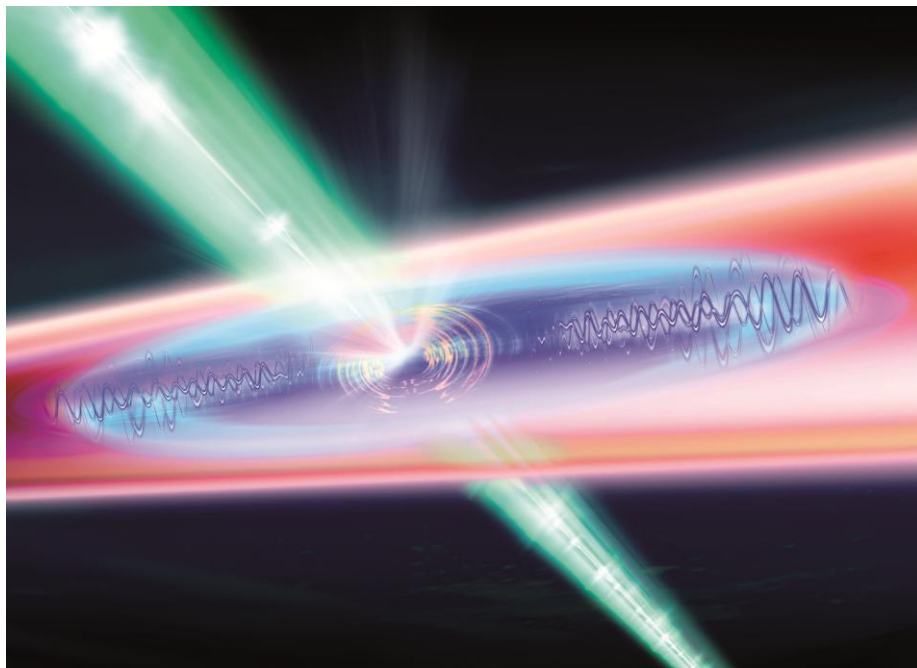


Superfluidity of ultra cold atomic gases

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In the talk I will review some of the most recent theoretical and experimental advances in the study of superfluid phenomena in ultracold atomic gases. These include the dynamic behavior of superfluid gases confined in harmonic traps, the quenching of the moment of inertia, the structure of quantized vortices, the propagation of second sound at finite temperature and the determination of the superfluid density, the observation of the lambda transition and the new effects caused by spin-orbit coupling, like the emergence of a double gapless band in the stripe phase.



Excitation of second sound