

Lab 7: Advanced instrumentation in the teaching lab

Location: 16-352

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Lab Instructors: Maxim Shusteff, Marcio von Muhlen and David Appleyard

Summary

This session makes use of the atomic force microscopy (AFM) and optical trapping experiments used to teach an undergraduate instrumentation laboratory. Using a home-built and easily-manipulated AFM, you will learn basic imaging techniques, take some simple force curves for elastic modulus, and make a measurement of thermal energy. Using similarly scaled-down optical traps, you will learn calibration methods for the optical traps and perform experiments on the molecular motors of *E. coli* bacteria. The documents under "Recommended Reading" on the GEM4 wiki provide the essential background for both instruments and an overview of the experiments.
(<http://www.openwetware.org/wiki/GEM4labs>)

