Spin Transport in Metallic Nanostructures

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NNIN Facilities utilized: Characterization Facility & Nanofabrication Center

- We are probing spin transport, in particular the spin diffusion length, by injection of spins from ferromagnetic to non-magnetic metals
  - Metallic spintronic devices widely employed as field sensors (e.g. in hard disks)
  - Factors limiting spin diffusion length, temperature dependence, poorly understood
  - We use a "non-local" geometry in a nanoscopic lateral spin valve to probe the spin transport and relaxation
  - Fabrication by UHV MBE / electron beam liuthography