Task 5.4 : Training

"Hands-on training of University and Graduate students as well as Researchers to the facilities.
Learn how to optimally exploit their potential"

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WP5
Open Access

WP Coordinator Maria Borge

Task 1	Task 2	Task 3	Task 4
Diversity and Dissemination	Open Data	Machine learning	Training
Gender balance	Data availability from the facilities	Machine Learning for Accelerator and Plasma (from WP3)	Hands-on training of University and Graduate students as well as Researchers to the facilities Learn how to optimally exploit their potential
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Task 5.4 : Training

Responsible : Livius Trache

Objectives: to forge a **coherent, stable, and predictable system of training and formation schools and events** that uses the strengths and capabilities of all partners

Plan: 2 set of schools

Basic Training (1/year) to take place at smaller accelerator facilities that allows hands-on activities: IFIN-HH, Catania, HIL Warsaw, INCT, CERN/CLEAR etc. *Coordinated by IFIN-HH.*

Advanced Training (4 events at larger, state-of-the-art facilities: CERN ISOLDE (2023), GANIL (2024), GSI/FAIR (2025) and IFIN-HH (2026). Two of these will be dedicated to the **technical and engineering staff.** *Coordinated by IEM-CSIC*.

We proposed training schools of 7-10 days, open to 15-20 students, from master's degrees to PhD students or even post-docs who are up to 3 years after their degree.

To coordinate the activities of this task we will select a **Training Scientific Board (TSB)** in the first 6 months of the Euro-Labs project

Milestones and deliverables

M5.4.1 – selection of the Training Scientific Board. M6 of Euro-Labs
D5.4.1 – report on activities after 24 months, including follow-ups from participants. M24
D5.4.2 – final report. M48

Basic ideas

We need to keep the connections, coherence, dialogue, leadership … and the community forged by the past EC grants ENSAR2, ENSAR, EURON, etc… To understand and use smartly the conditions of this new framework

Several proposals on "TRAINING" suggest:

- To forge a **coherent, stable and predictable system of training and formation schools and events** that uses the strengths and capabilities of all partners
- It should target the **new generations of researchers (training** and **formation)**, but address also the needs to **train the technical and engineering staff –** specialization is the keyword
- It should remain open to the need for *"cross-disciplinary fertilisations and a wider sharing of information, knowledge and technologies across scientific fields "*
- Should **use the complementarity between larger and smaller facilities:**
- Basic training schools at smaller facilities to include beamtime
- Advanced training events at larger facilities to include reviews of advanced installations, experimental setups, DAQs, etc.
- It should address the **need of cooperation between fundamental research and applications**
- Should **not reinvent the wheel** = should use and strengthen the **existing traditions**: topic schools, regional schools open internationally, etc. For e.g. students will be sent to successful hands-on school such as the EDIT (Excellence in Detectors and Instrumentation Technologies) school that moves in Europe, Asia and North America (related to activities in WP4).
- Should avoid unnecessary duplications (but not redundances).
- Should advertise their i**nclusion in PhD programs** across Europe – this must be invented!
- These are ***relatively inexpensive contributions*** to the e**ffective use of Research Infrastructures**, to their **wider use in the community** and to **their upgrade(s)**.

-**Participation should be mostly in-person, but hybrid participation can be considered – but we should connect to 'today': internet, YouTube courses, etc…**

WP5 Open Access Task 5.4 : Training
resp: IFIN-HH and IEM-CSIC

Purpose: “Hands-on training of University and Graduate students as well as Researchers to the facilities. Learn how to optimally exploit RI’s potential”

Training and **Formation** of new generations of users and facility builders

First order of business: select Training Scientific Board:

11 members, including Task Leaders

- to coordinate task activities (within proposal’s margins, adapted to communities’ needs)
- Choose forms of activities, hosts/places and organizers
- Coordinate the schools’ curricula and selection of trainers and students

In proposal: training schools of 7-10 days, open to 15-20 students, from master’s degrees to PhD students or even post-docs who are up to 3 years after their degree.

- Funds to be used as seed money!

2 **schools for technical and engineering staff**: support and increase highly qualified personnel (that our facilities badly need)

Forge **closer ties** between the NP community and the HE Accelerator and Detector communities?!

Training Scientific Board

- **Propose a TSB to serve as steering committee, of 11 members, including task leaders:**

  Livius Trache - IFIN-HH, Romania - Task Leader

  Maria Borge – IEM-CSIC, Spain – WP5 Coordinator

  Ilias Efthymiopoulos - HEP Accelerators

  … - HEP Detectors ?!

  Christoph Scheidenberger – GSI/FAIR

  Hanna Franberg-Delahayes – GANIL (school for technical and engineering staff – a good idea)

  Magdalena Kowalska - CERN/ISOLDE

  Rosana Depalo - INFN and contact with ChETEC-INFRA

  Poland – Pawel Napiorkowski – HIL& INCT Warsaw could organize a basic school

  … Jyvaskyla Univ ?!

  Frank Tecker - HEP Accelerators ? !

TSB responsibilities

- Training Scientific Board (TSB) **will select the activities and the organizers**
- "Activities will be selected based on the following criteria:

- Target the new generations of researchers (therefore FORMATION), as well as the specialized training of the technical and engineering staff.
- Address the need of cooperation between fundamental research and applications.
- Use the complementarity between larger and smaller facilities.

- The need for *"cross-disciplinary fertilisations and a sharing of information, knowledge and technologies across scientific fields"* will be particularly addressed strengthening also the existing traditions of topical schools, regional schools, open internationally, etc. to avoid unnecessary duplications. For e.g. students will be sent to successful hands-on school such as the EDIT (Excellence in Detectors and Instrumentation Technologies) school that moves in Europe, Asia and North America (related to activities in WP4).

- Thanks!

- For listening now and for contributing with ideas later