

TALENT

Status and Future

TALENT

<http://talent.web.cern.ch/TALENT/>



- Ongoing **Marie Curie Network** on **new state-of-the-art technologies for the ATLAS Insertable B-Layer detector (IBL) and for future precision tracking detectors**
 - Applied physics – Electronics - Mechanical engineering - Software engineering - Economics
- 10 Beneficiaries, 7 associated partners (**2 Research facilities, 7 Universities, 8 Industrial partners**)
- Funding: 4.5 ME
15 early stage researchers (3 y) & 2 experienced researchers (2 y)
- CERN role: network coordination, host of 4 ESRs and many secondments
- **Project Duration: January 1, 2012 until December 31, 2015**

Status

- TALENT ESRs and ERs have participated in IdeaLab pilot-phase projects
- TALENT is at 1.5 y to completion, i.e. TALENT ESRs are now at peak of work and PhD duties
- Remaining network events:
 - August'14: Tech Entrepreneurship Challenge, driven by P.Keinz (WU)
 - Dec'14: TALENT Annual Meeting
 - Dec'15: TALENT Final Conference
 - Completion of ESRs secondments

TALENT @ IdeaSquare



- Current TALENT ESR's will stay in current offices/labs
- ESR's coming for secondments can work in IdeaSquare
- TALENT Consortium meetings and upcoming training sessions can be hosted in IdeaSquare
- TALENT ESRs can contribute to next CBI courses
 - Remote and non-destructive leak finding technologies, Carbon-composite applications, Printing technologies...
- Collaborations with TALENT partners and future partners
 - Cividec (AT): Beam monitor and electronics development
 - CiS (DE): Silicon detector development & manufacturing company
 - UiO (NO): detector development
 - IIT Mumbai: Collaboration on diamond sensors development
- Interests: working areas and access to equipment and expertise, meeting space, offices, visibility

Future

- **STREAM**

Smart **S**ensor Technologies and **T**raining for
Radiation **E**nhanced **A**pplications and
Measurements

- EU proposal under preparation

- Will integrate this proposal with IdeaSquare goals from the start

Technology

- Field: scientific design, construction manufacturing, testing and commissioning of advanced instruments for very high radiation environments
 - Innovative **radiation hard CMOS imaging sensors**, implemented as Smart monolithic and hybrid CMOS sensors and electronics, interconnection and packaging technologies
 - Workpackages:
 - Depleted CMOS Technologies
 - Smart Sensor Design and Layouts
 - Characterization and Performance
 - Application and System integration
 - Technology competence leveraging and business model
- CERN Framework: ATLAS Tracker Upgrade Project (ITK)
- Other applications: satellite environments, industrial X-ray systems, microscopy and medical imaging
- Partners: Research/Academic institutions and Private sector

Submission

Option 1

Marie Curie ITN

~ 8 beneficiaries

~ 6 Associated Partners

Funding: 15 ESRs hosted by beneficiaries

Duration: 4 years

Call: early 2015

Option 2

ICT in 'Leadership in Enabling and Industrial Technologies'

ICT 25 – 2015: Generic micro- and nano-electronic technologies

Call: early 2015