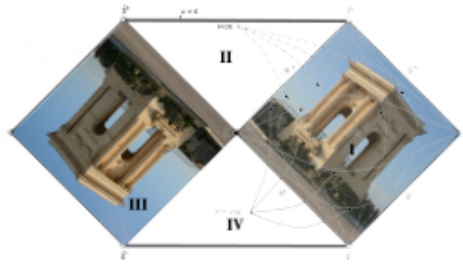


*Ecole Thématique*  
Aspects Géométriques de la Relativité  
Générale  
*Thematic School*  
Geometric Aspects of General  
Relativity



ID de Contribution: 7

Type: **Non spécifié**

## Horizons in General Relativity (lecture 1)

*lundi 28 septembre 2015 15:50 (1 heure)*

In the first two lectures I will describe the basic results on the significance, existence, and properties of apparent horizons (or more precisely “marginally outer trapped surfaces”) in initial data sets. Taking into account the preferences of the audience, I will then sketch the proofs of one or two fundamental results in mathematical relativity that build on this theory. The possibilities include the minimal surface proof of the Riemannian positive energy theorem, the marginally outer trapped surface proof of the spacetime positive mass theorem, and the existence of black holes due to condensation of matter.

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