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Perpendicular spin torque in circularly exchange-biased trilayer structures OLLE HEINONEN, Seagate Technology — Over the past few years, it has become clear that both in-plane and perpendicular spin torques are important for the magnetization dynamics in magnetic tunnel junctions. However, at the present the perpendicular spin torque, in particular its dependence on bias voltage, is not well understood. I will here show that both sign and magnitude of the perpendicular spin torque in magnetic tunnel junctions can be determined as a function of bias voltage by measuring the lowest eigenfrequency of a circularly exchange-biased system. A simple model allows for a qualitative and quantitative analysis.

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