

# QUANTUM OPTICS SEMINAR



**Title:** Exploring an ultracold Fermi-Fermi mixture: interspecies Feshbach resonances of  ${}^6\text{Li}$ - ${}^{40}\text{K}$

**Speaker:** Florian Schreck,  
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**Time:** Tuesday, January 29 at 10:15

**Place:** 1525-323

**Abstract:**

We explore mixtures of two fermionic species,  ${}^6\text{Li}$  and  ${}^{40}\text{K}$ . Recently we have observed interspecies Feshbach resonances in this mixture. Interpretation of the data unambiguously assigns molecular bound states to the various resonances and fully characterizes the ground-state scattering properties in any combination of spin states. Using this knowledge we hope to be able to produce  ${}^6\text{Li}{}^{40}\text{K}$  molecules, cool them to quantum degeneracy, and study their BEC-BCS crossover.

Michael Drewsen