



The Department of Physics at the University of Cyprus
is organizing a seminar on

Thursday, 26 of May 2016, time 4:00 p.m.

Room B228, Building 13, New Campus

Speaker:

Dr. Konstantinos Siampos
University of Bern

“Holographic reconstruction of Einstein spaces”

Using the asymptotic form of the bulk Weyl tensor, we present an explicit approach that allows us to reconstruct exact four-dimensional Einstein space-times which are algebraically special with respect to Petrov’s classification. If the boundary metric supports a traceless, symmetric and conserved complex rank-two tensor, which is related to the boundary Cotton and energy–momentum tensors, and if the hydrodynamic congruence is shearless, then the bulk metric is exactly resummed and captures modes that stand beyond the hydrodynamic derivative expansion.

We illustrate the method when the congruence has vorticity and the boundary metric has two commuting isometries. This leads to the complete Plebanski–Demianski family. The structure of the boundary consistency conditions depict a $U(1)$ invariance for the boundary data, which is reminiscent of a Geroch-like solution-generating pattern for the bulk.

For more information please contact:
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