Janus solutions from four-dimensional gauged supergravities with different numbers of supercharges

We give a review of holographic conformal defect from AdS/CFT duality via solutions called Janus solutions. Our tool is gauged supergravity in the embedding tensor formalism. Supersymmetric Janus solutions can be obtained by solving BPS equations on AdS sliced-domain wall and generally show a scalar field varying with radial coordinate that is dual to a position-dependent gauge coupling constant in conformal field theory. We mainly focus on the solutions from four-dimensional gauged supergravities with different numbers of supercharges. Each example is discussed and clarified in detail.

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