

CERN

European Organization for Nuclear Research

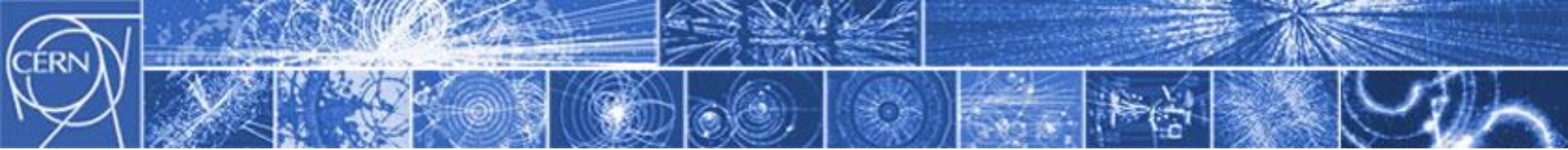
Organisation Européenne pour la Recherche Nucléaire

CERN TECHNICAL TRAINING: Courses on EUG tools

Valeria Perez Reale (HR-LD)

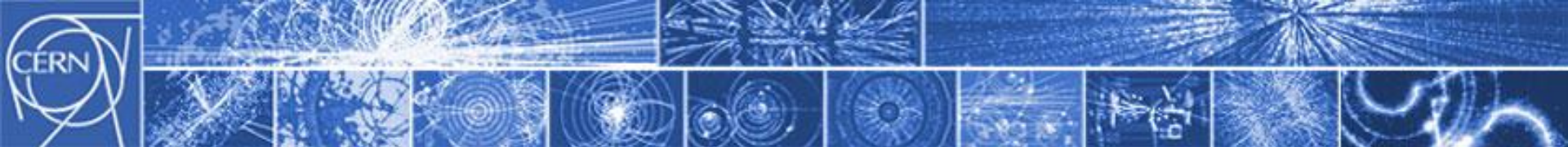
On behalf of Technical Training

20 June 2012



Overview

- Learning and Development Group News
- Table of Technical Training EUG contact Experts
- List of Courses: Labview, Altium, ESD, VHDL, Siemens, Schneider, RoHS, EMC, Signal Integrity, MAGNE, MATLAB
 - Supplier(s)
 - Statistics per department
 - Issues/Requests
- New courses: LTE, HTE, High Speed & EMC



Technical Training (TT) News



Pascale Goy
Head, Learning and Development Group
Management & Communication



Silvia Schuh-Erhard
Technical Training
Responsible



Valeria Perez Reale
Technical Training
Officer

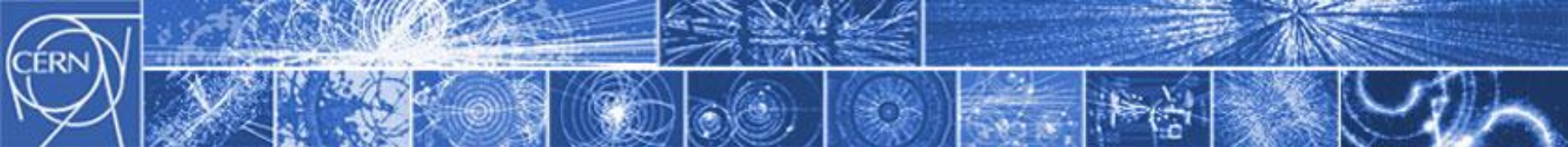


Elise Romero (50%)
Technical Training
Assistant



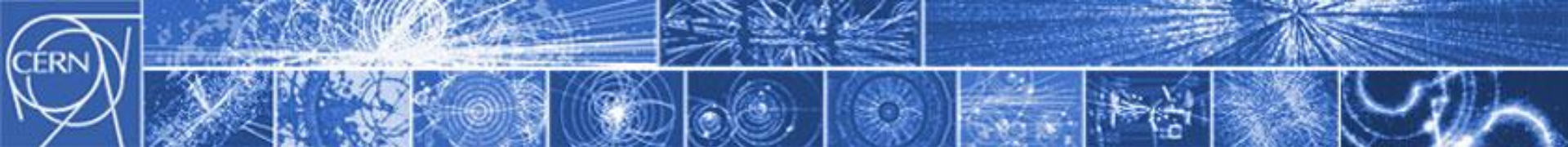
Eva Stern
Technical Training
Assistant

- Since September 2011 Pascale Goy has replaced Sudeshna Datta-Cockerill as Learning and Development (LD) Head
- LD is now a Group inside HR Department (since 1/2012)
- Silvia Schuh is on annual leave until September 2012 (Valeria Perez-Reale replacing as TT Responsible)
- Eva Stern is the contact person for electronic courses logistics.



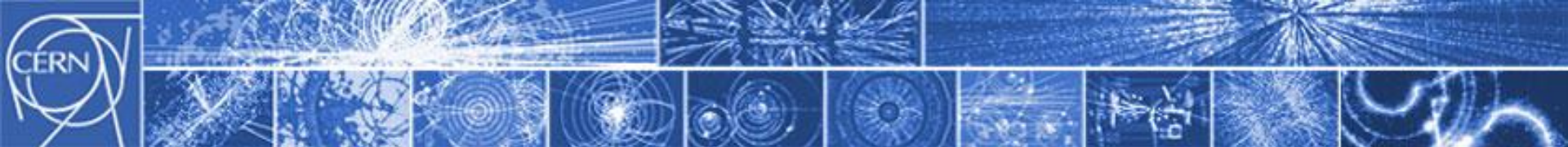
DTOs

BE	Paula CARVALHO-CORREIA (Eric Montesinos)
DG	Raphael OTZENBERGER
EN	Ofelia CAPATINA (replacing Vinod Chochan)
FP	Marie-Claude PELLOUX
GS	Doreen KLEM
HR	Florence LICCI-OUNNOUGH
IT	Maria DIMOU
PF	Claude LAMBOLEY
PH	Nathalie KNOORS
TE	Dorothee DURET (Maria LLORENTE)



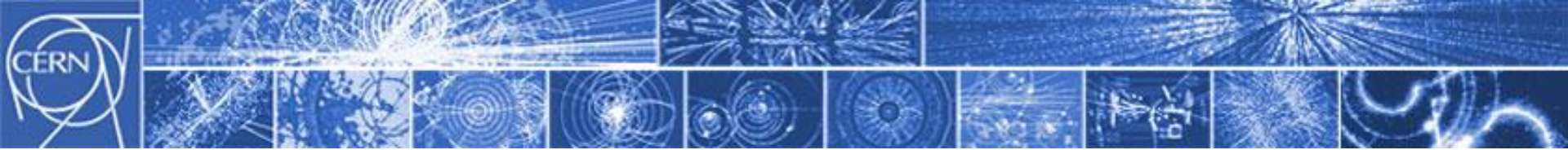
Technical Training Contacts

Training	Contact	Name	Dept.	EUG Member
LabView	Users	Alessandro Raimondo	EN/MME	no
Altium	Users	Pierre Baheler	IT/PES	yes
		Betty Magnin	TE/MPE	yes
		Michael Husejko	GS/ASE	yes
		Michael Husejko	GS/ASE	yes
VHDL		John Evans	IT/PES	yes
Siemens		Enrique Blanco	EN/ICE	no
		Jeronimo Ortola	EN/ICE	no
Schneider		Jean-Michel Beckers	EN/ICE	no
RoHs		Betty Magnin	TE/MPE	yes
EMC		Friedrich Szoncso	DGS/DI	no
ESD		Betty Magnin	TE/MPE	yes
MAGNE		Stephan Russenschuck	TE/MSD	no
Signal Integrity	???	????	???	???
MatLab		John Evans	IT/PES	yes
TR-CIEL	???	????	???	???
Radiation Effects		Markus Brugger	EN/STI	No
		Giovanni Spezia	EN/STI	No
	???	Yves Thurel	TE/EPC	No



LabVIEW

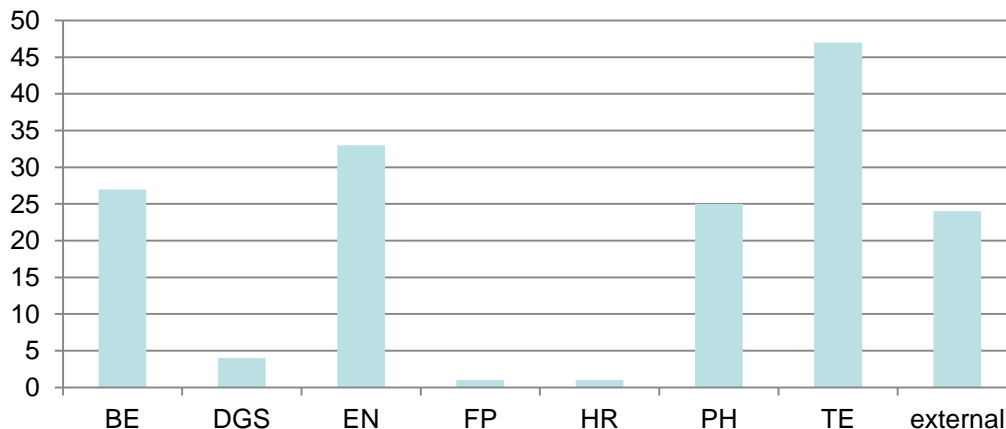
Type	Course	Next Session	Duration	Language	Frequency
Certification	Certified LabVIEW Associate Developer (CLAD)	to be scheduled	1 hour	English or French	
Certification	Certified LabVIEW Developer (CLD)	to be scheduled	4 hours	English	
Training	LabVIEW Data Acquisition and Signal Conditioning Course	to be scheduled	2 days	English or French	1/year
Training	LabVIEW Real Time and FPGA	to be scheduled: November	5 days	English or French	Merged course: first time this year
Training	LabVIEW for Experts	24-Sep-12 to 28-Sep-12	5 days	English	1-2/year
Training	LabVIEW for beginners	to be scheduled	3 days	English or French	3-4 /year



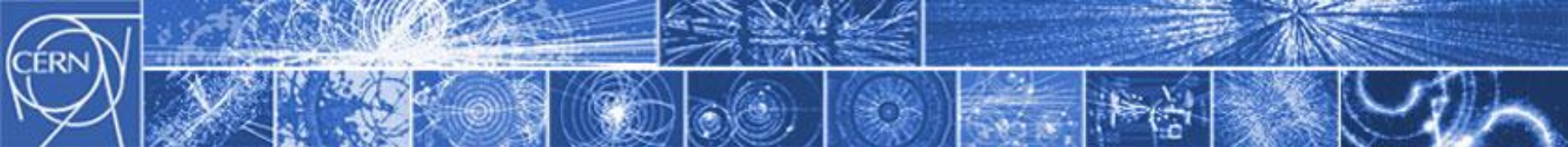
LabView

- National Instruments (Switzerland) ~ 10 years
- Trainer Joseph Tagg → courses bilingual
- Beginners (CERN specificities: 3rd day given by CERN expert)
- In collaboration with Alessandro Raimondo, Technical Training merged some courses and removed others from programme

2008-Present

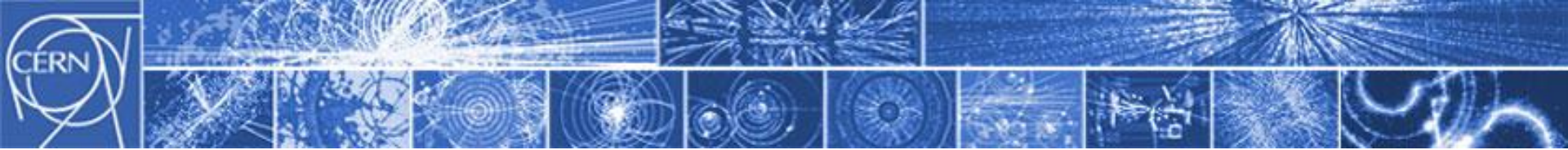


- Have trained 162 participants since 2008 (1000 since beginning)



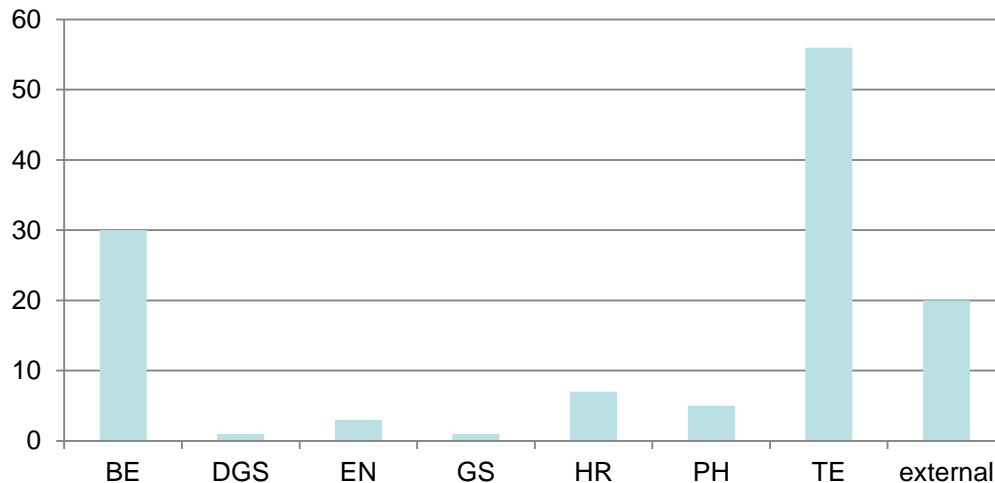
Altium Designer

Course	Next Session	Duration	Language	Frequency
Altium Designer – Advanced training for experts	to be scheduled	1 day	French	Once every 2 years
Altium Designer – Saisie de Schemas	to be scheduled	2 days	French	NEW
Altium Designer 6.0 – Foundation & Board Implementation	12-Sep-12 to 21-Sep-12	5 days	French	2 /year
Altium Designer- For users of other printed circuit board software	to be scheduled	4 days	French	1 /year

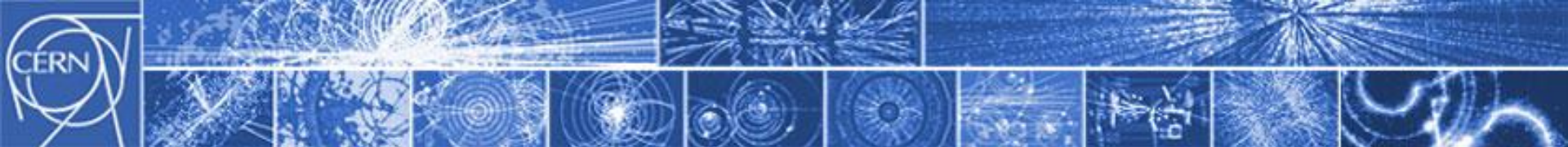


Altium Designer

- Supplier: POLGONE (France)
 - Trainer: Sylvie Bugnand bilingual (courses in French)
 - Good feedback from participants
 - New course: 124ALT04: Altium Designer - Saisie de Schemas (2j)
 - Please make publicity in your groups
- https://cta.cern.ch/cta2/f?p=110:9:2895011502968157::NO::X_COURSE_ID,X_STATUS:4505,D



Trained 123 participants
since 2007

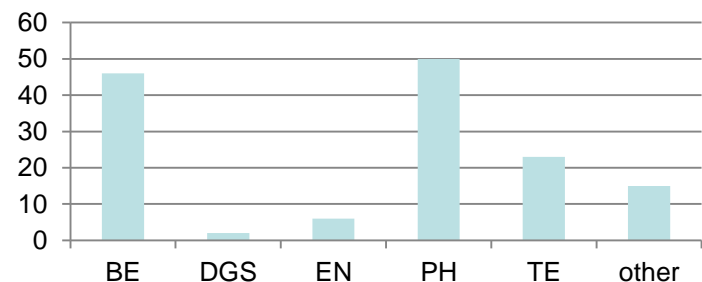


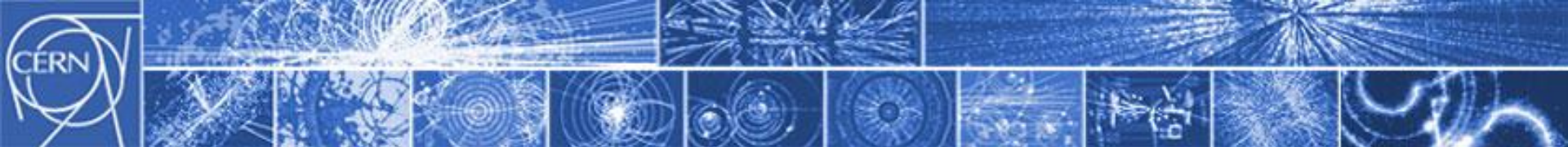
VHDL

Course	Next Session	Duration	Language	Frequency
Comprehensive VHDL for FPGA Design	08-Oct-12 to 12-Oct-12	5 days	English	1 / year
Expert VHDL for FPGA Design	to be scheduled	5 days	English	1/year (last session May 2012)
Introduction to VHDL	to be scheduled	1 day 4 hours	English	As needed

- Supplier: DOULOS for expert and comprehensive
- Concerns from some departments on course prices (~2500-3000 CHF)
 - best quality-price compromise
- Introduction to VHDL (CERN trainer: Michal Husejko, 2 sessions since 2011)
 - Very good feedback on new format (theory, intro to tools)

VHDL since 2007

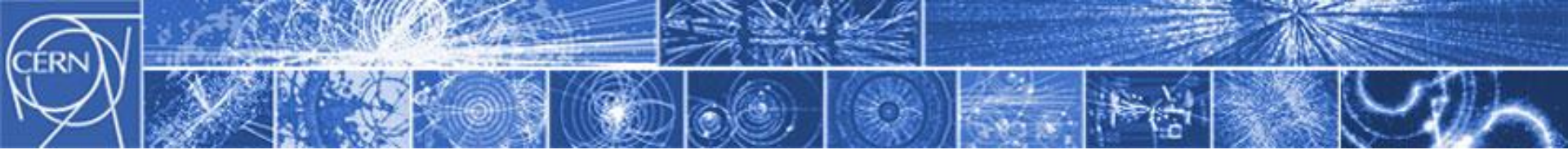




MAGNE

- Electromagnetism for magnetic measurements and design
- Training given by external supplier in the past (CEDRAT, 3 days): feedback unsatisfactory
- Proposal: Three day lectures (visits) organized by CERN expert in the field (S. Russenschuck)
 - Tentative schedule September/October 2012

<i>Draft Schedule</i>	Day 1	Day 2	Day 3
9:00 - 10:30	Vector algebra and foundations of EM fields (Russenschuck)	Vector analysis and the solutions of the Laplace equation (Russenschuck)	Time transient fields; inductance, energy, eddy-currents (Russenschuck)
11:00 - 12:30	Calculation of magnetic circuits; normal conducting magnets. (Russenschuck)	Field harmonics (coil dominated magnets), Superconducting Magnets (Russenschuck)	Magnetic fields and accelerator performance (Todesco)
14:00 - 15:00	Conceptual EM design of normal conducting magnets (Zickler)	Magnetic materials (Sgobba)	Numerical field computation (Auchmann)
15:30 - 16:30	Magnetic Field Hazards (Buzio)	Superconductors (Bottura)	Magnetic measurements (Walckiers)
17:00 - 17:30	Visit to 181 (NC magnets)	Visit to Fresca test facility	Visiti to ISR8 (Magnetic measurements)



RoHS

- «Impacts de la suppression du plomb (RoHS) en électronique»
- Last session held in 2007. New supplier found IFTEC (1 day, content discussed with Betty M.)
- Next probable session in October

Electrostatic Discharge Protection

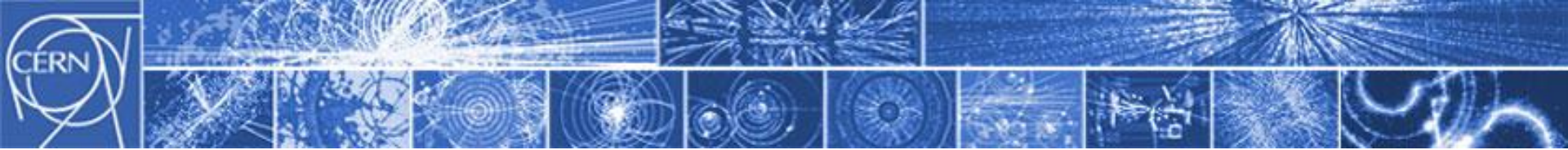
- Supplier STATECH SYSTEMS (Switzerland). (1/2 day) 1/year
- Publicity necessary, min n° participants 23. Needed for July (TE-EPC)

CAO: Allegro Design Entry & Simplorer

- Last session of these courses 2007 (ANSOFT) and 2010 (CADENCE)
- Participants in waiting list since then, but never reached minimum to open session
- Close courses and send participants external?

MatLab

- Suspended training due to negotiations with MatLab (John Evans as contact)
- Advised participants to get o MatLab Suisse

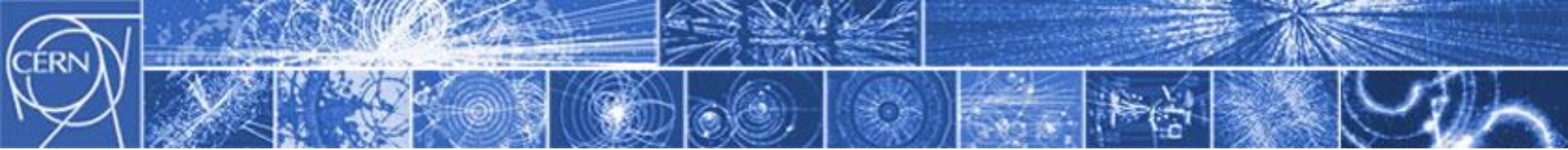


High Speed Digital Eng. & EMC

- Oxford Summer Lecture programme:
<http://www.conted.ox.ac.uk/courses/professional/staticdetails.php?course=216>
- Asked Departments for feedback. Interest in Howard Gordon's:
 - **High-Speed Digital Design 26-27 June 2012 – Dr. Howard Johnson**
 - **High-Speed Noise and Grounding 28-29 June 2012 – Dr. Howard Johnson**
- Oxford does not allow us to connect live this year. We will have the possibility to stream recording of training with a session of live questions to Dr. Johnson
 - More news in September 2012

Signal Integrity

- Signal Integrity: Advanced High-Speed Design and Characterization (5days)
- Dr. Novak (expensive and full agenda). Last session Nov. 2010
- Proposal from John Evans (Eric Bogatin). Essential principals of SI (1 day)



LTE/HTE

Low Temperature Electronics (LTE):

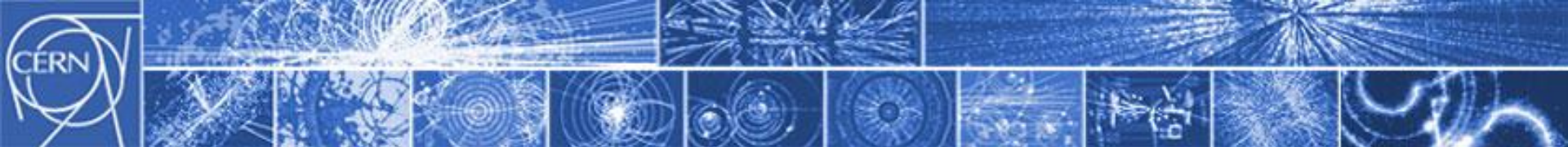
- Requested by Thomas Kaltenbacher. June 2011
- Theory course given by Stefan Stahl and Dr. Randall Kirschmann

High Temperature Electronics (HTE): **New course**

- Dr. Randall Kirschman. To be held *20-21 August 2012*.
- Designed for: Electronic engineers, physicists and technicians interested in high temperature electronics

https://cta.cern.ch/cta2/f?p=110:9:3380016133597322::NO::X_COURSE_ID,X_S TATUS:4511,D

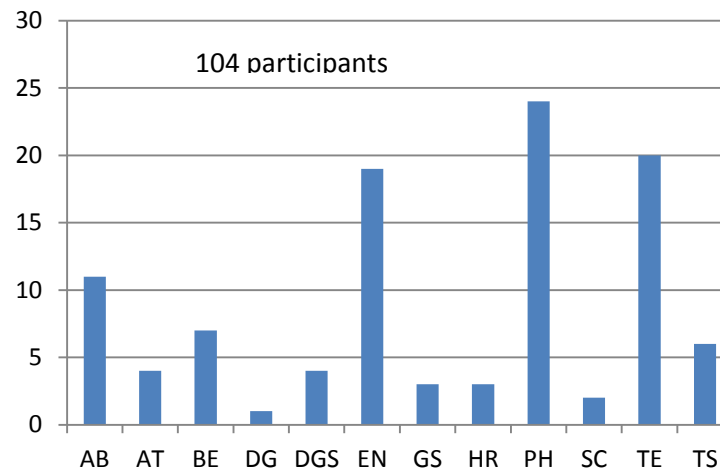
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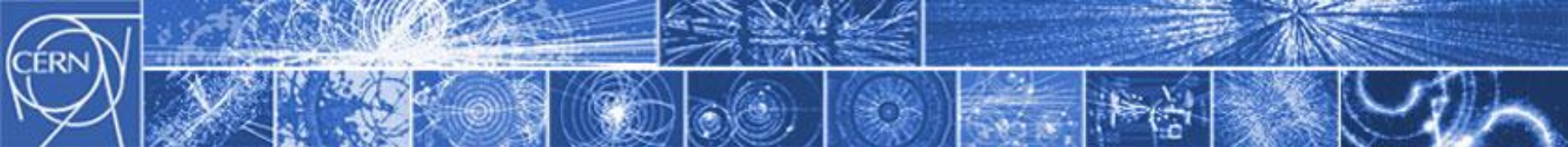


Siemens

Course	Next Session	Duration	Language	Frequency
Siemens - STEP7 : level 1	25-Jun-12 to 28-Jun-12	4 days	French	1/year
Siemens - STEP7 : level 2	08-Oct-12 to 12-Oct-12	5 days	English	1/year
Siemens - Simatic Net Network	to be scheduled	2 days	English or French	
Siemens: Profinet IK-PNSYS	to be scheduled	16 hours	French	

- Supplier SIEMENS Switzerland
- Trainer Paolo Gelato (bilingual)
- Revision of content from CERN experts (J. Ortola, E. Blanco)
- Good reduction negotiated for when sending participants to Siemens

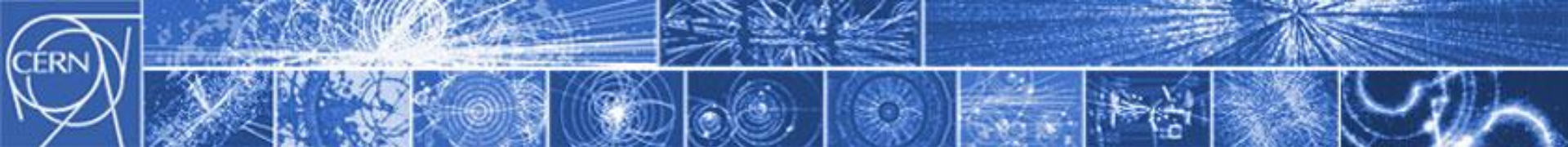




Automate UNPP

Course	Next Session	Duration	Language	Frequency
Schneider: Automate Modicon Premium UNP7D	to be scheduled Oct/Nov 2012	3 days	French	
Schneider: Automate Modicon Premium UNPP1	to be scheduled	4 days	French	0.5-1 /year
Schneider: Automate Modicon Premium UNPP2	to be scheduled	4 days	French	0.5-1 /year
Schneider: Automate Modicon Premium UNPP2 Expert	June 19-22	4 days	English	New course

- Supplier Schneider France
- Trainer Mr. Aucel and Mr. Seggio (bilingual)
- Problem to schedule sessions: language
- New course Schneider: Automate Modicon Premium UNPP2 Expert (UNPP2+ Communication) requested by J.M. Beckers



Summary

Technical Training Statistics 2011

Training Sub-Category	Nr of Courses	Nr of Sessions	Nr New courses
Electronics design	21	31	3
Mechanical design	28	43	4
Office software	31	91	1
Software and system technologies	46	66	4
Special	3	4	
Total	130	236	12

Please contact Technical Training for any new trainings topics in the area of electronics!