

## **MSM – Development of a Multifunctional Scanning Microscope.**

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We are just starting a large grant from EPSRC (£1M) to develop a multifunctional scanning microscope. Part of the application is about providing scanning probe ability (AFM for example) as a function of temperature in large vector fields.

However a significant part is the development of a new microscope. The development work will involve altering the system so that surface scanning can be performed whilst simultaneously either passing currents or applying optical signals to the sample. This type of measurement has not been routinely performed and would offer a world-leading capability to our labs. This part of the project is relatively straightforward.

More challenging is the development of new measurements such as a scanning squid head. In this project the PhD student will be responsible for the design and development of this new instrument along with the academics in CM and the engineers who build such instruments.

This type of PhD is generally seen as an excellent grounding in experimental physics and offers outstanding career prospects.