Contribution ID: **11** Type: **not specified**

Lepton and Hadron Colliders

Wednesday, 21 October 2015 12:30 (1 hour)

Circular lepton and hadron colliders have been the mainstay of particle and much of nuclear physics research at both the energy and precision frontiers for a few decades. They look set to play this role for a few decades more. This lecture will look at the physics of how they work from the point of view of an experimental physicist (as imagined by an accelerator physicist Ö), working outwards from the collision point. The key differences between lepton and hadron colliders will be explained together with an introduction to key concepts and language from accelerator physics. Some of the physical phenomena limiting the energy and luminosity that can be delivered will be illustrated with examples from the LHC and other colliders.

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