Hamiltonian of the electromagnetic and gravitational fields on asymptotically null spacelike surfaces

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Time: Tuesday July 17th, h 14:30
Place: , Tullio Regge Main Lecture Hall, Physics Department, Via Pietro Giuria 1, 10125 Torino
Abstract: We present a new application of the Regge-Teitelboim method for treating symmetries which are defined asymptotically. It may be regarded as complementary to the one in their original 1974 paper.

The speaker:

Claudio Bunster (named Teitelboim until 2005) studied at Universidad de Chile and Princeton University, he taught at Princeton, the University of Texas at Austin and Universidad de Chile and has been a long-term member at the Institute for Advanced Study, Princeton. His research in general relativity has elucidated the Hamiltonian structure of spacetime and the geometry of hypersurface deformations. He has given significant contributions with Regge to the determination of the role of surface integrals as generators of asymptotic symmetries in general relativity and gauge theories and he has worked extensively in Torino Physics Department and INFN. He has obtained important results on black holes, on the quantisation of constrained systems, on the dynamic neutralization of the cosmological constant, and on the electric-magnetic duality for extended objects and higher spins. Bunster has been the Director of the Centro de Estudios Científicos (CECs), he has served as Presidential Science Advisor in 1994-2000 and as a member of the Dialogue Board on Human Rights. He has been especially interested in incorporating the armed forces in the research effort as a way to strengthen democracy through science.
Bunster was awarded the Chilean National Science Prize in 1995 and was elected foreign associate of the United States National Academy of Sciences in 2005 and was made Honorary Member of the Solvay Institute in 2007. He received the Natural Science Prize of Chile in 1995, the Humboldt Award in 2011 and the TWAS-Lenovo Science Prize in 2013.