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Pushing the Limits of Nanoscale Imaging in Atomic Force Microscopy JACOB CVETICH, VASUDEVA RAO ARAVIND, BENJAMIN LEGUM, Clarion University, CLARION UNIVERSITY TEAM — The invention of scanning probe microscopy has revolutionized the field of nanotechnology. Atomic force microscopy is a branch of scanning probe microscopy in which an extremely sharp tip (~50 nm diameter) is held in contact with a sample surface. By maintaining constant force between the tip and the sample, the topography of a sample surface can be measured with high precision. The lateral resolution in this technique is however limited by the size of the tip. In this presentation, we present a method to deconvolve the effect of tip size and obtain higher resolution than presented by the experimentally obtained topographic image.

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