Giovanni Rumolo, member of BE/ABP-ICE

Summary of the main activities:

1) Macroparticle simulations including different types of collective effects
   a. Development of the HEADTAIL code
   b. Development of the FASTION code
   c. Code for multi-bunch resistive wall studies in the CLIC-BDS

2) Electron cloud studies
   a. Build up simulations of accelerator cross sections (ECLOUD code)
   b. Simulations of ECM's to interpret measurements
   c. Simulations of electron cloud driven instabilities (HEADTAIL linked to ECLOUD) and study of the scaling laws

3) Impedance calculations through the work with Carlo Zannini

4) Activities related to the LHC Injectors
   a. PS-Booster supervision
   b. MD coordination
   c. ABP representative for the MSWG and deputy secretary

5) Upgrade studies
   a. Member of the PSB upgrade task force, responsible for the Beam Dynamics package
   b. Member of the SPS Upgrade Study Team and Task Force (e-cloud and impedance studies, MDs)

6) CLIC studies on collective effects
   a. Electron cloud in the Damping Rings (tolerances, heat load)
   b. Space charge and coherent instabilities in the Damping Rings (TMCI thresholds, resistive wall instabilities in the very short bunch regime, fast beam ion instabilities)
   c. Fast beam ion instability in the long transfer line, Main Linac and Beam Delivery System (vacuum specifications)
   d. Resistive wall in the BDS (aperture specifications)

7) Student and fellow supervision