

Joint Quantum Institute Seminar
April 9, 2007 at 12:30
Physics 1201

"Interference of low-dimensional Bose condensates"

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My talk will be devoted to application of interference fringe contrast analysis in physics of low-dimensional condensates. In particular I will discuss the method of full distribution function of interference of two condensates to study correlation functions of single condensate. Then the problem of dynamical splitting of condensate will be addressed to study the spectrum of collective excitations. Throughout the talk I will point out intriguing connections between the distribution functions of interference fringe amplitudes and several problems in field theory, systems of correlated electrons, and statistical physics. I will also briefly mention interesting connection of physics of 1D Bose condensate with some new directions in quantum optics.

UMD Host Victor Galitski