



JOINT UNIVERSITIES
ACCELERATOR SCHOOL

WELCOME TO JUAS 2014

Louis Rinolfi, Director

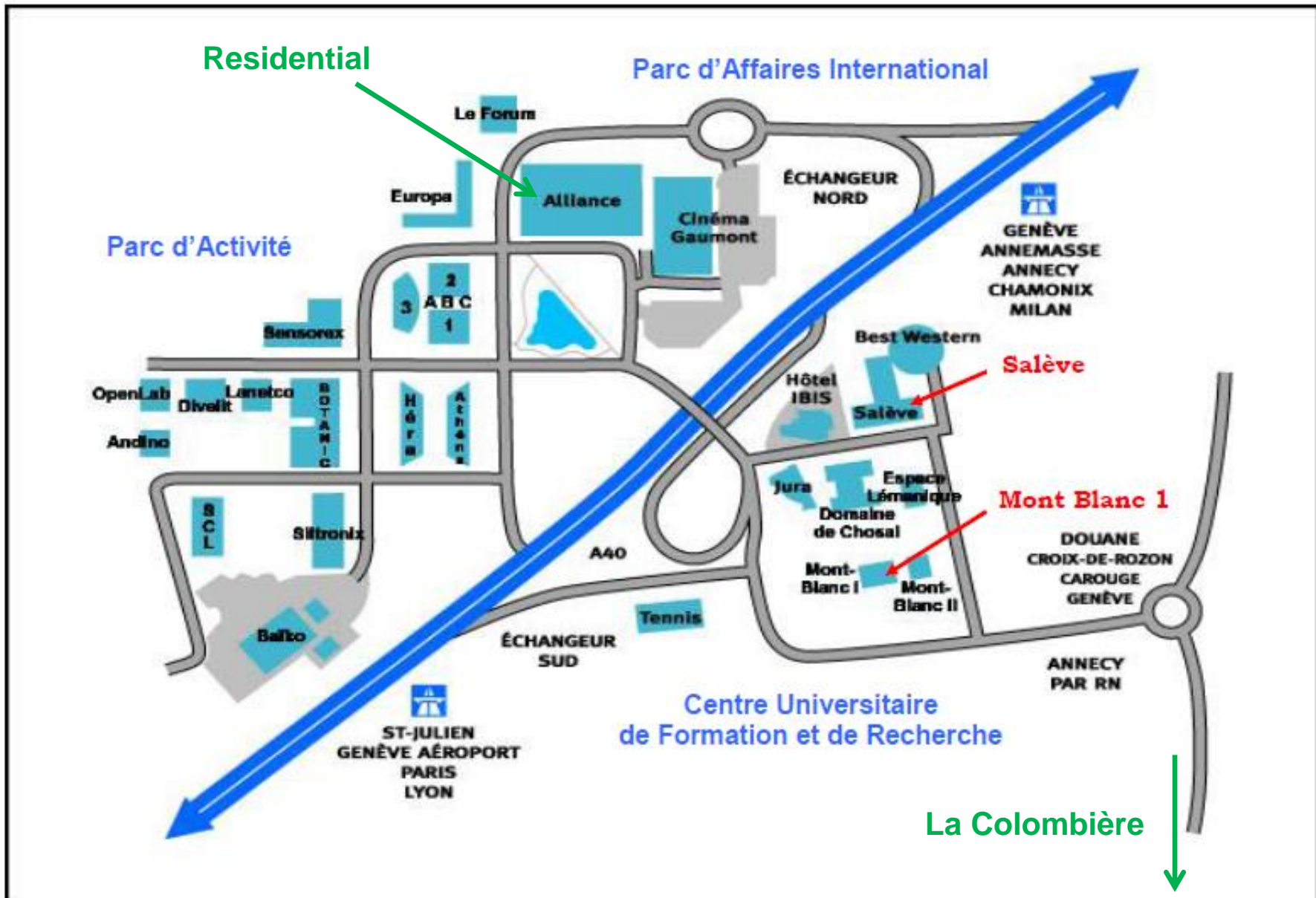
Monday 10th February 2014



The School is 17 km South of CERN



Map



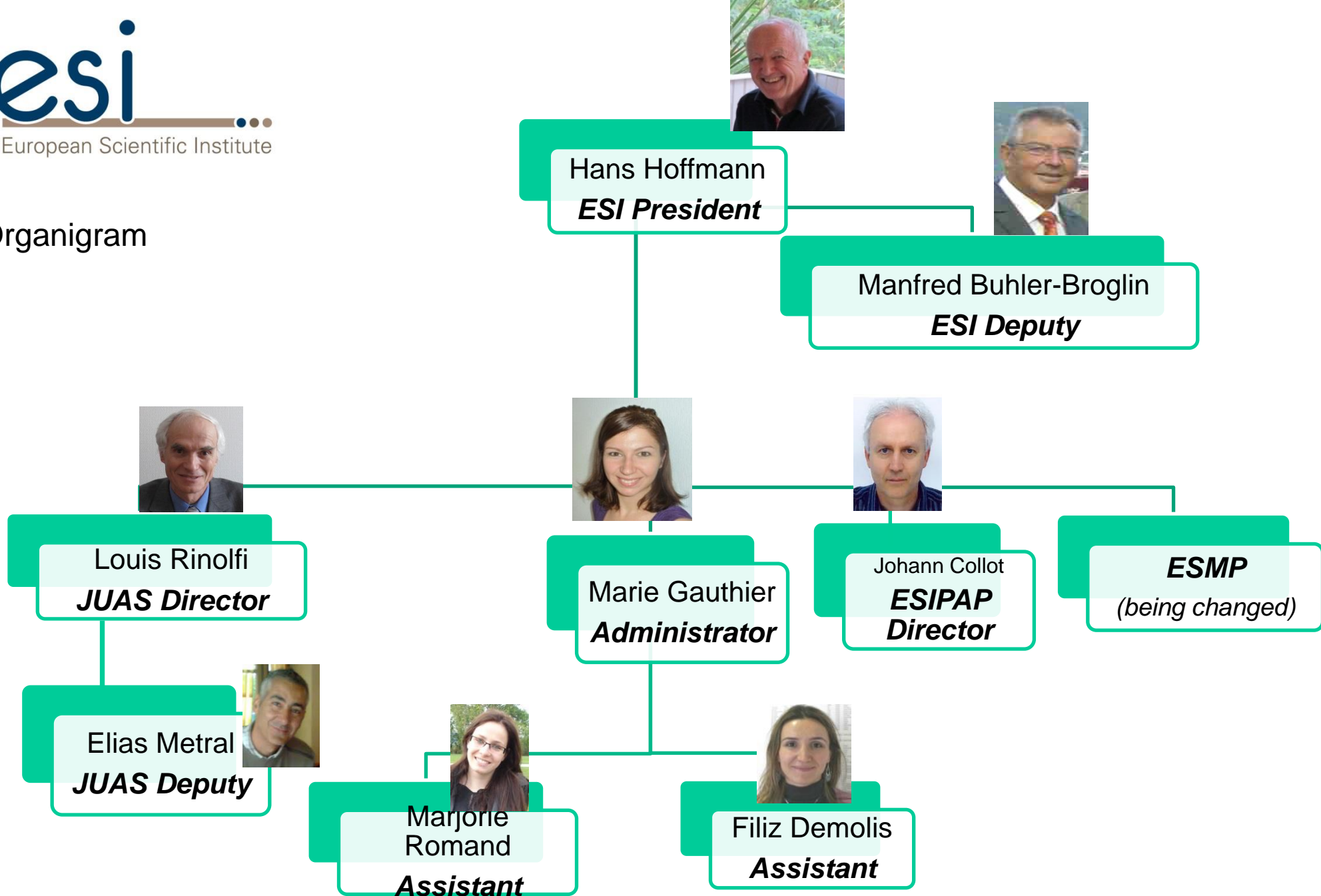
Bâtiment Mont Blanc 1
61 rue Antoine Redier
Archamps Technopole
F-74166 Saint-Julien-en-Genevois Cedex
Tél: +33 4 50 31 50 10



3 schools:

- 1) JUAS: Joint Universities Accelerator School
- 2) ESIPAP: European School of Instrumentation for Particle and Astroparticle Physics
- 3) ESMP: European School of Medical Physics

Organigram



JUAS Anniversary

JUAS was founded in 1994 simultaneously with ESI (European Scientific Institute) at Archamps – Haute-Savoie – France.

This year 2014, we will celebrate the 20 years anniversary of the school.

The event will take place on Friday 25th April 2014 at the University of Grenoble:
LPSC = Laboratoire de Physique Subatomique et de Cosmologie

All students JUAS 2014 are kindly invited to participate to this event

15 European Universities partners of JUAS in 2014

Universities	Members of Advisory Board	Since
Université Joseph Fourier Grenoble	Jean-Marie De Conto	1994
Technische Universität Darmstadt	Joachim Enders	1994
Karlsruher Institut für Technologie	Anke-Susanne Müller	1994
Universitat Politècnica de Catalunya	Antoni Mendez	1994
Universitat Autònoma de Barcelona	Youri Koubychine	1994
Institut Polytechnique de Grenoble	Elsa Merle-Lucotte	1994
Università degli studi di Napoli "Federico II"	Vittorio Vaccaro	1994
Università degli studi di Roma "La Sapienza"	Luigi Palumbo	1994
Università degli studi di Genova	Marco Bozzo	2002
Technische Universität Berlin	Heino Henke	2002
Universitat de Valencia	Angeles Faus-Golfe	2002
University of Liverpool	Carsten Welsch	2011
Université Paris-Sud Orsay	Costel Petrache	2012
University of Rostock	Ursula van Rienen	2013
University of Oxford	Andrei Seryi	2014

12 representatives from Institutes

Institutes	Members of Advisory Board
ESI President	Hans Hoffmann
ESI administrator	Marie Gauthier
JUAS Director	Louis Rinolfi
JUAS Deputy Director	Elias Métral
CAS Director (<i>CERN Accelerator School</i>)	Roger Bailey
CERN	Bernhard Holzer
Oxford University	Chris Prior
ESRF (<i>European Synchrotron Radiation Facility</i>)	Jean-Luc Revol
PSI (<i>Paul Scherrer Institute</i>)	Terry Garvey
GSI (<i>GSI Helmholtzzentrum für Schwerionenforschung</i>)	Peter Forck
DESY (<i>Deutsches Elektronen-Synchrotron</i>)	Winfried Decking
BNL (<i>Brookhaven National Laboratory</i>)	François Meot

Supporting and contributing

Main sponsor:



Names in alphabetic order (see next slide)

ALBA	ESS
Bergoz Instrumentation	GSI
CEA	HIC / FAIR
CERN	HZB
CNRS / IN2P3	INFN
CPAN	KIT
DESY	oPAC
ESGARD	PSI
ESRF	SOLEIL

Institutes, Laboratories and Industrials (alphabetic order)

ALBA - CELLS	Light source (Barcelona – Spain)
Bergoz Instrumentation	Private company for beam instrumentation (Saint-Genis-Pouilly – France)
CEA	Commissariat à l’Energie Atomique (Saclay - France)
CERN	Conseil Européen pour la Recherche Nucléaire (Genève - Suisse)
CNRS / IN2P3	Centre National de la Recherche Scientifique (Paris - France)
CPAN	Centro Nacional de Física de Partículas, Astropartículas y Nuclear (Valencia – Spain)
DESY	Deutsches Elektronen-Synchrotron (Hambourg - Germany)
ESGARD	European Steering Group on Accelerator R&D (Brussels - Belgium)
ESRF	European Synchrotron Radiation Facility (Grenoble - France)
ESS	European Spallation Source (Lund and Bilbao – Sweden and Spain)
GSI	GSI Helmholtzzentrum für Schwerionenforschung (Darmstadt - Germany)
HIC for FAIR	Helmholtz International Center [for Facility for Antiproton and Ion Research] (Darmstadt - Germany)
HZB	Helmholtz Zentrum Berlin (Berlin – Germany)
INFN	Istituto Nazionale per la Fisica Nucleare (Roma - Italy)
KIT	Karlsruhe Institute of Technology (Karlsruhe – Germany)
oPAC	Optimization of Particle Accelerator (Liverpool –United Kingdom)
PSI	Paul Scherrer Institute (Villigen - Switzerland)
SOLEIL	Light source (Saint Aubin - France)

Supporting institutes



Professors and assistants in 2014 – Course 2

Professors / Assistants	Lecture	Home
F. Caspers / S. Federmann	RF engineering including superconductivity	CERN
P. Chiggiato / R. Kersevan	Vacuum	CERN
Tommasini / Russenschuck	Magnets design	CERN
T. Zickler / J. Bauche	Normal conducting magnets	CERN
M. Wilson / P. Ferracin	Superconducting magnets	Oxford Instruments
P. Forck	Beam instrumentation	GSI - Darmstadt
T. Thuillier	Particle sources	J. Fourier university
E. Zimoch	Accelerator control	PSI - Villigen
W. Mondelears	Low energy electron accelerators	Gent university
W. Kleeven	Accelerators for industrial & medical appl.	IBA - Belgium
S. Bousson	High current proton linacs	IN2P3/IPNO - Orsay
R. Miralbell	Therapeutic applications	HUG - Geneva
S. Meyroneinc	Particle therapy and accelerators	Institut Curie - Paris
X. Queralt	Radiation safety	ALBA - Barcelona

Practical days in 2014 – Course 2

Professors / Assistants	Activities	Home
F. Caspers + assistants	RF engineering	CERN
P. Chiggiato + assistants	Vacuum	CERN
T. Zickler + assistants	Normal conducting magnets	CERN
A. Ballarino + assistants	Superconducting magnets	CERN
J. Bergoz + assistants	Construction of beam diagnostic devices	Saint-Genis-Pouilly
R. Miralbell + assistants	Visit & discussions at the hospital	HUG - Geneva

Seminars in 2014 – Course 2

Professors	Lecture	Home
R. Losito	Effects of radiation in particle accelerators	CERN

WEEK 6

	Monday Feb 10 th	Tuesday Feb 11 th	Wednesday Feb 12 th	Thursday Feb 13 th	Friday Feb 14 th		
09:00						09:00	
	Registration and coffee at Juas Office	Vacuum systems lecture <i>P. Chiggiato</i>	RF Engineering lecture <i>F. Caspers</i>	RF Engineering lecture <i>F. Caspers</i>	RF Engineering lecture <i>F. Caspers</i>		
10:00		Coffee Break	Coffee Break	Coffee Break	Vacuum systems tutorial <i>P. Chiggiato / R. Kersevan</i>	10:00	
10:15		Presentation of JUAS 2014 <i>L. Rinolfi</i>	Vacuum systems lecture <i>P. Chiggiato</i>	RF Engineering tutorial <i>F. Caspers / S. Federmann</i>		RF Engineering lecture <i>F. Caspers</i>	10:15
11:15	Introduction to CERN practical day <i>Magnet, Superconductivity</i>	Vacuum systems tutorial <i>P. Chiggiato / R. Kersevan</i>	RF Engineering lecture <i>F. Caspers</i>	RF Engineering tutorial <i>F. Caspers / S. Federmann</i>	Coffee Break	11:15	
12:15	WELCOME	LUNCH	LUNCH	LUNCH	<i>Bus leaves at 11h30 at JUAS</i> <i>(Lunch at CERN)</i>	12:15	
13:00	COCKTAIL	Exercises in computer room				VISIT AT CERN	13:00
14:00	Introduction to CERN practical day <i>RF, Vacuum</i>	Vacuum systems lecture <i>P. Chiggiato</i>	RF Engineering lecture <i>F. Caspers</i>	RF Engineering lecture <i>F. Caspers</i>			15:00
15:00	RF Engineering lecture <i>F. Caspers</i>	Vacuum systems lecture <i>P. Chiggiato</i>	RF Engineering tutorial <i>F. Caspers / S. Federmann</i>	RF Engineering tutorial <i>F. Caspers / S. Federmann</i>	16:00		
16:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	<i>Return scheduled at 18h30</i>	16:00	
16:15	RF Engineering lecture <i>F. Caspers</i>	Vacuum systems tutorial <i>P. Chiggiato / R. Kersevan</i>	Seminar Effects of radiation in particle accelerators <i>R. Losito</i>	RF Engineering lecture <i>F. Caspers</i>		16:15	
17:15						17:15	

Visit at CERN

Friday 14th January 2014



Programme:

- 12:00 Lunch at CERN
- 13:50 Meeting at the PS cafeteria and formation of the groups by Fritz Caspers
 - Visit CERN Linacs (2, 3, 4)
 - Visit AD
 - Visit RF material measurements and ferrite tuned cavity
- 17:30 Bus start for Archamps

WEEK 7

	Monday Feb 17 th	Tuesday Feb 18 th	Wednesday Feb 19 th	Thursday Feb 20 th	Friday Feb 21 st	
09:00						09:00
	Introduction to Magnets lecture <i>D. Tommasini</i>	Normal Conducting magnets lecture <i>T. Zickler</i>	Superconducting magnets lecture <i>M. Wilson</i>	Mini-workshop Normal conducting Magnets	<i>Bus leaves at 8h30 at JUAS</i> <i>(lunch at CERN)</i> PRACTICAL WORKS AT CERN 1) RF 2) VACUUM 3) MAGNETS 4) SUPERCONDUCTIVITY <i>Return scheduled at 18h30</i>	
10:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break		10:00
10:15	Electromagnetism lecture <i>S. Russenschuck</i>	Normal Conducting magnets lecture <i>T. Zickler</i>	Superconducting magnets lecture <i>M. Wilson</i>	<i>P. Ferracin S. Russenschuck D. Tommasini M. Wilson T. Zickler</i>		10:15
11:15	Electromagnetism lecture <i>S. Russenschuck</i>	Normal Conducting magnets lecture <i>T. Zickler</i>	Superconducting magnets tutorial <i>M. Wilson</i>			11:15
12:15	LUNCH	LUNCH	LUNCH	LUNCH		12:15
14:00	Normal Conducting magnets lecture <i>T. Zickler</i>	Superconducting magnets lecture <i>M. Wilson</i>	Superconducting magnets lecture <i>M. Wilson</i>	Mini-workshop Superconducting Magnets <i>P. Ferracin S. Russenschuck</i>		14:00
15:00	Normal Conducting magnets lecture <i>T. Zickler</i>	Superconducting magnets lecture <i>M. Wilson</i>	Normal Conducting magnets tutorial <i>T. Zickler</i>			15:00
16:00	Coffee Break	Coffee Break	Coffee Break			Coffee Break
16:15	Electromagnetism lecture <i>S. Russenschuck</i>	Superconducting magnets tutorial <i>M. Wilson</i>	Normal Conducting magnets tutorial <i>T. Zickler</i>	<i>D. Tommasini M. Wilson T. Zickler</i>		16:15
17:15	Numerical techniques lecture <i>S. Russenschuck</i>					
18:15						

Reports on the Magnets mini-workshop

The Magnet lecturers will ask you to write a small report related to mini-workshop day.

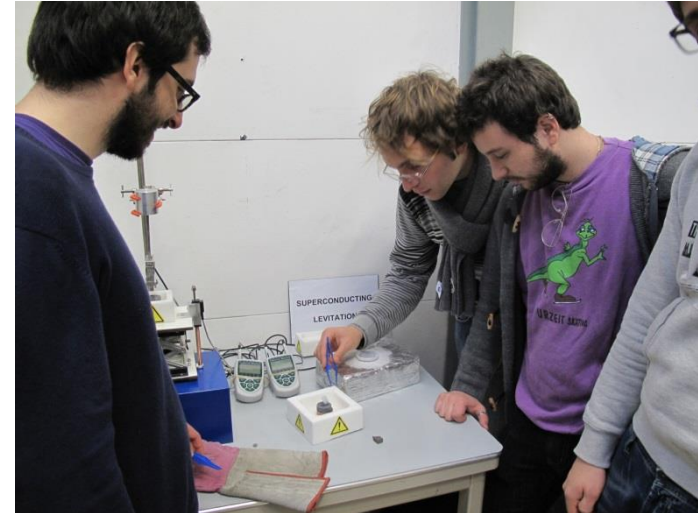
The marks obtained on the report, **will be added** to the marks of your Magnet examination results.

Practical day at CERN

Magnet measurements



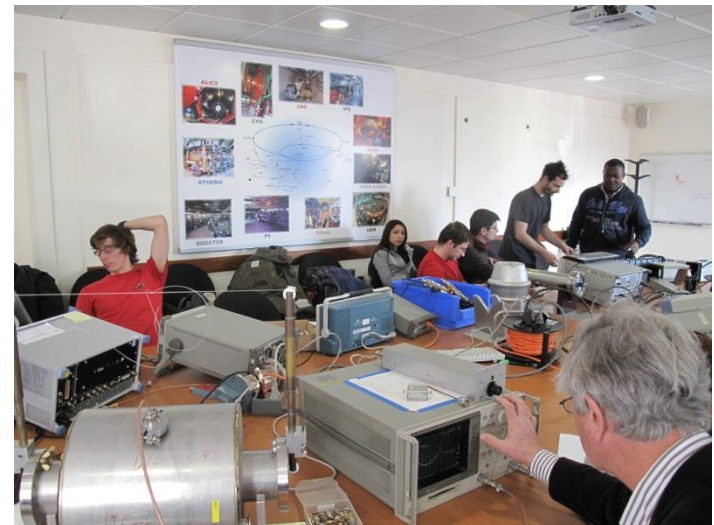
Superconductivity measurements



Vacuum measurements



RF measurements



WEEK 8

	Monday Feb 24 th	Tuesday Feb 25 th	Wednesday Feb 26 th	Thursday Feb 27 th	Friday Feb 28 th	
09:00	Beam instrumentation lecture <i>P. Forck</i>	Beam instrumentation lecture <i>P. Forck</i>	Beam instrumentation tutorial <i>P. Forck</i>	Bus leaves at 8h at JUAS <i>Travel to Villigen</i> <i>(Lunch at PSI)</i> VISIT PSI <i>(Lunch at PSI)</i> VISIT PSI <i>(Dinner at PSI)</i>	VISIT PSI <i>(Lunch at PSI)</i> VISIT PSI <i>Return scheduled at 19h00</i>	09:00
10:00	Coffee Break	Coffee Break	Coffee Break			10:00
10:15	Beam instrumentation lecture <i>P. Forck</i>	Beam instrumentation lecture <i>P. Forck</i>	Beam instrumentation tutorial <i>P. Forck</i>			10:15
11:15	Beam instrumentation lecture <i>P. Forck</i>	Beam instrumentation lecture <i>P. Forck</i>	Beam instrumentation lecture <i>P. Forck</i>			11:15
12:15	LUNCH	LUNCH	LUNCH			12:15
14:00	Exercise in computer room		Exercise in computer room			14:00
15:00	Beam instrumentation tutorial <i>P. Forck</i>	Superconducting RF Cavities lecture <i>F. Caspers</i>	Superconducting RF Cavities tutorial <i>F. Caspers / W. Weingarten</i>			15:00
16:00	Beam instrumentation tutorial <i>P. Forck</i>	Superconducting RF Cavities lecture <i>F. Caspers</i>	Superconducting RF Cavities tutorial <i>F. Caspers / W. Weingarten</i>			16:00
16:15	Coffee Break	Coffee Break	Coffee Break			16:15
17:15	Beam instrumentation lecture <i>P. Forck</i>	Superconducting RF Cavities lecture <i>F. Caspers</i>	Superconducting RF Cavities lecture <i>F. Caspers</i>			17:15

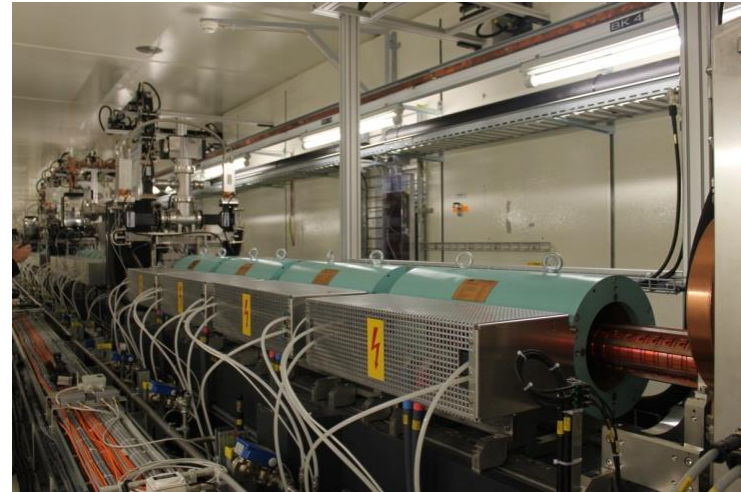
PSI visit at Villigen (Zurich)



The SNQ source



The Cyclotron



The SLS Linac

			WEEK 9			
	Monday March 3 rd	Tuesday March 4 th	Wednesday March 5 th	Thursday March 6 th	Friday March 7 th	
09:00						09:00
	Particle Sources lecture <i>T. Thuillier</i>	Low Energy Electron Accelerators lecture <i>W. Mondelaers</i>	<i>Bus leaves at 8h30</i> VISIT AND EXPERIMENTAL WORK AT BERGOZ INSTRUMENTATION <i>(Lunch at Bergoz)</i> <i>Return scheduled at 17h</i>	High Current Proton Linacs lecture <i>S. Bousson</i>	Particle therapy and accelerators lecture <i>S. Meyroneinc</i>	09:30
10:00	Coffee Break	Coffee Break		Coffee Break	Coffee Break	10:00
10:15	Particle Sources lecture <i>T. Thuillier</i>	Low Energy Electron Accelerators lecture <i>W. Mondelaers</i>		High Current Proton Linacs lecture <i>S. Bousson</i>	Particle therapy and accelerators lecture <i>S. Meyroneinc</i>	10:15
11:15	Particle Sources lecture <i>T. Thuillier</i>	Low Energy Electron Accelerators lecture <i>W. Mondelaers</i>		High Current Proton Linacs lecture <i>S. Bousson</i>	Particle therapy and accelerators lecture <i>S. Meyroneinc</i>	11:15
12:15	LUNCH	LUNCH		LUNCH	LUNCH	12:15
14:00	Particle Sources tutorial <i>T. Thuillier</i>	Acc. for indust. & medical applications lecture <i>W, Kleeven</i>		<i>Bus leaves at 13h30</i> Therapeutic Applications at Geneva Hospital <i>R. Miralbell</i> <i>Return scheduled at 18h</i>	Radiation safety lecture <i>X. Queralt</i>	14:00
15:00	Accelerator Control lecture <i>E. Zimoch</i>	Acc. for indust. & medical applications lecture <i>W, Kleeven</i>			Radiation safety lecture <i>X. Queralt</i>	15:00
16:00	Coffee Break	Coffee Break			Coffee Break	16:00
16:15	Accelerator Control lecture <i>E. Zimoch</i>	Acc. for indust. & medical applications lecture <i>W, Kleeven</i>			Radiation safety lecture <i>X. Queralt</i>	16:15
17:15						

Practical day at BERGOZ company



Lunch together with Bergoz engineers in a restaurant

Half day visit at Geneva hospital



HUG = Hôpitaux Universitaires de Genève

Reports on the practical days

On a voluntary basis, you are invited to write a small report related to your practical days either at CERN or/and at BERGOZ company.

According to the quality and the level of the report,
points will be added to your examination results.

Computer room

connected to the CERN servers via optic fibres



Each participant will use a single computer available in the room.

Two excursions are proposed for relaxation

- 1) They are on a voluntary basis but you should register
- 2) A small financial contribution is requested
- 3) No guided tours scheduled
- 4) Everybody is free to organize his Saturday
- 5) The bus driver does not speak English

Lyon – Saturday 15th February 2013



ONLY LYON 

Chamonix – Saturday 22nd February 2014



Examinations are mandatory for:

- * Master students
- * Students who have received a financial support

Each student who gets an **average mark of 10/20** (or above) will receive **ECTS(*)** recognized by the Universities. The number of ECTS could vary according to the University.

There are 5 topics, each of them lasts one and half hour:

- * RF engineering
- * Magnets
- * Beam Instrumentation
- * The remaining 2 exams are announced in week 9 (i.e. the week before the exams)

For each examination, all **written documents are permitted** as well as a pocket calculator.

It is strictly forbidden to have an electronic device (iPhone, Portable, etc...) during the exam

(*) ECTS = European Credit Transfer System

WEEK 10

	Monday March 10 th	Tuesday March 11 th	Wednesday March 12 th	Thursday March 13 th	Friday March 14 th
09:00					09:00
		EXAMINATION	EXAMINATION	EXAMINATION	
		Beam Instrumentation	Magnets	RF	
10:00		Written session	Written session	Written session	10:00
10:15					10:15
		Coffee Break	Coffee Break		
		EXAMINATION	EXAMINATION	DISCUSSION	
11:15		Topic given in week 9	Topic given in week 9	SUMMARY of	11:15
				JUAS courses	
		Written session	Written session		
12:15					12:15
				BUFFET	
14:00				END OF 2 nd	14:00
				JUAS SESSION	
				-	
				END OF THE SCHOOL	
15:00				2014	15:00
16:00					16:00
16:15					16:15
17:15					17:15



Archamps, March 29th 2013

JUAS CERTIFICATE 2013

TECHNOLOGY & APPLICATIONS
OF PARTICLE ACCELERATORS



participated in the examination week and passed successfully the exams.

His performance merited the award of 10 credits under the European Credit Transfer System (ECTS), acknowledged by JUAS partner Universities.

Average score : 19,5/20

Rank : 1/18

Average score of class : 14,3/20

Louis RINOLFI
JUAS Director

JUAS certificate of examination for course 2

*Each student who obtains a mark equal
(or above) to 10 / 20 will receive such
certificate*



Archamps, March 27th 2013

CERTIFICATE of Attendance

We, undersigned, certify that,



has followed the JUAS courses (lectures, tutorials, visits and exams),

I. Science and Physics of Particle Accelerators

(Course 1)

(From January 7th to February 8th, 2013)

This course consists of Relativity, Electro Magnetism, Introduction to Accelerators, Particle Optics, Transverse Beam Dynamics, Longitudinal Beam Dynamics, MADX, Linacs, Injection/Extraction process, Linear Imperfections and Non-linear Effects, Space Charge, Instabilities, Synchrotron Radiation, Cyclotrons and Machine Design.

II. Technology and Applications of Particle Accelerators

(Course 2)

(From February 11th to March 15th, 2013)

This course consists of RF Engineering, Vacuum Systems, Magnets Design, Normal Conducting Magnets, Superconducting Magnets, Superconducting RF Cavities, Beam Instrumentation, Particles Sources, Accelerator Control, Low Energy Electron Accelerators, Accelerators for Industrial & Medical Applications, High Power Proton Linac, Reliability & life-cycle of accelerators and Radiation & Safety.

Organized by the European Scientific Institute (E.S.I.) in partnership with 14 European Universities and major laboratories*

Louis RINOLFI
JUAS Director

Marie GAUTHIER
ESI Administrator

JUAS certificate of attendance

*Each student who followed more than
90% of the course received such
certificate*

* Universitat Politècnica de Catalunya
Universitat Autònoma de Barcelona
Technische Universität Darmstadt
Université Joseph Fourier Grenoble
Institut National Polytechnique de Grenoble

Karlsruher Institut für Technologie
Università degli Studi di Napoli „Federico II“
Università degli Studi di Roma „La Sapienza“
Technische Universität Berlin
Università degli Studi di Genova

Universitat de València
Universität Heidelberg
University of Liverpool
Université Paris Sud - Orsay

Practical information (1)

The Time Table is displayed:

- ✓ in the hall of the school (Amphitheatre entrance)
- ✓ on the web site

if a discrepancy occurs, only what is displayed in the hall of the school is effective

Books:

We have many Particle Accelerator publications and books, for loan, on the shelves in JUAS students room. They can be borrowed and kept for the duration of the school.

Please ask Filiz Demolis before borrowing, so that we know where books are.

Practical information (2)

Homework:

There are 4 rooms within JUAS area for home work after lecture time, working in group as well. We encourage you to make small working teams, work together – just like in real “Accelerator Physicist's Life”.

Internet:

Internet is available in every room at school only with a cable (plug on the table).

Each student will receive a cable (ask Filiz) to connect to internet with a personal computer.

Internet is available in the Residences :

- ✓ La Colombière (Wifi). Ask the reception to get your card with login and password.
- ✓ Residential (wire network). Ask the reception to get your card with login and password.

The school will pay this service for you, at the end of your stay.

JUAS web site:

In the Web site : www.cern.ch/juas

- The Time Table is kept updated when a change occurs for a lecture or a visit.
- Proposals for Traineeships, PhD, Post, etc. , submitted by laboratories are displayed
- Many other useful information are available.

Practical information (3)

Coffee breaks:

Twice a day, morning and afternoon, the right place for discussions of all sort !

An accelerator world concept : 50% of the research is performed during coffee breaks.

The right place for discussing with lecturers and looking for a training period in an accelerator Laboratory.

Lunch:

The Alliance building has several restaurants.... unless you prefer to cook at home.

Ticket of 3 Euros will be provided by JUAS for one meal per day.

There is a restaurant Best Western, on the site. There is also a restaurant at La Colombière.

Dinner:

Everybody is free to organize himself.

Transportation in Archamps

Since February 2013, a new bus line has been opened by **tpg** (Geneva public transport)

The line M



allows students to go to the supermarket by themselves.



A new bus line between JUAS and CERN



Imprimer

Via St. Julien

Vue d'ensemble					
Arrêt/gare	Date	Heure	Durée	Chang.	Moyen de transport
Archamps-Technopole CERN	24.04.13	dép. 16:37 arr. 17:57	1:20	2	
Archamps-Technopole CERN	24.04.13	dép. 17:04 arr. 18:18	1:14	3	
Archamps-Technopole CERN	24.04.13	dép. 17:08 arr. 18:28	1:20	2	

Vue détaillée					
Arrêt/gare	Date	Arr.	Dép.	Moyen de transport	Remarques
Archamps-Technopole	24.04.13		17:08	Bus M	Bus Direction: Saint-Julien-Gare
Saint-Julien-Gare		17:19			
Saint-Julien-Gare			17:27	Bus D	Bus Direction: Bel-Air
Stand		17:58			
Stand				Parcours à pied	2 min.
Stand					
Stand			18:02	Trm 18	Trm Direction: CERN
CERN		18:28			

Durée: 1:20, circule 24. Avr jusqu'au 28. Jun 2013 Lu - Ve; pas 9., 20. Mai

Horaires valables du 09.12.12 jusqu'au 14.12.13. Logiciel/Données: HAFAS 5.23.TPG.4.7/5.21.TPG.4.7 - 24.04.13
info mobilité unireso, 0900 022 021 (CHF 0.94/appeil depuis un réseau fixe)
Du lundi au vendredi de 7 h 00 à 19 h 00 | le samedi de 9 h 00 à 17 h 00 | fermé le dimanche et les jours fériés
Les informations sont publiées sans responsabilité.



<http://tpg.hafas.de/bin/tp/query.exe/fn>



Imprimer

Via Croix-de-Rozon Douane

Vue d'ensemble					
Arrêt/gare	Date	Heure	Durée	Chang.	Moyen de transport
Archamps-Technopole CERN	24.04.13	dép. 16:37 arr. 17:57	1:20	2	
Archamps-Technopole CERN	24.04.13	dép. 17:04 arr. 18:18	1:14	3	
Archamps-Technopole CERN	24.04.13	dép. 17:08 arr. 18:28	1:20	2	

Vue détaillée					
Arrêt/gare	Date	Arr.	Dép.	Moyen de transport	Remarques
Archamps-Technopole	24.04.13		17:04	Bus M	Bus Direction: Collonges-Bourg d'en Haut
Croix-de-Rozon-Douane		17:15			
Croix-de-Rozon-Douane			17:18	Bus 44	Bus Direction: Tours-de-Carouge
Tours-de-Carouge		17:29			
Tours-de-Carouge				Parcours à pied	1 min.
Tours-de-Carouge			17:34	Bus 11	Bus Direction: Jardin Botanique
Servette		18:02			
Servette				Parcours à pied	1 min.
Servette					
Servette			18:03	Trm 18	Trm Direction: CERN
CERN		18:18			

Durée: 1:14, circule 24. Avr jusqu'au 28. Jun 2013 Lu - Ve; pas 9., 20. Mai

Transportation in Archamps

Other possibilities:

Bus stop at La Croix de Rozon (1200 m from JUAS) to Geneva

Bus stop at Vitam Park (800 m from La Colombière) for Geneva and for Annecy

Some of you have cars:

⇒ **friendly spirit is welcome to share good moments, ideas and cars**

Super-market at St-Julien-en-Genevois

Read the “Students Information file” or ask Filiz for detailed information

Accommodation in Archamps



LA COLOMBIERE



We are cooperating with 2 residences (both are equipped with kitchenette, laundry facilities, bed linen and towels.)



RESIDENTIAL



Your contribution to JUAS

Presence sheets :

To be signed in the morning at 9:00 and in the afternoon at 14:00

We need it for Administration purposes (funding, statistics, etc...)

Appreciation sheets :

JUAS needs your appreciations on the lectures and lecturers.

Appreciation forms will be given to you for that purpose.

Please bend down on that form as long as necessary, think of it, fill it,

and... *return it to us ...*

Appreciation sheets

You do not have to write your name on the sheet, although it can be useful for us to know which country, university you come from when analyzing your form

Table below shows an example for a lecturer A, B and C:
(Seminars of 1h are not concerned)

Lectures	Requested Level			Oral presentation (Pedagogy)	Written documentation (Contents & structure)
	<i>too easy</i>	<i>as expected</i>	<i>too high</i>		
<i>(legend)</i>				<i>(0 = bad → 5 = excellent)</i>	<i>(0 = bad → 5 = excellent)</i>
Lecturer A		X		3	3
Lecturer B	X			0	4
Lecturer C			x	5	1

Name (optional)

Job opportunities

Being at JUAS is **THE** opportunity to find a position for:

➡ an internship or traineeship in European and International Laboratories,

➡ a summer job,

➡ a PhD grant,

other job opportunities.

-talk to the lecturers, question them on that.

-talk to people you'll meet during the various Laboratory visits.

-we keep updated the JUAS web site with job/traineeship/PhD/post announcements:

see the link [Job opportunities](#)

Accelerator Conference prize for JUAS

Each year JUAS is allotted a grant by IPAC: **International Particle Accelerator Conference**

In 2014, for the 20 years anniversary of JUAS => grants for 2 students

The requirements to attend IPAC Conferences are the following:

1. To follow completely either JUAS course 1 or JUAS course 2 (or both)
2. To obtain the best marks at the examination
3. To continue in the field of particle accelerator at the time of the conference
4. To be proposed by JUAS Director to IPAC Conference Coordinator
5. To present work at the conference, abstract/poster and contribution to proceedings
6. To serve as required, scientific secretary, etc. as for other supported students

Grants for two JUAS 2014 students to attend IPAC'14 (Dresden – Germany, 15 – 20 June)



<http://www.ipac14.org/>

Countries	Students
Armenia	1
Austria	1
Belgium	1
Colombia	1
France	7
Germany	4
Greece	1
India	2
Iran	1
Italy	13
Lebanon	1
Poland	2
Romania	4
Russia	2
Spain	2
Sweden	2
Turkey	1
Ukraine	2
18	48

Participants in 2014
by country
(Alphabetic order)

JUAS 2014 – Photo

Monday 17th February 2014 during the coffee break at 10 a.m.



Last but not least ...



ARRIVE ON TIME AT THE LECTURES

It means, manage to be installed 5 minutes ahead of schedule
(usually 9 a.m., morning and 2 p.m., afternoon session)

In conclusion

You are ready to start the second course:
“Technology & Applications of Particles Accelerators”

I wish you a pleasant stay at JUAS 2014

