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## Non-Linear Invariance of Black Hole Entropy

*Saturday, July 8, 2017 12:10 PM (20 minutes)*

A novel non-linear symmetry of black hole entropy is presented : Freudenthal duality, defined as an anti-involutive, non-linear map acting on symplectic spaces.

After a general introduction on some aspects of extended (super)gravity theories in four dimensions and the structure of their e.m. duality orbits, I will consider the e.m. duality Lie groups “of type E7”, and the corresponding notion of Freudenthal duality.

Extension to Abelian gaugings of supergravity, also including hypermultiplets, will also be briefly discussed.

### Experimental Collaboration

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**Session Classification:** QFT and string theory

**Track Classification:** Quantum Field and String Theory