

BILINEAR VIRIAL IDENTITIES AND APPLICATIONS

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Abstract

I'll present some recent work with F. Planchon on bilinear virial identities for the nonlinear Schrodinger equation, which are extensions of the Morawetz interaction inequalities firstly obtained by Colliander, Keel, Staffilani, Takaoka and Tao. We recover and extend known bilinear improvements to Strichartz inequalities and provide applications to various nonlinear problems, most notably on domains with boundaries.