

B. K. Stuhl: *Making Gauge Fields Real*

Over the past several years, synthetic gauge field effects have been conclusively demonstrated in ultracold atomic systems, both by our group and others. I will describe some of our recent results, including phasetransitions in spin-orbit coupled (SOC) Bose gases, an observation of the Spin-Hall effect, and the measurement of Zitterbewegung of an SOC Bose-Einstein condensate.