

BME, Természettudományi Kar, Differenciálegyenletek Tanszék

Eulerian Methods for Schrodinger Equations in the Semi-Classical Regime

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We present various Eulerian method for solving the Schrodinger equations in the semi-classical regime based on high frequency asymptotic methods. We discuss the constructions based on the geometrical method, the Gaussian beam summation and also a recently developed fast Huygens sweeping methods which incorporates short-time Wentzel-Kramers-Brillouin-Jeffreys (WKBJ) propagators into Huygens' principle. Even though the WKBJ solution is valid only for a short time period due to the occurrence of caustics, Huygens' principle allows us to construct the global-in-time semi-classical solution. This is a joint work with Susana Serna and Jianliang Qian.

2015. 10. 15. csütörtök, 10.15-11.30

BME, H306

Minden érdeklődőt szeretettel várunk!

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