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Conductance spectra of ferromagnetic superconductors[1] JACOB LINDER, MARTIN GRONSLETH, ASLE SUDBO, Norwegian University of Science and Technology — Recent findings of superconductors that simultaneously exhibit multiple spontaneously broken symmetries, such as ferromagnetic order or lack of an inversion center and even combinations of such broken symmetries, have led to much theoretical and experimental research. Ferromagnetic superconductors represent a marriage of two physical phenomena that conventionally have been considered virtually incompatible. We here study quantum transport in a junction consisting of a ferromagnetic metal and a non-unitary p-wave ferromagnetic superconductor. Considering several different possible pairing symmetries, our results show how the magnitude of the superconducting gaps may be inferred from the conductance spectra, in addition to their relative orientation in momentum-space. Also, we investigate how the strength of the magnetic exchange energies on both sides of the junction affect these spectra.

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Asle Sudbo
Norwegian University of Science and Technology

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