

Abstract Submitted
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Developments in Scanning Hall Probe Microscopy TARAS
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SFU, BC, Canada — Low temperature scanning Hall probe microscopy is a sensi-
tive means of imaging magnetic structures with high spatial resolution and magnetic
flux sensitivity approaching that of a Superconducting Quantum Interference Device.
We have developed a scanning Hall probe microscope with novel features, including
highly reliable coarse positioning, in situ optimization of sensor-sample alignment
and capacitive transducers for linear, long range positioning measurement. This has
been motivated by the need to reposition accurately above fabricated nanostructures
such as small superconducting rings. Details of the design and performance will be
presented as well as recent progress towards time-resolved measurements with sub
nanosecond resolution.

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