

WP6: Training Office



WP6 according to the Grant Agreement

Objectives

- To coordinate the training activities organized by the network for academic knowledge, personal growth, and transferrable skills;
- To advise the ESRs on their Individual Career Development Plan and monitor their progress;
- To liaise with the different doctoral schools where the ESRs are registered for their PhD degree.

Description of work and role of partners

WP6 - Training [Months: 4-48]

KUL

A Training Office will be formed with input from the academic (KUL), communication (CERN – from WP7), and valorization sectors (rotation between the industrial partners: IREPA, MSL, HUB, PAN). The TO will support and advise the students in the drafting of their ICDP and will monitor the progress of their training on a regular basis.

Task 1: Coordination of the training events (schools, workshops, academic courses, online courses), presentation of the content of the different trainings to the Supervisory Board for approval, and reporting on completed activities

Task 2: Collecting feedback from the ESRs towards a more tailored response to their needs and expectations on training and secondments

Task 3: Distributing information to the ESRs about interesting training opportunities outside the network-wide events, conferences, and job opportunities

WP6: The Training Office



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Training Officer
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IREPA Laser

TBD
Communication

- Changing every year
1. MSquared
 2. MSquared
 3. Hubner Photonics
 4. Panttechnik

IREPA LASER : Industrial R&D

Laser process & materials

Our DNA

IREPA LASER develops **innovative laser manufacturing solutions** for the industry and assists their operational implantation on site.

4 expertises



Additive
Manufacturing



Surface
functionalisation



Metal & polymer
Laser welding



Laser safety

Offer

-  Design & Industrialization
-  Advice & expertise
-  Production
-  Training

Industrial means

- More than 20 industrial lasers: fiber, diodes, Nd-YAG, CO₂
- Industrial equipments : 5 axes AM machines, micro-machining machine, robots
- Laboratory and analysis means

Main events

Deliverable 6.3



WP6: Training events

1. Training kick-off at KU Leuven – M13 = Nov 2020
2. General Training 1 at IREPA Laser – M14 = Dec 2020
 - *Safety, ethics, and society*
3. Specialized Training 2 at Jyvaskyla – M16 = Feb 2021 (later?)
 - *Advanced techniques for the production and study of actinides*
4. Specialized Training 3 at Mainz – M20 = Jun 2021
 - *Nuclear chemical techniques and laser resonance ionization laboratory training*
5. Summer School 1 near Groningen – M26 = Dec 2021 (either Winter School or change of date required!)
 - *Structure of complex atoms*
6. Specialized Training 4 at Jena – M32 = Jun 2022
 - *Advanced computational techniques*
7. Summer School 2 by GANIL – M38 = Dec 2022 (either Winter School or change of date required!)
 - *From the nucleons to the stars*

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Training Kick-Off in Leuven

- 2 days in Leuven with all ESRs and all supervisors. **Attendance is compulsory!**
- Attendance by the **European Commission Project Officer**
 - Some general introductions and discussions
 - Closed session with the ESRs about recruitment
- Details to be clarified...
- 2 days in La Butte aux Bois in Lanaken (Limburg) for team building
 - For ESRs and those who wish to stay

		DESCRIPTION OF MEETING & BANQUET ROOMS								
MEETING ROOM	AREA (m ²)	HEIGHT (m)	U-SHAPE	CLASSROOM	THEATRE	CABARET	BANQUET	BOARDROOM	COCKTAIL	
1	PREDIKHEREN	80	2.90	40	51	70	54	—	38	100
2	FRANCISCANEN	50	2.90	24	32	50	32	—	22	60
3	DOMINICANEN	60	2.90	37	40	60	40	—	34	80
1 + 2 + 3	MEETING ROOM	190	2.90	56	99	146	80	—	54	240
	FOYER	36	3.90	—	—	—	—	—	—	70
	ORANGERY	105	—	—	—	—	—	80	—	120
	MORILLON	60	—	—	—	—	—	40	—	80



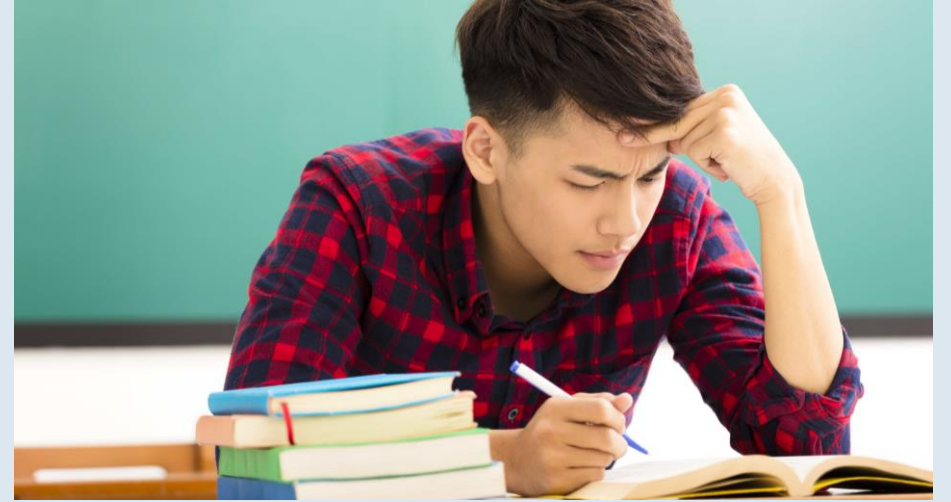
Martin Klooster in Leuven

Specialized Training 1 at IREPA Laser

- Safety
 - Laser safety by IREPA Laser
 - ❖ With an exam to validate credits
 - Radioprotection
- Ethics
- Societal applications
 - Guest speakers (U. Koster, K.T. Flanagan, and more)
- Presentation skills
 - Each ESR presents their topic in 3-min thesis style
 - Each WP prepares a poster about their work
- Team building
 - Wine cellar visit
 - Visit to the Strasbourg Christmas Market



Continuous training



Doctoral training

- We promised to register all ESRs in a PhD program (*deliverable 6.2*)
 - Also for those working at labs or in the industry
 - All universities involved which are not Beneficiaries must be Partners!
- Each PhD program will be different (*milestone 28*)
 - The TO will provide certificates from our events to the need of the Doctoral Schools
 - Evaluations will be possible if required by some Doctoral School
- We suggested courses that could be followed by ESRs
 - We should check and update the list and make it available to the ESRs to consult

ESRs may not pay for any training!!
Any training expense MUST be paid from B2
Includes school fees, language courses, ...

Doctoral training

Institution	Academic Training	Complementary Training
CERN	The CERN Academic Training Committee arranges a number of academic training courses each year. https://hr-dep.web.cern.ch/official-bodies/academic-training-committee CERN accelerator School http://cas.web.cern.ch/	Language course (French, English, all levels); leadership (impactful communication, leadership coaching); Communication (communicating in an intercultural setting, how to guide tours/visits, the impact of your voice); Self-development (mindful vs mind full, balancing performance and pressure), Project management; Extended LabView trainings (CLAD, CLA, CLD, ...); GEANT4 for beginners and advanced users; ROOT for beginners and advanced users; Drupal, ANSYS, Catia
KUL	Theoretical Nuclear Physics (6 ECTS); Exotic Nuclei: Properties & Interactions (6 ECTS); Weekly Scientific Meetings (2 ECTS) Nuclear & Radiochemistry (3 ECTS)	Academic Writing for Science, Engineering & Technology (1-week intensive course); Falling Walls Lab (intensive outreach training leading to a 3-min thesis presentation in front of a professional jury); Interpersonal Skills (2-day training); Writing for a General Audience (2x 2hrs); Writing Scholarships & Grant Proposals (2 days); Exploitation of Research – Technology & Knowledge Transfer (5 days over 7 months)
JYU	Nuclear Physics (8 ECTS); Fundamentals of Theoretical Nuclear Physics (9 ECTS); Techniques for Nuclear and Accelerator-based Physics Experiments (10 ECTS); Nuclear Models in Accelerator-based Physics (5 ECTS); Lasers and Traps in Nuclear Physics Studies (5 ECTS); provided via the Master's degree programme in Nuclear and Particle Physics	The language department of the University of Jyväskylä provides a full service of courses for doctoral students on "soft skills", presentation skills, scientific writing and more. The teaching language is English.
JGU	Interferometry and quantum eraser, Fourier optics, particle identification in cloud chamber and Cerenkov counter, classical spectroscopy with prism and grating, particle traps and accelerators, nano physics using electron microscopes (5 days laboratory course, 4 ECTS)	
FSU	Theoretical Atomic Physics (6 ECTS); Computational Quantum Physics (4 ECTS); Lecture week on Advanced Atomic and Plasma Science	Soft-skill graduate week (3-4 days); Scientific Writing & Presentation
RUG		Courses offered by the graduate school: Presentation Skills, Scientific Writing, Scientific Integrity, Teaching Skills, Future Career Training
LUH IRS	Ultra trace detection and speciation of radionuclides environmental samples by mass spectrometry and electron microscopy; Isolation and characterization of hot particles; Radiochemical preparation of natural samples	Courses in health physics an practical radiation protection; Scientific writing; Advanced use of academic search engines and data bases
UNSW		Variety of professionalisation courses offered by the Graduate School
GANIL (PSIME)	Luminescent Materials and Lasers (2 ECTS); Optical Metrology and Laser Diagnostics (2 ECTS); Weekly Scientific Meetings (2 ECTS)	Scilab (2x 3 days); Python (2x 3 days); LaTeX (2x 3 hours)
UNIMAN	Hyperfine Interactions (video lectures); NTEC module N03: Radiation & Radiological Protection (lectures and lab work over a week)	

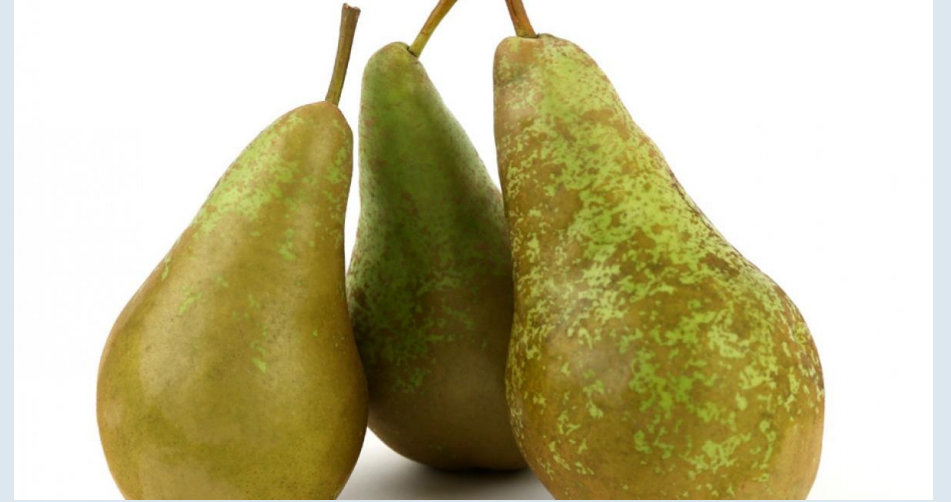


Individual Career Development Plan

- (*deliverable 6.1*)
- A document co-signed by the ESR and their promotor
- Describing the objectives of the ESR's work and their training to reach those.
- Includes description of **Research**, **Training**, **Secondments** and their relative importance
- Due ASAP when ESR starts, then reviewed each 12 months (*milestone 29*)
- The TO will
 - Provide a template
 - Collect all the ICDP
 - Follow up and review their progress

Beyond the training

- ❖ *Outreach follow up*
- ❖ *PhD Label*
- ❖ *Conferences*
- ❖ *Job opportunities*



Outreach follow up

- Outreach falls under WP7
- The ESR's involvement in outreach is tallied with '*Communication & Outreach Credits*' (COC)
- Each ESR must accumulate **100 COC** during their PhD.
 - The TO will tally and follow up on this progress along with the ICDP

LISA Doctoral Label

- Offering our training and philosophy to more PhD students than just our ESRs and acknowledging their involvement and training.

We plan to establish a **LISA doctoral label** that can be offered to other doctoral students sharing the research interests and training philosophy of the LISA network, to acknowledge the quality of their training. This doctoral label will last beyond the term of this project towards and puts this training philosophy into a longer term.

The specifics of the LISA Doctoral Label remain open for definition.

Conferences

- The TO will distribute announcements about conferences, workshops, fairs, ... that could be of interest to our ESRs whenever informed about anything.
- Isabelle will make email distribution lists for the ESRs, the affiliates PhD students, and many more, to keep everybody posted.
- We can only distribute the information that is given to us! **Please send any information on upcoming relevant events to Isabelle for proper diffusion!**

Conferences



Event title	Date and location or Frequency	Related WP	Satellite Meeting
International Conferences & Workshops			
The European Group on Atomic Systems (EGAS)	every year	2, 4	
Journée des Actinides	e.g. Apr 2019, Erice (IT) every year	2, 4	
ECAMP: European Conference on Atoms, Molecules and Photons	e.g. April 2019, Florence (IT) every 3 years	2, 4	
CLEO: Laser Science to Photonic applications	May 2020, San Jose (USA) every year	2, 4	
PLATAN: International Conference Merger of the Poznań Meeting on Lasers and Trapping Devices in Atomic Nuclei Research and the International Conference on Laser Probing	e.g. May 2019, Mainz (DE) every 3 years	2	LISA: new laser technology to enable the study of the heaviest elements
ICPEAC: International Conference on Photonic, Electronic and Atomic Collisions	e.g. July 2019, Normandy (FR)	2, 4	
INPC: International Nuclear Physics Conference	e.g. July 2019, Glasgow (UK) every 3-4 years	3, 5	LISA: Investigating the ground-state properties of the heaviest elements
International Conference on the Chemistry and Physics of the Transactinide Elements	e.g. Aug 2019, Wilhelmshaven (DE)	4, 5	
Mazurian Lake Conference on Physics	Sept 2019, Piaski (PL) every 2 years	5	
REHE: International Conference on Relativistic Effects in Heavy-Element Chemistry and Physics	Sept 2019, Assisi (Italy) every 2 years	3, 4	LISA: supporting nuclear ground-state properties research with advanced atomic physics calculations
ICAP: International Conference on Atomic Physics	July 2020, Toronto (CA) every 2 years	2, 4	
Extremes of the Nuclear Landscape	Aug 2020, Zakopane (PL) every 2 years	5	LISA: establishing the ground-state properties of SHE
ARIS: Advances in Radioactive Isotope Science	every 3 years	5	LISA: symbiosis between atomic and nuclear physics for the study of the heaviest elements
EURORIB	every 3 years	2, 5	
EuNPC: European Nuclear Physics Conference	every 3 years	3, 5	
EMIS: Electromagnetic Isotope Separators & Related Topics	every 3 years	2, 3	LISA: advancing the ISOL techniques for the heaviest elements
National Conferences & Workshops			
NUSTAR Annual Meeting	every year, GSI (DE)	4, 5	
SPiRAL2 week	every year, GANIL (FR)	2, 5	
IOP Nuclear Physics Conference	every year, (UK)	2, 4, 5	
DPG Spring Meeting – Nuclear	every year, (DE)	3, 5	
DPG Spring Meeting – Atomic	every year, (DE)	3, 4	
ISOLDE Workshop & Users Meeting	every year, CERN (CH)	2, 3, 5	
Fysikdagarna	every other year (SW)	2, 3, 4, 5	
International Exhibitions and Trade Fairs			
SPIE Photonics West (SPIE Photonics West Exhibition & the LASE conference)	Feb 2020, San Francisco (CA, USA) every year	2	
Laser World of Photonics	Jun 2020, Munich (DE) every 2 years	2	
InterOpto International Optoelectronics Exhibition	Oct 2020, Tokyo (JP) every year	2	

Job opportunities

- Same principles as for the conferences
- **Any information provided to Isabelle** will be redistributed to the ESRs and affiliates, even beyond the end of their employment – if they provide a forwarding address.
- Showing that our ESRs are gaining employment quickly after the completion of their training is a proof of relevance and quality of our training and will be key in our final reporting.

- **The TO concerns itself with**
 - The network-wide training events
 - The doctoral trainings
 - ❖ Doctoral Schools
 - ❖ ICDP
 - Following up with the students via a centralised communication channel

- **The TO will need your help with**
 - The local organisation of the events
 - Keeping the training offers up to date and accurate
 - Informing us about opportunities that may interest any ESR