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Abstract for an Invited Paper  
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**Search for new short range forces with cold and ultracold neutrons**

STEFAN BAESSLER, Univ of Virginia

Various models for new physics, motivated e.g. by the attempt explain the energy content of the universe, predict the existence of new interactions with a range of nanometers to millimeters. The free neutron is a suitable probe for such interactions, being insensitive to background from a much stronger electrostatic interaction. In my talk, I will present various recent and future measurements that have used the neutron as a probe. I will include neutron interferometry, gravity resonance spectroscopy, and neutron scattering.