

WELCOME TO JUAS 2016

Louis Rinolfi, Director

Monday 11th January 2016

Course 1: Science & Physics of Particle Accelerators



Brief history of JUAS

JUAS was founded in 1994

900 students trained at JUAS

150 lecturers

ECTS credits from European Universities

International conferences

Practical works at CERN

Practical works at Bergoz company

Visits of several particle accelerators centers

1994 JUAS was born

The first Joint Universities Accelerator School took place at Archamps from January 24th to March 25th, 1994. It was attended by 24 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- Francesco 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

2004: ten years after

REVUE DE PRESSE

L'ESSOR SAVOYARD / LE MESSAGER

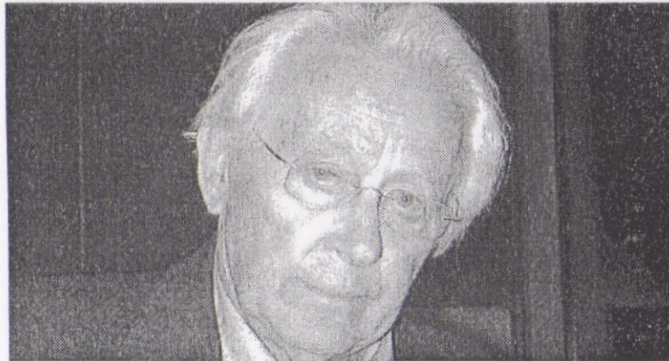
“Assessment after a first decade”

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. »



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.

G. Charpak
1992 Physics Nobel prize
supported the schools
since the beginning

2014: twenty years after

The celebration of the **20th Anniversary of JUAS** was held on 25th April 2014 in Grenoble at the LPSC ("*Laboratoire de Physique Subatomique et de Cosmologie*").

This event brought together more than 100 scientists, lecturers, students and institutional partners... all present to share a special day dedicated to the school. It was an opportunity to look back on the past twenty years and to debate the future.



Round table at the 20th Anniversary of JUAS : *from left to the right.*

Luigi Palumbo: Director of Department of Applied Sciences for Engineering / Sapienza University / Rome

Phil Burrows: Professor at Oxford University / Chairman Education & Training group (Eucard2)

Steve Myers: Former Director of CERN Accelerators Department

Pantaleo Raimondi: Director of ESRF Accelerators

Frédéric Bordry: Director of CERN Accelerators and Technology

Hans Hoffmann: President ESI

Louis Rinolfi: Director JUAS





Hans Hoffmann, President of ESI

Marie Gauthier presented the ESI team

France



JUAS 2016

Germany



TECHNISCHE
UNIVERSITÄT
DARMSTADT



Universität
Rostock



Traditio et Innovatio

Italy



SAPIENZA
UNIVERSITÀ DI ROMA



UNIVERSITÀ DEGLI STUDI
DI GENOVA



UNIVERSITÀ DEGLI STUDI DI NAPOLI
FEDERICO II

15 partner
universities

Spain

UAB

Universitat Autònoma
de Barcelona



UNIVERSITAT
DE VALÈNCIA



UNIVERSITAT POLITÈCNICA
DE CATALUNYA

United Kingdom



UNIVERSITY OF
LIVERPOOL



John Adams Institute
for Accelerator Science



UNIVERSITY OF
OXFORD

15 European Universities partners of JUAS in 2016

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

11 representatives from Institutes

Institutes	Members of Advisory Board
ESI President	Hans Hoffmann
ESI administrator	Marie Gauthier
JUAS Director	Louis Rinolfi
JUAS Director Designate	Philippe Lebrun
Former JUAS Director	François Méot
CAS (<i>CERN Accelerator School</i>)	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

JUAS Selection Board 2016

Members of Selection Board

Marco Bozzo

Philippe Lebrun

Elias Métral

Louis Rinolfi

Logos of JUAS 2016 sponsors

France



Germany



Italy



Spain



Sweden



Switzerland



UK



TWO COURSES ON PARTICLE ACCELERATORS

11 January to 18 March 2016

Course 1

SCIENCES & PHYSICS

11 January to 12 February

Course 2

TECHNOLOGY & APPLICATIONS

15 February to 18 March

PARTNER UNIVERSITIES:



School of **esi**
European Scientific Institute

JUAS Poster 2016

Available upon request

*Ask Marjorie Romand for any
format (A4,...A0).*

www.esi-archamps.eu

With the support of:



Participants in 2016 by country *(Alphabetic order)*

	Countries	Students
1	Armenia	1
2	Austria	1
3	Belgium	4
4	China	5
5	Czech Republic	1
6	Germany	5
7	Finland	1
8	France	18
9	Greece	4
10	India	2
11	Iran	1
12	Italy	11
13	Jordan	1
14	Lebanon	1
15	Mexico	1
16	Spain	2
17	Ukraine	4
18	UK	1
	18	64

Professors and assistants in 2016 – Course 1

Professors / Assistants	Lecture	Institutions
P. Bryant	Introduction to Accelerators	Former CAS Director
H. Henke	Relativity & Electromagnetism	Berlin University
J.M. De Conto	Particle optics	University J. Fourier
A. Latina / J. Resta Lopez	Transverse Beam Dynamics	CERN
G. Sterbini / D. Pellegrini	MADX	CERN
E. Métral / B. Salvant	Longitudinal Beam Dynamics	CERN
J.B. Lallement / V. Dimov	Linacs	CERN
Y. Papaphilippou / H. Bartosik	Linear imperfections + Non linear effects	CERN
M. Migliorati	Space charge + Instabilities	Roma University
R. Bartolini	Synchrotron radiations	Oxford University
F. Chautard	Cyclotrons	GANIL
T. Perron	Injection / Extraction	ESRF

Seminars in 2016 – Course 1

Professors	Lecture (1h)	Home
V. Vaccaro	History of particle accelerators	Naples University
M. Vretenar	EuCard - 2	CERN
F. Bordry	Future high energy circular colliders	CERN
E. Prat	Free Electron Lasers	PSI
R. Alemany	LHC and injector complex	CERN
L. Rinolfi	Future high energy linear colliders	CERN / JUAS
R. Assmann	Laser plasma acceleration	DESY

WEEK 1

	Monday Jan 11 th	Tuesday Jan 12 th	Wednesday Jan 13 th	Thursday Jan 14 th	Friday Jan 15 th	
08:00	Arrival and registration at ESI Office & Accommodation					09:00
		Relativity lecture <i>H. Henke</i>	Electro-magnetism lecture <i>H. Henke</i>	European Projects for Collaborative Accelerator R&D <i>M. Vretenar</i>	Intro. to Accelerator Design lecture <i>Ph. Bryant</i>	
		Coffee Break	Coffee Break	Coffee Break (group photo)	Coffee Break	10:00 10:15
11:15		Relativity tutorial <i>H. Henke</i>	Electro-magnetism tutorial <i>H. Henke</i>	Intro. to Accelerator Design lecture <i>Ph. Bryant</i>	Intro. to the Mini-Workshop lecture <i>Ph. Bryant</i>	11:15
	Relativity lecture <i>H. Henke</i>	Electro-magnetism lecture <i>H. Henke</i>	Intro. to Accelerator Design lecture <i>Ph. Bryant</i>	Intro. to the Mini-Workshop lecture <i>Ph. Bryant</i>	12:15	
12:30	WELCOME LUNCH	LUNCH	LUNCH	LUNCH	<i>Bus leaves at 12:15 from JUAS</i> <i>(Lunch at CERN)</i>	14:00
14:00	Presentation of ESI & building visit	Electro-magnetism lecture <i>H. Henke</i>	Particle optics lecture <i>J.M. De Conto</i>	Intro. to Accelerator Design lecture <i>Ph. Bryant</i>	VISIT AT CERN <i>(Presentation of CERN and visit of CMS)</i>	15:00
14:30	Presentation of JUAS & Presentation of students 2016 <i>L. Rinolfi</i>	Particle optics lecture <i>J.M. De Conto</i>	Particle optics tutorial <i>J.M. De Conto</i>	Intro. to Accelerator Design lecture <i>Ph. Bryant</i>		16:00 16:15
15:30	Relativity lecture <i>H. Henke</i>	Coffee Break	Coffee Break	Coffee Break		17:15
16:30 16:45	Coffee Break	Particle optics lecture <i>J.M. De Conto</i>	Particle optics tutorial <i>J.M. De Conto</i>	Intro. to Accelerator Design lecture <i>Ph. Bryant</i>		<i>Bus leaves at 18:00 from CERN</i>
17:45	History of Part. Accel. Seminar <i>V. Vaccaro</i>					

EuCARD-2: the collaborative road to Accelerator R&D

EuCARD-2 = European Coordinated Accelerator Research and Development,
an *Integrating Activity* co-funded by the European Commission under the *Capacity
– Research infrastructure* Program

> 300 participants from 40 Institutes (Laboratories, Universities and
Industries) of 12 European Countries (+ CERN and Russia)

48 months duration (01.05.2013 - 30.04.2017)

13 Workpackages covering different fields of advanced Accelerator R&D

23.5 M€ total cost, 8 M€ EC contribution

One website: <http://eucard2.web.cern.ch/>

One goal: **develop the technologies for tomorrow accelerators**

Visit at CERN

Friday 15th January 2016



Programme:

- 13:00 Lunch at CERN
- 13:30 Bus start for CMS detector (Point 5 in Cessy)
- 14:00 General presentation of CERN Laboratory
- 14:45 Start CMS visit (3 groups)
- 16:15 End of CMS visit
- 16:20 Discussions, Questions and Answers, Film (if time permits)
- 17:30 Bus start for Archamps

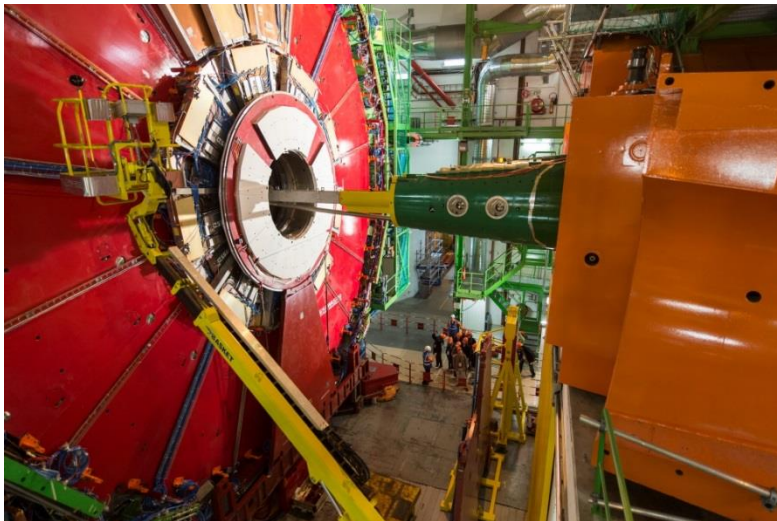
CERN – CMS (Compact Muon Solenoid)



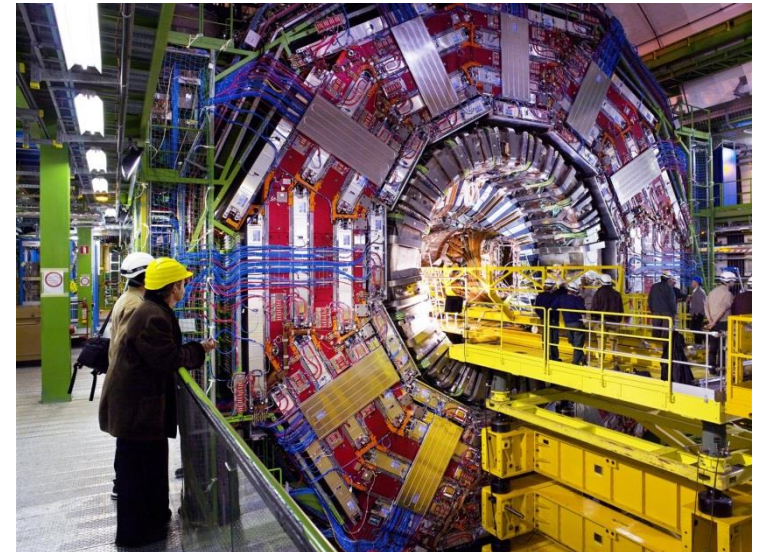
M. Bozzo as a guide



Waiting for the lift



At 100 m underground



Close to the detector

WEEK 2

	Monday Jan 18 th	Tuesday Jan 19 th	Wednesday Jan 20 th	Thursday Jan 21 st	Friday Jan 22 nd	Saturday Jan 23 rd	
VISIT Tokamak AT EPFL <i>(Lunch at EPFL)</i>						BEAM MEASUREMENT AT ESRF (GRENOBLE)	
<i>Bus leaves at 07:30 from JUAS</i>	Longitudinal Dynamics lecture <i>E. Métral</i>	Linacs lecture <i>J-B. Lallement</i>	Longitudinal Dynamics lecture <i>E. Métral</i>	Cyclotrons lecture <i>F. Chautard</i>			
	Coffee Break	Coffee Break	Coffee Break	Coffee Break			
	Longitudinal Dynamics tutorial <i>E. Métral</i>	Longitudinal Dynamics lecture <i>E. Métral</i>	Longitudinal Dynamics lecture <i>E. Métral</i>	Cyclotrons lecture <i>F. Chautard</i>			
	Longitudinal Dynamics lecture <i>E. Métral</i>	Longitudinal Dynamics tutorial <i>E. Métral</i>	Longitudinal Dynamics lecture <i>E. Métral</i>	Cyclotrons tutorial <i>F. Chautard</i>			
	LUNCH	LUNCH	LUNCH	LUNCH			
	Linacs lecture <i>J-B. Lallement</i>	Longitudinal Dynamics lecture <i>E. Métral</i>	Cyclotrons lecture <i>F. Chautard</i>	Longitudinal Dynamics lecture <i>E. Métral</i>			
<i>Bus leaves at 14:00 from EPFL</i>	Linacs lecture <i>J-B. Lallement</i>	Linacs tutorial <i>J-B. Lallement /V. Dimov</i>	Cyclotrons tutorial <i>F. Chautard</i>	Longitudinal Dynamics tutorial <i>E. Métral</i>			
	Coffee Break	Coffee Break	Coffee Break	Coffee Break			
Injection / Extraction <i>Thomas Perron</i>	Linacs tutorial <i>J-B. Lallement /V. Dimov</i>	Linacs tutorial <i>J-B. Lallement /V. Dimov</i>	Cyclotrons lecture <i>F. Chautard</i>	Longitudinal Dynamics tutorial <i>E. Métral</i>			
Injection / Extraction <i>Thomas Perron</i>	LHC & Future High-Energy Cicular Collider Seminar <i>F. Bordry</i>						

Synchrotron ESRF - 6 GeV - Grenoble



Six JUAS 2016 students will ~~w~~ork during a full shift from the control room

Cancelled today due to the current state of emergency



Swiss Plasma Center Mission

The Swiss Plasma Center is the major swiss plasma and fusion laboratory. It's main goal is to participate in the worldwide development of this new energy source through strong education and research programmes.

Computing room in 2015

connected to the CERN servers via optical fibres



All new 30 computers in 2016



WEEK 3

	Monday Jan 25 th	Tuesday Jan 26 th	Wednesday Jan 27 th	Thursday Jan 28 th	Friday Jan 29 th	
09:00						09:00
	Transverse Dynamics lecture <i>A. Latina</i>	Transverse Dynamics lecture <i>A. Latina</i>	Intro. to MADX <i>G. Sterbini</i>	Space charge lecture <i>M. Migliorati</i>	Space charge lecture <i>M. Migliorati</i>	
10:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	10:00
10:15	Transverse Dynamics lecture <i>A. Latina</i>	Transverse Dynamics lecture <i>A. Latina</i>	MADX <i>G. Sterbini/ A. Latina /J. Resta Lopez / D. Pellegrini</i>	Space charge lecture <i>M. Migliorati</i>	Instabilities lecture <i>M. Migliorati</i>	10:15
11:15	Transverse Dynamics lecture <i>A. Latina</i>	Transverse Dynamics tutorial <i>A. Latina / J. Resta Lopez</i>	MADX <i>G. Sterbini/ A. Latina /J. Resta Lopez / D. Pellegrini</i>	Space charge lecture <i>M. Migliorati</i>	Instabilities tutorial <i>M. Migliorati</i>	11:15
12:15	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	12:15
14:00	Transverse Dynamics lecture <i>A. Latina</i>	Transverse Dynamics lecture <i>A. Latina</i>	Transverse Dynamics lecture <i>A. Latina</i>	Space charge tutorial <i>M. Migliorati</i>	Instabilities tutorial <i>M. Migliorati</i>	14:00
15:00	Transverse Dynamics tutorial <i>A. Latina / J. Resta Lopez</i>	Transverse Dynamics lecture <i>A. Latina</i>	Transverse Dynamics tutorial <i>A. Latina / J. Resta Lopez</i>	MADX <i>G. Sterbini/ A. Latina /J. Resta Lopez / D. Pellegrini</i>	MADX <i>G. Sterbini/ A. Latina /J. Resta Lopez / D. Pellegrini</i>	15:00
16:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	16:00
16:15	Free-Electron Lasers Seminar <i>E. Prat</i>	LHC injectors chain Seminar <i>R. Alemany</i>	Future High-Energy Linear Colliders Seminar <i>L. Rinolfi</i>	MADX <i>G. Sterbini/ A. Latina /J. Resta Lopez / D. Pellegrini</i>	MADX <i>G. Sterbini/ A. Latina /J. Resta Lopez / D. Pellegrini</i>	16:15
17:15						17:15
18:00	COCKTAIL JUAS & ESIPAP					
19:00						

WEEK 4

	Monday Feb 1 st	Tuesday Feb 2 nd	Wednesday Feb 3 rd	Thursday Feb 4 th	Friday Feb 5 th	
09:00	Synchrotron Radiation lecture <i>R. Bartolini</i>	Synchrotron Radiation lecture <i>R. Bartolini</i>	Linear imperfections lecture <i>Y. Papaphilippou</i>	Mini-workshop Machine Design <i>Ph. Bryant</i>	Non-linear effects lecture <i>Y. Papaphilippou</i>	09:00
10:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	10:00
10:15	Synchrotron Radiation lecture <i>R. Bartolini</i>	Synchrotron Radiation lecture <i>R. Bartolini</i>	Linear imperfections tutorial <i>Y. Papaphilippou/ H. Bartosik</i>	Mini-workshop Machine Design <i>Ph. Bryant</i>	Non-linear effects lecture <i>Y. Papaphilippou</i>	10:15
11:15	Synchrotron Radiation tutorial <i>R. Bartolini</i>	Synchrotron Radiation tutorial <i>R. Bartolini</i>	Linear imperfections lecture <i>Y. Papaphilippou</i>	Mini-workshop Machine Design <i>Ph. Bryant</i>	Non-linear effects lecture <i>Y. Papaphilippou</i>	11:15
12:15	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	12:15
14:00	Synchrotron Radiation lecture <i>R. Bartolini</i>	Synchrotron Radiation lecture <i>R. Bartolini</i>	Linear imperfections lecture <i>Y. Papaphilippou</i>	Mini-workshop Machine Design <i>R. Bartolini</i>	Synchrotron Radiation tutorial <i>R. Bartolini</i>	14:00
15:00	Synchrotron Radiation lecture <i>R. Bartolini</i>	Synchrotron Radiation lecture <i>R. Bartolini</i>	Linear imperfections tutorial <i>Y. Papaphilippou/ H. Bartosik</i>	Mini-workshop Machine Design <i>R. Bartolini</i>	Presentation of Accelerator Design <i>Students + P. Bryant</i>	15:00
16:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	16:00
16:15	Synchrotron Radiation lecture <i>R. Bartolini</i>	Linear imperfections lecture <i>Y. Papaphilippou</i>	Linear imperfections lecture <i>Y. Papaphilippou</i>	Mini-workshop Machine Design <i>R. Bartolini</i>	Presentation of Light Source Design <i>Students + R. Bartolini</i>	16:15
17:15			Laser Plasma Acceleration Seminar <i>R. Assmann</i>			17:15
			BARBECUE	18:15		

EXAMINATION

It is a written examination

Each student who gets an **average mark of 10/20** (or above) will receive **ECTS(*)** recognized by the Universities. The number of ECTS credited is decided by the university and can vary.

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

- * Transverse Beam Dynamics
- * Longitudinal Beam Dynamics
- * Synchrotron Radiations
- * The remaining 2 exams are announced in week 4 (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 5

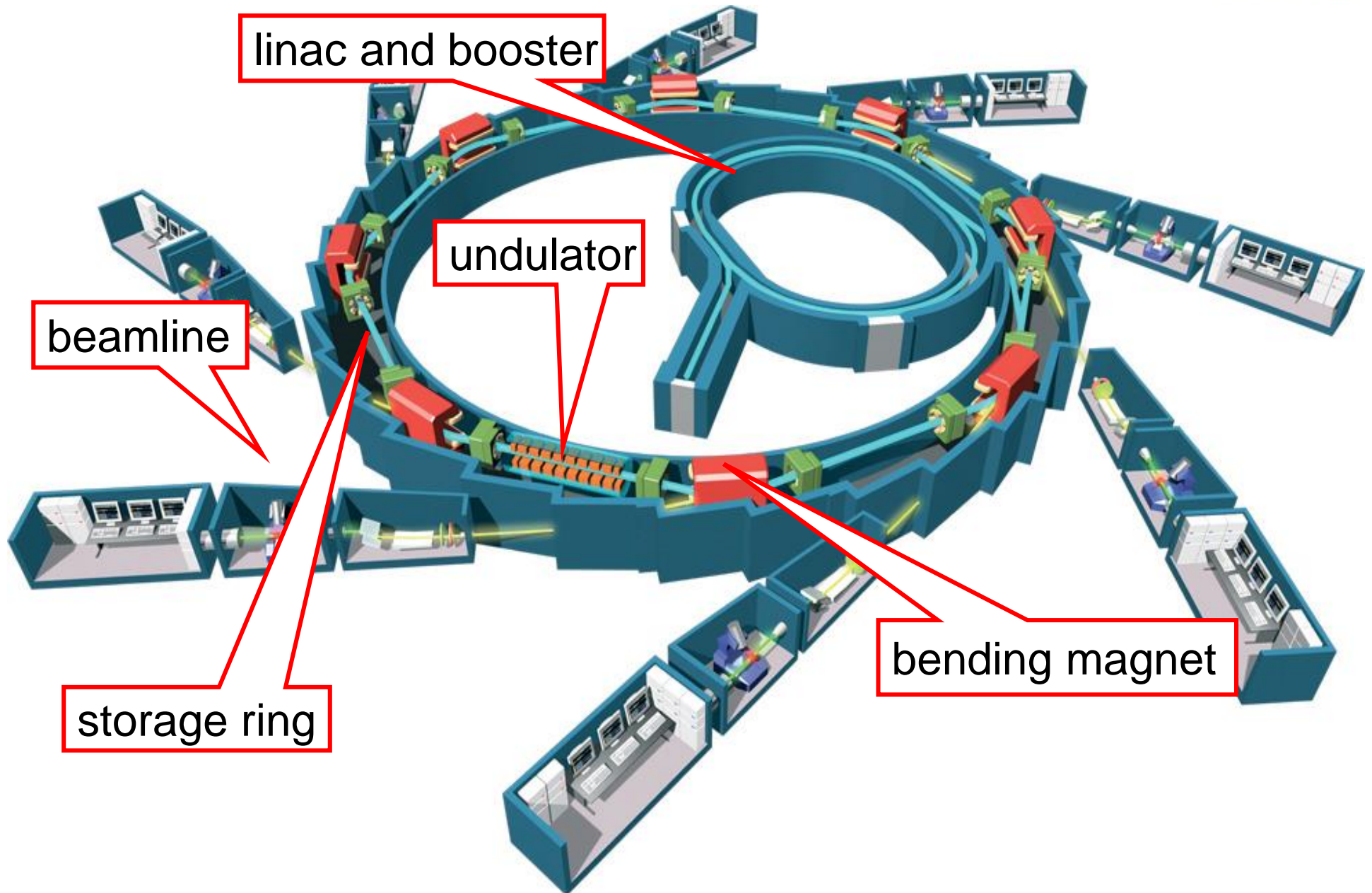
		Monday Feb 8 th	Tuesday Feb 9 th	Wednesday Feb 10 th	Thursday Feb 11 th	Friday Feb 12 th	
09:00	BEAM MEASUREMENT AT SYNCHROTRON SOLEIL (PARIS)						09:00
		EXAMINATION Synchrotron Radiation <i>Written session</i>	EXAMINATION Longitudinal beam dynamics <i>Written session</i>	EXAMINATION Transverse beam dynamics <i>Written session</i>			
10:30		Coffee Break	Coffee Break	Coffee Break			10:30
11:00		EXAMINATION <i>Topic given in week 4</i> <i>Written session</i>	EXAMINATION <i>Topic given in week 4</i> <i>Written session</i>	DISCUSSION, SUMMARY of JUAS lectures			11:00
12:30		LUNCH	LUNCH	CLOSING RECEPTION JUAS COURSE 1			12:30
14:00							14:00
15:30							
16:00							

Synchrotron SOLEIL – 3 GeV - Paris



Two JUAS 2016 students will work during a full day from the control room

Synchrotron SOLEIL – 3 GeV - Paris



Archamps, March 4th 2015


JUAS CERTIFICATE 2015

Course 1
SCIENCES & PHYSICS OF PARTICLE ACCELERATORS
(4 weeks of lectures, tutorials, seminars, visits and 1 week of exams)

DIJKSTAL Philipp

participated in the examination week and passed successfully the exams.

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

Average score :  /20

Rank  /24

Average score of class : 13.9 /20

Louis RINOLFI

JUAS Director



Marie GAUTHIER

ESI Administrator



Universitat Politècnica de Catalunya

Universitat Autònoma de Barcelona

Technische Universität Darmstadt

Université Joseph Fourier Grenoble

Institut 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

Oxford University

EFET 427 430 433 00012 - AFE 3340

Joint Universities Accelerator School 2015

Archamps, 4th March 2015

CERTIFICATE OF ATTENDANCE

We, undersigned, certify that,

DIJKSTAL Philipp

has registered as student for JUAS 2015 and
has followed 4 weeks of JUAS courses (lectures, tutorials, seminars and visits),

Sciences and Physics of Particle Accelerators

(Course 1)

(from January 12th to February 13th in Archamps -France)

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

Organized by the European Scientific Institute (E.S.I.) in partnership with 15 European Universities.*

Louis RINOLFI

JUAS Director



Marie GAUTHIER

ESI Administrator



JUAS certificate of attendance for course 1

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

Job opportunities from JUAS

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 during the coffee breaks, lunch time,....

-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

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

The requirements to receive the grant and to attend IPAC Conferences are the following:

1. To follow completely JUAS courses
2. To obtain the best marks at the examination and write good reports
3. To continue in the field of particle accelerator
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

IPAC 2016

Busan, South Korea

8th – 13th May 2016

7th International Particle Accelerator Conference

May 8 – 13, 2016 BEXCO Busan, Korea



General

Author Information

Scientific Program

Industrial Exhibition

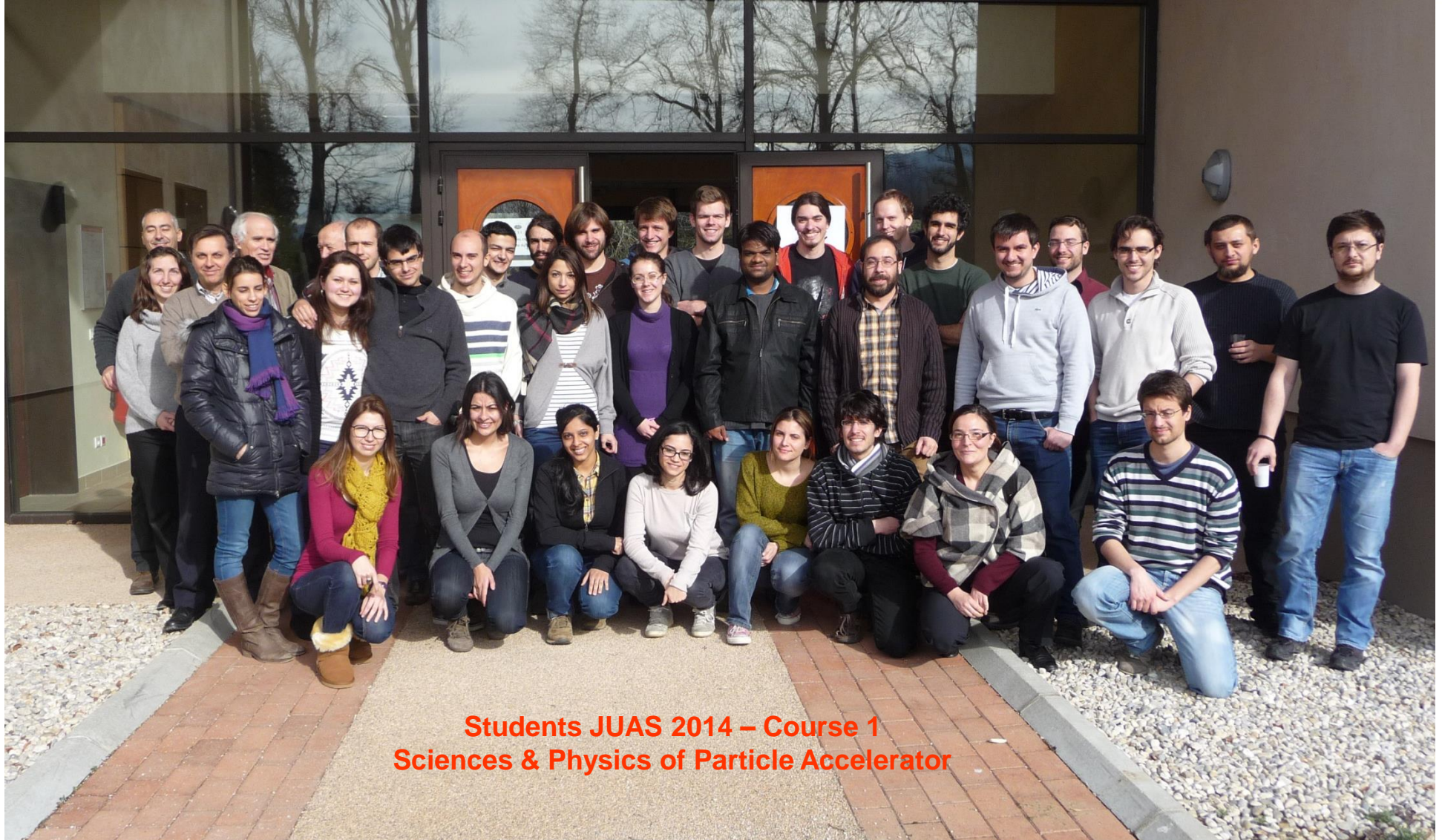
Events

About Busan

<http://www.ipac16.org/general/index.html>



JUAS – Photo



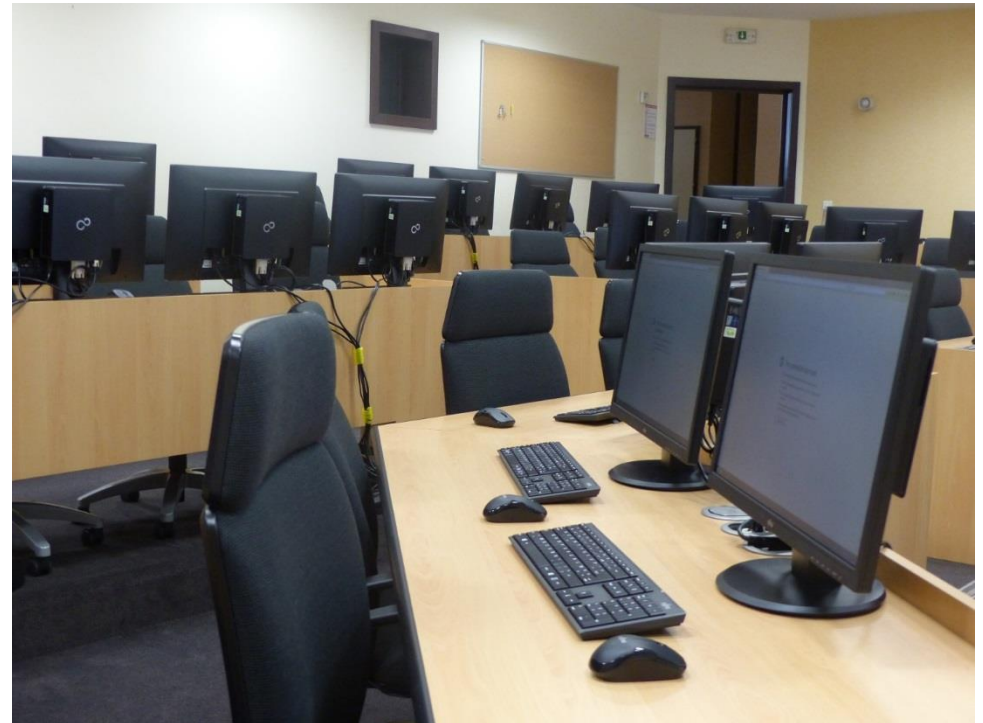
**Students JUAS 2014 – Course 1
Sciences & Physics of Particle Accelerator**

Take a photo today Monday 11th January 2016

Last but not least ...

ARRIVE ON TIME AT THE LECTURES

It means, manage to be installed 5 minutes ahead of schedule



I wish you a pleasant stay at JUAS 2016

