



SEMILINEAR ELLIPTIC EQUATIONS: CONJECTURES, VERIFICATION AND EXPERIMENTS

P J MCKENNA
Department of Mathematics
University of Connecticut
Storrs
CT 06269-3009, USA.

I look at the recent history of research on some old conjectures from the eighties on the multiplicity of semilinear equations, and how experimentation and verification led to large leaps forward in nonlinear analysis. Current new experimentation and verification attempts lead to speculation on new theorems and methods. (Some of this is joint work with Michael Plum and Wolfgang Reichel.)