HYPERBOLIC REGULARIZATION OF
THE SOBOLEV SYSTEM

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The article deals with a hyperbolic system with small parameter which turns into a Sobolev system as the parameter vanishes. It is proven that some components of a solution to the Cauchy problem for this hyperbolic system tend to the corresponding components of a solution to the Cauchy problem for the Sobolev system uniformly on the set $[0, T] \times \mathbb{R}_3$. The derivatives with respect to the space variables of the remaining component converge uniformly on every set $[t_0, T] \times K$, where $0 < t_0 < T$ and K is a compact set.

Key words and phrases: Cauchy problem, Sobolev system, hyperbolic system with small parameter.

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