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Abstracts of Plenary and Invited Lectures

Section:

10. Partial Differential Equations

1991 MS Classification: 35, 42
Machedon, Matei, University of Maryland, USA
Fourier Analysis of Null Forms and Non-linear Wave Equations.

The non-linear terms of many equations, including Wave Maps and Yang-Mills have a special, "null" , structure. In joint work with Sergiu Klainerman, I use techniques of Fourier Analysis, such as generalizations and refinements of the restriction theorem applied to null forms to study the optimal Sobolev space in which such non-linear wave equations are well posed. This talk covers a survey and recent developments of these ideas.