

**NON-EQUILIBRIUM DYNAMICS IN ULTRACOLD FERMIONIC AND
BOSONIC GASES**

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Ultracold atomic gases provide an excellent testing ground to study non-equilibrium dynamics. As the experimental parameters can be changed dynamically during the experiment the system's relaxation from non-equilibrium states can be observed. We report on experiments on the non-equilibrium dynamics of both fermionic and bosonic quantum gases. For fermionic atoms in a 3D optical lattice we investigate the behaviour of the system upon dynamic changes of the two-body scattering length using a Feshbach resonance. With bosonic atoms we experimentally study the formation of off-diagonal long-range order during Bose-Einstein condensation when a supercooled bosonic atom cloud evolves towards thermal equilibrium.