

Figure 3.3: A cross section through the central (barrel) section of the CMS detector. The different components (inner and outer tracker, electromagnetic and hadronic calorimeters, the solenoid magnet and the muon chambers) are highlighted in different colours. The trajectories of different types of particles are drawn. Solid lines indicate that a particle is detected by the respective detector subsystem, dashed lines indicate that it passes the subsystem unnoticed. The direction of the magnetic field lines is shown by  $\otimes$  and  $\odot$  inside and outside the solenoid, respectively [43].