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Radial symmetry of solutions to systems of higher order semilinear PDE.

We prove radial symmetry and decrease of solutions to certain n -th order systems of semilinear PDE in n -dimensional Euclidean space which have applications in conformal geometry. With the help of the classical isoperimetric inequality we show that any putative nonradial symmetric solution violates a Pokhozaev type identity satisfied by all solutions which are asymptotically radial in a suitable sense. This is joint work with Sagun Chanillo. (Received January 08, 2008)