

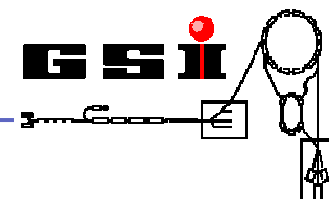


MC-PAD

**FP7 Marie Curie Initial Training Network
on Particle Detectors**

Christian J. Schmidt,

4th NoRHDia Workshop



MC-Pad, Marie Curie Initial Training Network within FP7

- MC-Pad: An initial training network to provide extraordinary training opportunities to young researchers in the field of particle and photon detectors.
- MC-Pad will play an essential role to form a new generation of excellent detector scientist which is required to conceive, design, build and exploit the next generation of experiments which may come into operation in the time 2012-2020.
- 8 academic participants
- 3 industrial partners and
- 3 associated academic partnersfrom 8 European countries.
- 17 PhD financed



Network Participants

CERN (Coordinator)	European Organization for Nuclear Research (CH)	Dr. Christian Joram
DESY	Stiftung Deutsches Elektronen-Synchrotron (DE)	Prof. Joachim Mnich
GSI	Gesellschaft für Schwer-ionenforschung mbH (DE)	Dr. Christian J. Schmidt
JSI	Jožef Stefan Institute (SI)	Prof. Peter Križan
AGH	AGH University of Science and Technology (PL)	Dr. Marek Idzik
LNF	Laboratori Nazionali di Frascati - INFN (IT)	Dr. Pierluigi Campana
NIKHEF	Stichting voor Fundamenteel Onderzoek der Materie (NL)	Prof. Els Koffeman
PSI	Paul Scherrer Institut (CH)	Dr. Roland Horisberger
UHH	University of Hamburg (DE)	Prof. Robert Klanner
Associated Partners		
Evatronix	Evatronix SA (PL)	Dr. Wlodzimierz Wrona
IFJ	Polish Academy of Sciences (Polska Akademia Nauk) PAN (PL)	Prof. Michal Turala
Micron	Micron Semiconductor Ltd. (UK)	Mr. Mark Bullough
Photonis	Photonis SAS Holding (FR)	Dr. Christophe Fontaine
NIMP	National Institute of Material Physics (NIMP), Bucharest	



MC-Pad offers...

- MC-Pad offers high level scientific and technical training
- Training corroborated by Visiting Scientists and Experienced Researchers
- Trainees will be integrated into existing collaborative structures
- Trainees will profit from a unique spectrum of expertise and facilities available in the network
- Complementary training, like communication skills, project and financial management, will be offered by some partner institutes and in particular through our industrial partners.
- Integration into an international environment within the MC-Pad Network with opportunities to present and discuss results on network meetings



12 Projects, many, regular network activities

Projects will be realized in groups of researchers involving two to five network participants

Projects may be closely or loosely linked to ongoing research activities

- radiation tolerant silicon detectors
- gaseous detectors
- calorimetry
- photon detection and particle identification
- monolithic detectors and front-end electronics
- simulation tools



MC-Pad Funding Matrix

	Network Team	Early-stage researchers (ESR) (person-months)	Experienced researchers (ER) (person-months)	Visiting scientists (VS) (person-months)	Total
1.	CERN	108	24	18	150
2.	DESY	72	0	0	72
3.	GSI	72	24	0	96
4.	JSI	72	0	0	72
5.	AGH	108	0	0	108
6.	LNF	0	48	0	48
7.	NIKHEF	72	0	0	72
8.	PSI	36	24	0	60
9.	UHH	72	0	0	72
	TOTAL	612	120	18	750

17 PhD



Fields of activities in finer detail

- radiation tolerant silicon detectors
 - Silicon hybrid pixel detectors for SLHC
 - Radiation Tolerant Mini-strip Tracking Detectors
 - Radiation hard crystals, 3D detectors
 - Silicon system integration for FAIR
- gaseous detectors
 - Micro Structured Gas Detector System Development/ TPC with MPGD r/o
- calorimetry
 - calorimetry for ILC experiments
- photon detection and particle identification
 - large area Hybrid Photon Detectors, low noise Geiger Mode AvPhotoDet~s
 - Photo detectors for high B-fields
- monolithic detectors and front-end electronics
- simulation tools, calorimeter simulation

check www.cern.ch/McPad for details



P11 Front End Electronics

- very low noise FEE for ILC calorimetry (at AGH Krakow)
- Very high speed ASIC microwave electronics for Diamond detector readout (at GSI)
 - Electronics for Diamond detector timing measurements
 - Electronics for individual particle counting dosimetry or beam monitoring
 - Radiation hard electronics
 - Integrated ASIC multi-channel readout
- Pick-up on and extend Mircea Ciobanu's PADY, GSI DBA and ALICE NINO developments
- Financed: 24 months "Experienced Researcher"
- Input of application driven specifications are welcome!



Organisational

- Start in September 2008
- Diamond electronics starts early spring 2009
- Interested students/researchers should check www.cern.ch/McPad , also for recruitment
- recruitment centrally managed
- EU-network recruitment conditions apply, they highly provoke an interchange of personal, in particular PhDs.

**Applications very welcome to every one of the MC-Pad projects,
→ Please distribute the word...**

