

Transport and response coefficients in generalized
black branes, gauge/gravity holographic dualities,
and applications

Roldão da Rocha
UFABC - Brazil

Generalized black branes are constructed as solutions to the equations of motion obtained from an action governing gravity in a bulk, containing quantum corrections to Einstein-Hilbert gravity. AdS/CFT duality is employed to derive transport and response coefficients in the dual fluid on the boundary, such as the shear and bulk viscosities, the entropy and energy densities. Applications to Dirac fluids describing graphene-like materials and holographic superconductors are reported and explored in the context of the AdS/CMT duality.