

1077-34-2322

Ovidiu Costin* (costin@math.ohio-state.edu), 100 Math Tower, 231 West 18th Avenue, Columbus, OH 43210, **Rodica D Costin** (rcostin@math.ohio-state.edu), 100 Math Tower, 231 West 18th Avenue, Columbus, OH 43210, **Min Huang**, 5734 S. University Avenue, Chicago, IL 60637, and **Wilhelm Schlag**, 5734 S. University Avenue, Chicago, IL 60637. *Constructive methods for the global analysis of solutions of differential equations.*

I will discuss rigorous connection methods for analyzing global properties of solutions of differential equations. As an application, I will look at the gap property of the L_{\pm} operators arising in the radial asymptotic stability analysis of the ground state soliton for the cubic nonlinear Schrödinger or Klein-Gordon equations in three dimensions. I will also mention applications to integrable models.

Work in collaboration with R. D. Costin (OSU), M. Huang and W. Schlag (U. Chicago) (Received September 22, 2011)