ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

10. Partial Differential Equations

1991 MS Classification: 35,76
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Zero dissipation limits of wave equations
In real physical situations, dissipative effects are often important in modelling the propagation of waves, but it seems that the zero dissipation limits have not been fully investigated. This talk is devoted to the study of the typical wave equations including BBM-Burgers equation, GKdV-Burgers equation and wave equations in more general form. The zero dissipation limits of these equations are obtained with explicit convergence rates in terms of the dissipation coefficient ν. $nu-$independent H^k bounds are established for the GKdV-Burgers equation. The results reported here are joint work with Jerry Bona.