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Miodrag Iovanov (miodrag-iovannov@uiowa.edu) and **Alex Sistko***
(alexander-sistko@uiowa.edu). *On the Finitely Generated Modules of a Leavitt Path
Algebra*. Preliminary report.

The infinite-dimensional, noncommutative algebra $R = \mathbb{K}\langle x, y \rangle / (xy - 1)$ is of basic importance in mathematics, as it provides us with a “universal example” of an algebra containing elements with one-sided inverses. It also arises as the Leavitt path algebra of a relatively simple quiver. In this talk, we discuss the surprisingly rich problem of classifying finitely generated modules over R . We classify semisimple modules and left ideals, and discuss results on the structure of cyclic modules and extensions. Work in progress. (Received September 15, 2014)