New architectural design for novel experimental domains

- R&D on simulation methods, technology and architectural design to extend Geant4 kernel capabilities for co-working transport schemes

**INFN Genova members**
- M.G. Pia (100%), P. Saracco (50%), M. Sudhakar (100%), borsa di dottorato dedicata (100%, derivante da fondi esterni)

**Activities in progress**
- Problems domain analysis and exploration of candidate solutions for co-working condensed/discrete transport issues: **PIXE prototype**
- Evaluation of software technologies in support of **physics object mutability** in transport: **electromagnetic design prototype**

**Work plan for 2010**: along the lines of activity in progress
- First results documented in conferences (subject to peer review) and journal publications
  - Paper in collaboration with CERN RADMON, TNS vol. 56, no. 4, August 2009
  - CHEP 2009: 2 talks + 1 poster (+ proceedings)
  - M&C 2009: oral presentation (+ proceedings)
  - 8 abstracts submitted to IEEE NSS + 1 on Geant4 scientometrics, under review

**Financial requests** similar to previous years

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Maria Grazia Pia, *INFN Genova*