Palumbo, Marcelle Rey-Campagnolle, Louis Rinolfi, Vittorio Vaccaro[†], Ursula van Rienen, Jens Vigen, Carsten Welsch



[†] Deceased 11 February 2023

Special relativity and electromagnetic using MOOC videos

Reorganized schedule with a redistribution of the exams

Organizing a student's tutoring session at IPAC 23 conference

**1 new partner university joined JUAS:
University of Medical Center Groningen**



Courtesy Elias Métral 29

A brief JUAS overview

Our impact over three decades

1420 students trained: Building the future of accelerator science and technology.

250 professors, lecturers and assistants: Sharing expertise and inspiring new generations.

20 European partner universities: A network of academic excellence across the continent.

30+ collaborating institutes: Providing essential support and fostering innovation

Comprehensive training for real-world applications

Hand-on practical work at leading facilities: CERN, SOLEIL, ESRF, Bergoz and more

Regular site visits to pioneering institutions: CERN, ESRF, PSI, HUG, EPFL

Support for student participation at IPAC conferences through EPS-AG

Preserving knowledge and excellence

Recognition through ECTS credits at partner universities: Validating student achievements.

Publication of JUAS book: Over 2000 pages of lectures, exercises, solutions, and history.

Conclusion

Many exciting projects for particle accelerators are under study at CERN and around the world.

JUAS will continue to provide excellent training with a fruitful collaboration with partner universities, the financial contributions from collaborating institutes, the proactive support from CERN and the French local authorities and the remarkable support from ESI.

JUAS is a foundation built on collaboration, innovation, and education.
It looks to the future – ready to inspire the next 30 years.

Thank you for your attention