



SEMINÁRIO DE EQUAÇÕES DIFERENCIAIS

Layer solutions for the fractional Laplacian on hyperbolic space

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Resumo: We consider a semilinear equation for the fractional Laplacian on hyperbolic space with a nonlinearity that comes from a double well potential. We prove existence and uniqueness of layer solutions, together with some qualitative and symmetry properties. One of the difficulties is to show a priori regularity for the equation, for which we need to derive a singular integral formula for the fractional Laplacian on hyperbolic space.