

武汉物数所理论交叉学术交流系列报告

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Novel p-wave superfluids of fermionic polar molecules

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LPTMS, Universite Paris-Sud XI

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频标楼4楼报告厅

About the speaker:

Prof. Shlyapnikov is Director of Research at CNRS, LPTMS, Orsay, France, and Professor in Univ. Of Amsterdam. His work on the theory of quantum gases was awarded by the Humboldt Prize (Germany) in 1999, by the Kurchatov Prize (Russia) in 2000, and by the International Bose-Einstein condensation Prize in 2011. He got the European Research Award in 2013. He published about 140 papers which have received more than 9400 citations and H-index of 48.



Abstract:

I will show that recently suggested subwavelength lattices offer remarkable prospects for the observation of novel superfluids of fermionic polar molecules. It becomes realistic to obtain a topological p-wave superfluid of microwave-dressed polar molecules in 2D lattices at temperatures of the order of tens of nano-kelvins. Another foreseen novel phase is an interlayer p-wave superfluid of polar molecules in a bilayer geometry.

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