

Excellent research through training innovations

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Overview




Background

Benefits of ITNs ?

How to do it ?

Good Track Record

- Initiator and Coordinator of 3 ITNs:

-  (2008-2012...)
4.2 M€, 22 Fellows, 32 partners
-  Since 2011
4.6 M€, 19 Fellows, 35 partners
-  Since 2011
6 M€, 23 Fellows, 34 partners

 Largest Marie Curie networks in accelerator community.

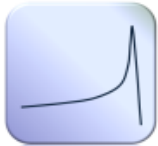
“Some of the most outstanding results of CI to date.” (SAC, 2013)

“Very important role in maintaining the international reputation” (science review, Liverpool, 2015)

Starting now:



- (online) beam monitors
- Improved calorimeters and Si detectors



- Enhanced Monte Carlo codes (FLUKA)
- Systematic studies into e.g. ion effects



- Common software bus
- Improved beam delivery schemes



‘Success stories’ (EC)

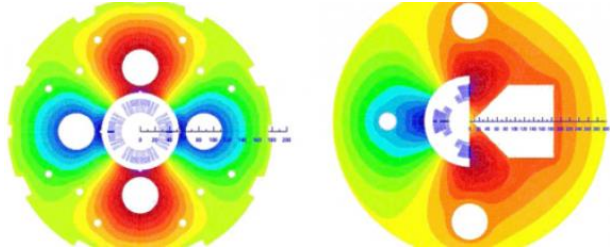
- Fellow R&D
- Researcher skills training
- Dissemination and Outreach
- Project Coordination & Management



➔ Also recognized as ‘best practice’ by HEA, UKRO, etc.

Excellent Science (CI examples)

E. Cruz

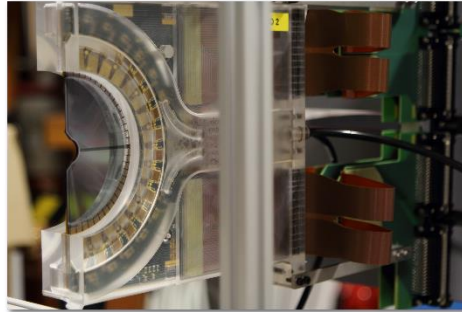


OPAC

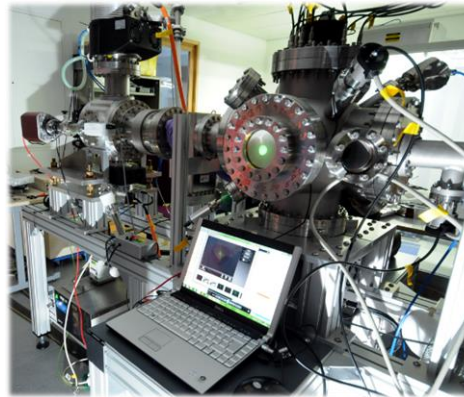


M. Fernandes

T. Cybulski

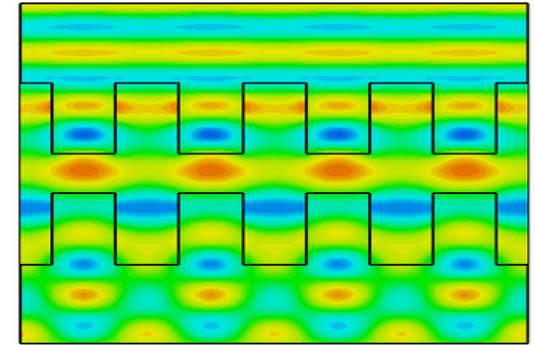


DITANET

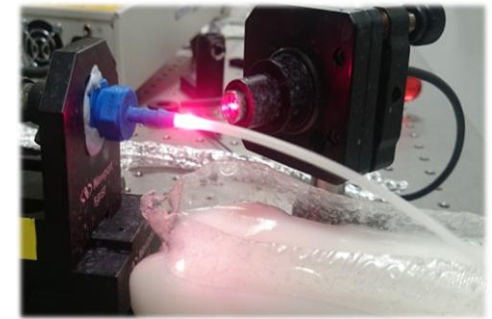


M. Putignano

Y. Wei, A. Aimidula



LANET



A. Alexandrova

Excellent Training

Time	Monday	Tuesday	Wednesday	Thursday	Friday	
8.30 – 9.30	Introduction <i>Paired Introductions: Participants generate flip chart poster of interview partner then present them to whole group.</i>	Career Prospects in Industry & Academia Independent Teamwork Dreamer, Realist, Critic <i>Teams to come up with a response to the challenge Teams choose their project topic and plan the team-working process.</i>	Presentation skills <i>Introduction</i> <i>Participants will give 5 minute presentation in small groups about their PhD projects</i> <i>All presentations will be video recorded</i> <i>Feedback by:</i> (1) presenter, (2) (2) fellow students, (3) Tutor	Advanced Project Management Independent Team Work <i>Teams work on the project according to their plan</i>	Introduction to Peer Review The Presentation <i>(Followed by Questions)</i>	
9.30 – 10.30						Peer Review preparation
10.30 - Break	Presentation skills <i>Basics of research presentations – an introduction to the Do's and Don'ts of conference presentation</i>	Target Setting Milestones & deliverables session – assessment of targets for the project		Chairs meeting <i>Present summary of report structure Teams review project following feedback</i>	Peer Review <i>Teams present assessment and feedback</i>	
11.00 – 12.30						International collaboration
12.30 – 13.30	Lunch					
13.30 – 15.00	Introduction to Project Management <i>Theoretical Background</i> <i>Action: Plan PhD project</i> <i>Update description</i> <i>Stakeholder analysis</i> <i>Milestones</i> <i>Deliverables</i>	Scientific Writing <i>Focus on writing research papers.</i> <ul style="list-style-type: none"> The writing process and structure Thinking about the audience Target journals Tips <i>Writing for the general public.</i>	Visit to Cockcroft Institute <i>Introduction</i> <i>Tour of facilities</i>	Network diagrams <i>(Understanding dependencies)</i>		
15.00 – Break						
15.30 – 16.30						Independent Team Work <i>Teams continue collaborating on project.</i> <ul style="list-style-type: none"> Produce report Create presentation
16.30 – 17.30						Assessing Risks
					Forward Planning	

Course Structure

- PhD project-specific part
 - Presentation skills
 - Scientific writing
 - Project management
- Generic skills through outreach project
 - Team working
 - Proposal writing
 - Peer review
 - Working under (time) pressure



„Best practice“

“I hadn't really thought of myself as a project manager until today!”

Event Organization

- >10 International Schools in specific research area and complementary skills;
- >20 Topical Workshops on focused R&D areas for 30-120 experts;
- 3 International Conferences
- 2 Symposia



Conference contributions

■ Conferences 2012

- IPAC stand
- BIW, LAP, etc.



■ Conferences 2013

- FEL, IPAC, IBIC, HEA L&T, etc.
- IBIC stand

■ Conferences 2014

- IPAC stand, ESOF (3)
- IBIC, IPAC



■ Conferences 2015

- IPAC stand, IBIC
- Symposium

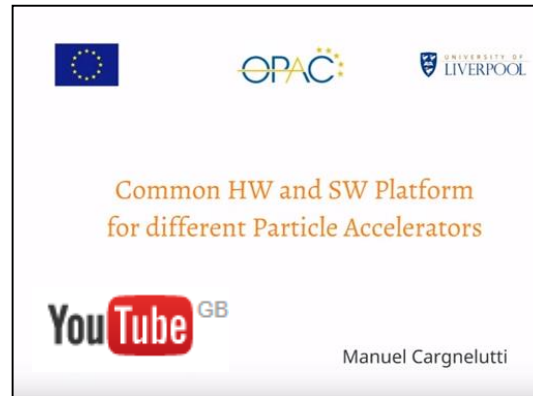
Outreach & Communication



- Newsletters incl Accelerating News
- Various project websites
- Social media and print publications (leaflets, brochures and targeted articles)
- Huge file repository in CERN indico

Public engagement

- Fairs & conferences
- Project videos
- School visits
- Symposium on Accelerators & Lasers for Science and Society, Liverpool Convention Centre, 26 June 2015



Common HW and SW Platform
for different Particle Accelerators

YouTube^{GB}

Manuel Cargnelutti



LASERS AND ACCELERATORS FOR SCIENCE & SOCIETY SYMPOSIUM
Liverpool Convention Centre, June 26th 2015 (p.m.)

Particle accelerators have numerous applications across many fields including fundamental research, medicine, electronics, environment and energy.

World-renowned scientists will present highlights in accelerator and laser research at this Symposium and the electronic impact these both have had on science and society.

They will be joined by Fellows from the European research infrastructures ESRF and LCLS. They will present the results of their research and share their excitement for science.

This event is free of charge - advance registration is required.

Registration deadline: May 15th 2015
www.eas-project.eu
www.lcfed.eu

Administrative Support

- Promotes CI research, training and administration internationally
- Contributions to IPAC, HEASTEM, IBIC, ..
- Provided training to admins from across Europe
- Key part also of other projects



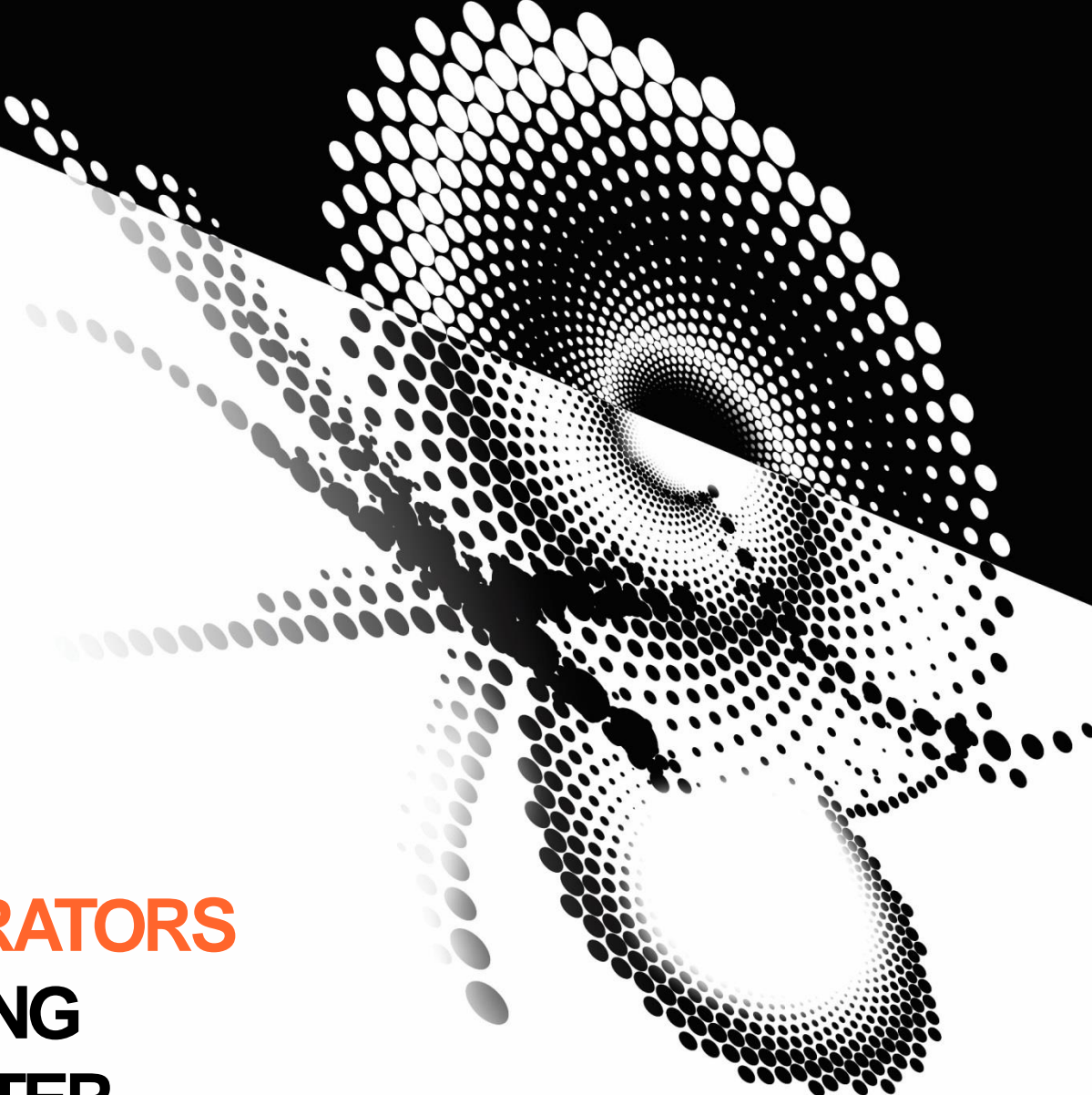


Joining the Community



Ok,...this sounds great, but...

- CALIFES is an existing facility;
- It all happens at CERN, how does this match the requirement of international collaboration ?
- We would like to focus on cutting edge research / innovative training !
- What would be the benefits for the wider community ?
- ...



ACCELERATORS
VALIDATING
ANTIMATTER
PHYSICS

Antimatter Facilities



- Better facility design
- New beam handling techniques



- Online diagnostics
- Improved detectors



- Experiments: Novel cooling schemes
- Spectroscopy on antihydrogen.

Summary: Marie Curie ITNs

- have been perfect basis for excellent science;
- can help boost reputation of infrastructure;
- allow to organize numerous events for wider research community;
- include outreach to highlight importance of accelerator science;

There should be space for more – CA (LIFES) RTI ?