1070-57-3 Walter D Neumann* (neumann@math.columbia.edu). What does a complex surface really look like?

The metric geometry of a complex surface (2-dimensional variety over the complex numbers) turns out to be surprisingly complicated in the small. This talk will describe recent work by the speaker and L. Birbrair and A. Pichon, building partly also on work of A. Fernandez and D. O'Shea, which uses 3-manifold theory as a microscope to examine this geometry. (Received February 14, 2011)