



Iranian Journal of Physics Research, Vol. 20, No. 1, 2020

Einstein-Yang-Mills black brane in ads space and dc color conductivity

Sh Parvizi and M Sadeghi

1. Department of Physics, School of Sciences, Tarbiat Modares University, Tehran, Iran
2. Department of Physics, School of Sciences, Ayatollah Boroujerdi University, Boroujerd, Iran

E-mail: parvizi@modares.ac.ir

(Received 16 September 2019 ; in final form 21 April 2020)

Abstract

Considering the $SU(2)$ Yang-Mills theory in a 4-dimensional Einstein Gravity, we find a black brane solution in the AdS space. For this setup, by using the AdS/CFT holography, we find non-Abelian color conductivity of the gauge theory on the boundary of the AdS space. Color conductivity is defined by the generalized Ohm's law and computed by applying holography to the linear response theory.

Keywords: color conductivity, holography, linear response theory, black brane

For full article, refer to the Persian section