ARDENT
February 2012 – January 2016

Advanced Radiation Dosimetry European Network Training initiative

Marie Curie Initial Training Network under EU FP7 – 4 M€

7 Full Partners and 5 Associate Partners

Coordinator: CERN, Scientist-in-Charge: Dr. M. Silari

CERN (coordinator), Switzerland
AIT Vienna, Austria
CTU- IAEP Prague, Czech Republic
IBA Dosimetry, Schwarzenbruck, Germany
Jablotron, Prague, Czech Republic
MI.AM, Milano, Italy
Politecnico, of Milano, Italy

ST Microelectronics, Italy
University of Erlangen, Germany
University of Houston, USA
University of Ontario, Canada
University of Wollongong, Australia
Development of advanced instrumentation for radiation monitoring

Three main technologies

- gas detectors [e.g., gas electron multipliers (GEM), tissue equivalent proportional counters (TEPC)]
- solid state detectors [e.g., Medipix, silicon micro-dosimeters]
- track detector techniques [e.g., CR-39, nano-dosimeters]
Objectives & Applications

• Main objectives
  o Radiation dosimetry
  o Micro- and nano-dosimetry
  o Photon and neutron spectrometry

• Applications
  o Characterization of radiation fields at particle accelerators (research, industry, medical)
  o Characterization of radiation fields on-board aircrafts and in space
  o Assessment of secondary dose to RT patient
  o Measurement of properties of clinical hadron beams
Researcher Recruitment

- 15 Early Stage Researchers (ESR) to be recruited
  - 4 at CERN, Geneva
  - 2 at AIT, Vienna
  - 3 at CTU, Prague
  - 2 at IBA Dosimetry, Schwarzenbruck
  - 1 at Jablotron, Prague
  - 1 at MI.AM, Milano
  - 2 at the Politecnico, Milano
- Up to 1/3 of time can be spent on secondments
- Work performed within the project to be used for PhD
- Generous training allowance for researchers
Work Packages

• Seven Work Packages
  o WP1: gas detectors
  o WP2: solid state detectors
  o WP3: track detectors
  o WP4: instrument inter-comparison
  o WP5: training
    ▶ Individual training programs
    ▶ Network-wide training
  o WP6: dissemination and outreach
  o WP7: ITN management
ARDENT Structure

http://cern.ch/ardent
Advertisement of Positions

• All ESR positions are advertised and applications are handled via the CERN ERT tool:
  https://ert.cern.ch/browse_www/wd_portal.list?p_web_site_id=1&p_class_type=Programme&p_class_value=Fellowships&p_title=Fellowships

• The positions are advertised network-wide

• Applications are not limited to the EU countries – mobility criteria apply!

• Selection of candidates will be done by the respective institutes
  o Researchers must be recruited under employment contract