
Amnon J. Meir
**On a Non-Standard Elliptic-Hyperbolic Partial
Differential Equation: Analysis and Numerical Simulation**

Department of Mathematics and Statistics
221 Parker Hall
Auburn University
Auburn
AL 36830
`ajm@auburn.edu`
Irada Yavneh

We describe some results for a non-standard, mixed-type (elliptic-hyperbolic) partial differential equation and an efficient multigrid algorithm for the numerical approximation of its solutions. This type of equation arises in atomic physics and describes a new object: the “action-dependent wave function.”