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On the Rosenau equation in multidimensional space. (English) Zbl 0811.35142

Nonlinear Anal., Theory Methods Appl. 21, No. 1, 77-85 (1993).

The author generalizes some results he obtained (in his Phd thesis) on the Rosenau equation

$$u_t + u_{xxxxt} = \varphi(u)_x, \quad x \in \Omega, \quad t \in (0, \infty), \quad u(0, x) = u_0(x), \quad x \in \Omega$$

with Dirichlet boundary conditions. He considers a mixed problem with Dirichlet boundary conditions, and he derives global existence of solutions.

Reviewer: [G.Jumarie \(Montreal\)](#)

MSC:

35Q58 Other completely integrable PDE (MSC2000)

35K35 Initial-boundary value problems for higher-order parabolic equations

Cited in **19** Documents

Keywords:

[Dirichlet boundary conditions](#); [mixed problem](#); [global existence](#)

Full Text: [DOI](#)

References:

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