

Conference on Beam Diagnostics

Carsten P. Welsch







What is DITANET ?



- Information about all projects / trainees
- Network-wide activities
- Dissemination and international partnership







What is DITANET ?

- Largest-ever EU funded training network in beam instrumentation and diagnostics;
- Development of beyond state-of-the art diagnostics for accelerators;
- Aim: Training of early stage researchers (18 ESRs, 3 ERs)
- Recognized importance of beam diagnostics at European level !

(only 68 from 905 selected - with 11 in physics)

C.P. Welsch, Proc. BIW 2010, IPAC 2011





The DITANET Consortium

Network Participants



HIT















Associated Partners





C.P. Welsch – DITANET International Conference





Adjunct Partners

Part of a long term strategy – DITANET is growing



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What are the project's main aims?

- Training of fellows through cutting-edge research;
- Improve their career perspectives, impact positively on their employability:
 - React to challenges from global labour market;
 - Contribute to reaching EU objectives (Lisbon);
 - React to changes induced by Bologna process.
- Close collaboration with industry partners;
- Initiate new community events;
- Secondment program between countries/sectors.







DITANET Schools (2009 and 2011)

- Beam Diagnostics, held in London and Stockholm
- > 70 participants and lecturers
- Lecturers from across consortium.

Time	Monday	Tuesday	Wednesday-RAL	Thursday	Friday
8:30 9:30		Definition of Particle Beams (C.P. Welsch)	Board coaches	Emittance (G. Blair)	Special Session - only for DITANET trainees -
9:30 10:30		Current (J.C. Denard)	Transverse Beam Profile 1 (E. Bravin)	Position I (P. Forck)	Part. Detection (A. Drouart)
11:00		Energy (S.Bernal)	Transverse Beam Profile 2	Position II (P. Forck)	e ⁻ cloud Diagnostics
12:00			(E. Bravin)		(M. Covo)
12:00		Longitudinal Beam Profile I	Beam Loss (Kay Wittenburg)	Tune (F. Zimmermann)	Industry I (Introduction, H. Smith, A. Beunas)
13:00		(T. Lefevre)			A. Deunic)
14:30	Welcome / Introduction	Study Session split in smaller groups		Study Session split in smaller groups	Industry II (V. Höfling, T. Chapman
15:30	DITANET				C. Bocchetta)
15:30	Introduction to Accelerators I	Longitudinal Beam Profile II	Visits	Poster Session	Conclusion
16:30	(H.Wiedemann)	(P. Karataev)			
		•			•
17:00	Introduction to	Seminar: Appl. of		Seminar: Acc. for	
	Accelerators II	Synchrotron Light		medical	
18:00	(H.Wiedemann)	(H.Wiedemann)		applications (A.Peters)	

CERN Indico: 55242, 112220









DITANET Topical Workshops

- Low energy, low intensity beam diagnostics (GSI, HIT)
- Longitudinal beam profile measurements (CI)
- Ultra cold electron beam diagnostics (CI)
- High intensity proton beam diagnostics (CEA)
- Technology transfer (i-tech)
- Detector technology (CNA)

Coming up:

- Beam loss monitoring (DESY)
- Beam position monitoring (CERN)

Full information: Homepage and CERN indico.







Employability and networking

Complementary skills school, Liverpool

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30		Project	Working Within	Time	Scientific Writing
9:30		Management I	an International	Management	
			Network		ThinkWrite: Pete
		Fistral: Paul	Guided	Ruth Bass	Moore
		Lyden	Discussion		
9:30			Building the		
10:30			Bridge to the		
			Industry Sector		
			Carsten Welsch +		
			speakers		
			speakers		
11:00	1	Presentation	Project	Problem Solving	Scientific Writing
		Skills II	Management II	Techniques	Scientific Writing
12:00		Skiis II	Ivianagement II	recuniques	ThinkWrite: Pete
		Carsten Welsch	Fistral: Paul	Ruth Bass	Moore
		Carstell Weisell	Lyden	ICUUI Dass	WIGOIC
			Lyddi		
12:00				Self	Conclusion
13:00				Management	
10.00					Carsten Welsch
				Ruth Bass	
14:00	Welcome/Introduction	Small groups:	Visit to CI /	General Patent	
15:00	of participants	Presentation	Daresbury	Issues and	
15:00	-	Skills Individual		Intellectual	
16:00	Carsten Welsch	assessment of		Property Right	
10:00		participants			
		through 5 min.		Marks-Clerk:	
		short talks		Peter Roberts	
16:30	Presentation Skills I			Work/Life	
				Balance	
17:30	Carsten Welsch			2-manoe	
				Ruth Bass	
				read baby	











Dissemination: DITANET Website

University: Home | A-Z Index | Staff 💼 | Students

SEARCH

Website Courses

44	UNIVERSITY OF
7	LIVERPOOL

DITANET

You are here: University Home > DITANET home

DITANET home	TANET home DITANET	
Network structure Projects Vacancies Documents News	The development of novel Diagnostic Techniques for future particle Accelerators is the goal of a new European Network (DITANET) installed within the Marie Curie ITN scheme.	of beam instrumentation, it is impossible to operate a particle accelerator - let alone optimize its performance.
Events Beam Instrumentation Booklet Administration Downloads Links	DITANET	
Web links	In this frame, several major research centers, leading universities, and	
Partners Area and DITANET Blog: Login to VOCAL DITANET photo album	partners from industry will develop beyond-state-of-the-art diagnostic techniques for future accelerator facilities and jointly train students and young researchers within a unique European structure.	

DITANET International Conference - Accelerator **Diagnostic Techniques: Seville** 9th-11th November 2011

DITANET PRIZE - €1,000 cash prize Application details





www.liv.ac.uk/ditanet



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Quarterly Newsletter

- Part of the dissemination strategy
- Contribution from all network partners
- Announcement and review of activities
- Subscription by email to coordinator/manager

NEWSLETTER October 2009 Issue 1	-DIT	'ANE'			
Special Interest News: - Announcement of Annual DITANET Prize - Recent Publications	accelerator; they reveal of the properties of a beam and how it behaves in a	searchers in this field, is of elevance far beyond the uure field of particle ac- selerators.			
Individual Highlights Recent Events 2 Forthcorning Events 3 Network 4	any accelerator compli- let above optimise its pe- formance. Beam dia notistics ia also a rich fie- in which a great variety - physical effects are mac- use of, and consequent provides a wide and sol base for the training - young researchers. Mor over, the principles th are used in any bea monitor or detector ent neadily into industrial a	NEWSLETTER July 2011 Issue 8 Special Interest Articles:		FANE Bright for Acce	1 X X
Publications & Notice Board 7	plications or the medic sector, which guarantee that training of young # DITANET Prize 2 / The network announce its first Prize in Beam I annositic Techniques.	- DITANET Conference in Seville - Nov 911. 2011	In the present climate of continuing economic problems and funding uncertainties, recent new about new accelerator- based scientific infrastructures were highly welcomed by the particle accelerator community and facility users from around the work:	research at the cutting edge. The recently updated ESFRI roadmap further underlines the importance of particle accelerators for essentially every scientific discipline; and beam instrumentation being at the very heart of all these	beams, detectors fr exotic beams ar instrumentation fr
	It will award a 1,000 cash prize for an ox standing contribution t the field of beam instri	Individual Highlights: News from DITANET Partners 2	With the approval of the SuperB factory by the Italian government, as well as additional accelerators at CERN, the HEI-ISOLDE facility and the low energy storage ring ELENA that shall take animatter research to a new level, the road seems	Clearly, these important infrastructures will only be able to demonstrate their full potential if a full set of beam diagnostics will be	I have used as the
		Events 6 Vacancies 7	DITANET Internat ABSTRACT SUBM	ional Conference ISSION OPEN!	
			Abstract submission for the DITANET International Conference on Acceler- ator Instrumentation and Beam Diagnostics is now open and needs to be made through the conference web site. The debitistics of the the debitistics of the the August I. The number of August I. The number of places is immed so pleases register early to avoid disappointment.	The conference will be hosted by the University of Seville/Centro Nacional de Aceleradores (CNA) and will provide ample opportunities for critical discussions of research outcomes, exchange of	scholarships will be mad available for researcher from outside the network Application details an more detailed informatio can be found at:







Conference: Special Awards

- Prizes will be awarded for the <u>best talk</u> and <u>best</u> poster at the end of the conference;
- DITANET prize winner will be announced at the end of the conference.

Enjoy the conference & discussions !



