# WP 5 — Future Experiments


Andrea Giuliani

Laboratoire de Physique des 2 Infinis Irène Joliot Curie (IJCLab)
Univ. Paris-Saclay — CNRS / IN2P3

Dominique Thers

IMT Atlantique — Département Subatech
Univ. Nantes — CNRS / IN2P3

Björn Herrmann

Laboratoire d'Annecy-le-Vieux de Physique Théorique (LAPTh)
Univ. Grenoble Alpes — Univ. Savoie Mont Blanc — CNRS / INP



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# Goals and activities of WP5

**Scientific and technological watch of detectors and infrastructures *under development***

→ compare the evolution of the experiments

→ highlight complementarity of the proposed approaches

→ identify major innovations intended to push back current limits on BSM physics

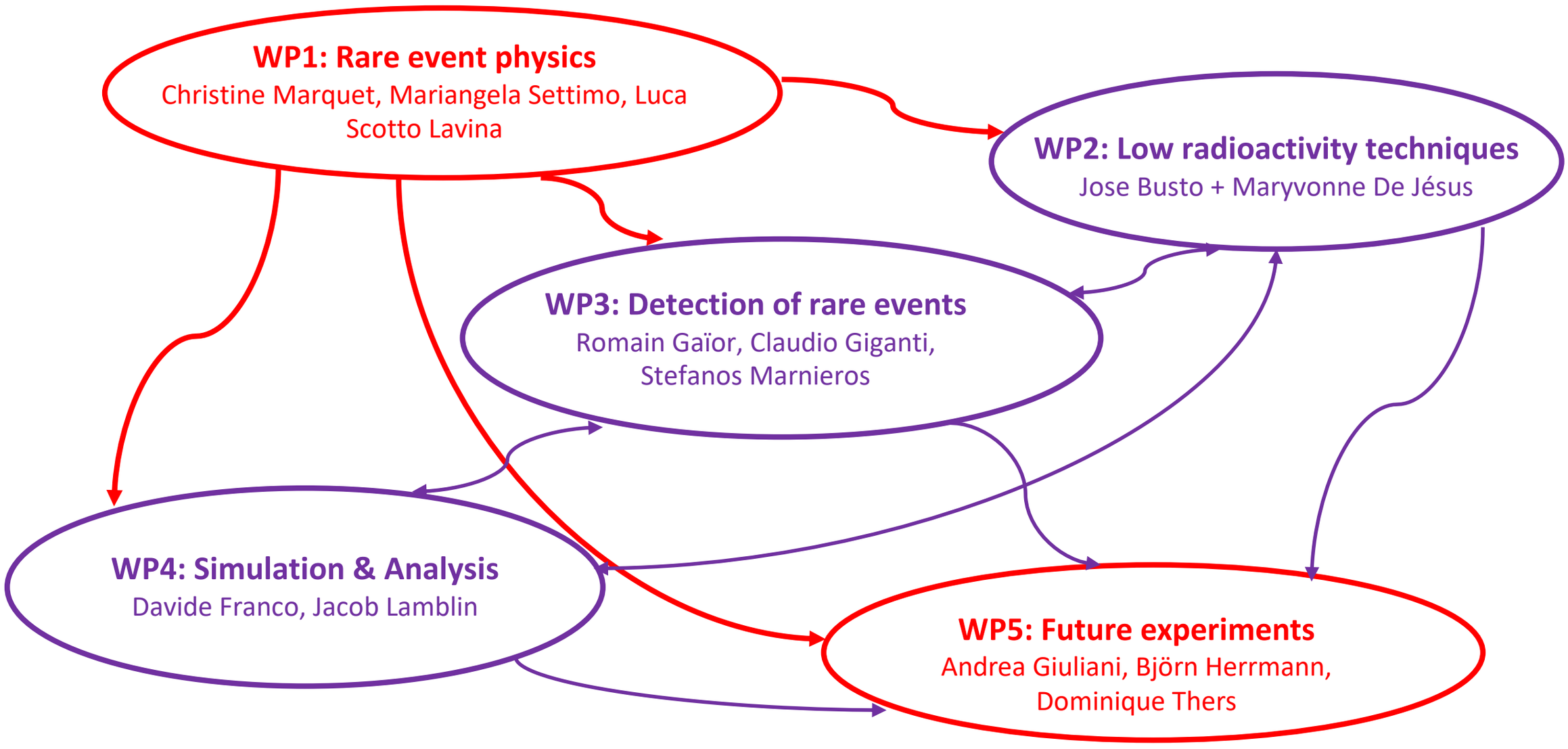
**Link between experiment and theory!**

**Review of developments in BSM theory and phenomenology**

→ understand BSM coverage of current experiments

→ assess needed experimental progress to cover promising BSM configurations

# Links with other WPs… and beyond




Neutrino physics → **GDR Neutrino…**

Dark matter within new physics frameworks → **IRN Terascale…**

# Deliverables of WP5

**Critical review of existing underground laboratories**

→ features with respect to future experiments and technologies

→ connection between physics reach and environmental parameters (depth, backgrounds, …)

→ recommendations (when required) concerning about location of experiments

→ update every year (if new data/input available)

**Living and evolving road-map for underground and rare-event searches**

→ **dark matter direct searches** + **neutrinoless double-beta decay** + other searches

→ relying on inputs from other WPs (in particular WP1 and WP3)

→ highlight most promising technologies and experiments

→ focus on French participation, but not neglecting the global scenario

**Link between theory and experiment**

→ consider new theoretical inputs (in relation with WP3)

→ impact on data analysis of running experiments and design of future experiments

→ suggest possible modifications of experimental strategies

→ influences from collider results and astrophysics observations

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**We count on you all for lively exchanges and discussions…!**