

WEIGHTED MINIMAL ENERGY PROBLEM ON THE UNIT SPHERE

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ABSTRACT. Consider an isolated charged sphere in the presence of an external field exerted by a point charge over the North Pole. Point charges are thought to interact according to the Riesz s -potential $1/r^s$ with $d-2 < s < d$. (Here, $d+1$ is the dimension of the embedding space.) We present results from joint work with Peter Dragnev and Ed Saff concerning the weighted extremal measure solving this external field problem and its properties (support, representation, potential).

Recipient of an APART-fellowship of the Austrian Academy of Sciences at the Center for Constructive Approximation at Vanderbilt University.