



ЛАБОРАТОРИЯ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ

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Center for
Quantum
Dynamics

*Many-body theory
of bosons group*

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Tutorial:

From Solitons and Solid-like states to Bosonic Josephson junctions – quantum dynamics with MCTDHB-Lab

MCTDHB-Lab package – is a free cross-platform (Unix/Mac/Windows) solver of the many-boson Time-Dependent Schrödinger Equation (TDSE). In this tutorial we learn how to model solitonic systems, solid-like states and bosonic Josephson junction tunneling in low-dimensional ultra-cold atomic clouds confined in external electro-magnetic traps. We analyze the underlying physics and visualize the dynamics in terms of figures and movies.

<http://www.qdlab.org>