TALENT

TALENT is a 4-year multi-site training network aiming at career development of young researchers in the field of instrumentation for radiation detection. The project focuses on piloting new state-of-the-art technologies on the new precision pixel detector ATLAS Insertable B-Layer detector (IBL) and for future precision tracking detectors. The project will strengthen the co-operation between research and multidisciplinary industry in the fields of advanced radiation sensors, fast and low power consumption read-out and data acquisition electronics, new cooling technologies and ultra-light mechanical support structures.

During the next years, completely new technical solutions are required to enable the construction of new or upgrading the existing high energy particle physics research infrastructures and detectors at CERN Large Hadron Collider (LHC). Aims for running the research facilities on increased intensity levels, pose a need to significantly improve the detector technologies mainly due to the 10 fold increased radiation level and data volume. Answering the hostile environment challenges and increased data acquisition needs will require vigorous industry collaboration and research on:

- **Radiation-hard precision pixel sensors**
- **Radiation-hard high-density electronics and interconnection technologies**
- **New mechanical integration methods for light-weight support and cooling systems**
- **Detector performance and system integration**
- **Dissemination, knowledge transfer and external research funding**

The aim of TALENT is to enhance interaction between European stakeholders to significantly increase the RTD efficiency by finding new technical solutions for future scientific infrastructures. The outcome will be to create the means to produce affordable high performance detector modules in European industry and thus answer to the forthcoming needs of research infrastructures and industry application demand.

TALENT is currently recruiting 15 Early Stage Researchers and 2 Experienced Researchers!

For further information please contact Dr. Heinz Pernegger, TALENT Network Coordinator, +41 76 487 2923, Heinz.Pernegger@cern.ch

To find out more about the TALENT network and the recruitment of the researchers please see the TALENT webpage http://www.cern.ch/talent

Training for cAreer deveLopment in high-radiation ENvironment Technologies

SEVENTH FRAMEWORK