Fermi superfluids with p-wave pairing near a Feshbach resonance
ROBERTO DIENER, Department of Physics, The Ohio State University

Fermi superfluids with s-wave pairing near an s-wave Feshbach resonance are being extensively studied both theoretically and experimentally. Recently, Feshbach resonances in the p-wave channel have been observed in both $^{40}$K and $^6$Li, raising the possibility that fermionic superfluids with p-wave pairing could be attained at low temperatures. Since the pairing wavefunction in this case breaks rotational symmetry, the superfluid properties of this system in the BEC-BCS crossover will be much different from the s-wave case. In particular, I will discuss the symmetry of the ground state as well as the experimental signatures of these novel superfluids as a function of the parameters defining the resonance. Other new results on resonance physics will also be reported.