

# Superresolved Multiphoton Microscopy with Spatial Frequency-Modulated Imaging

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I will be aiding Dr. Squier in data collection, and eventually hopefully real-time imaging of physical systems being scanned by Superresolved Multiphoton Microscopy with Spatial Frequency Modulated Imaging. Currently, data from this variant on Spatial Frequency Modulated Imaging (colloquially: 'SPIFI') is being collected by a National Instruments DAQ board for later analysis. The early part of my duties will be to faithfully reproduce the results of previous simulations of the system, to facilitate later simulations of more current work. In the latter span of the project, I will attempt to make improvements to both the physical design of the system based on my simulations and the data-collection apparatus and visualization software.