1128-13-130 **William J J Heinzer**, **Christel Rotthaus** and **Sylvia M Wiegand*** (swiegand1@unl.edu), Dept. of Mathematics, UNL, Lincoln, NE 68588-0130. *Construction of an Ogoma-like normal Noetherian non-catenary domain.* Preliminary report.

A Noetherian ring is "catenary" if every maximal nested chain of prime ideals between two prime ideals P and Q such that P is contained in Q has the same length. The first example of a non-catenary Noetherian ring was given by Nagata in the 1950s, but it was not integrally closed.

In 1980, Ogoma gave an example of a three-dimensional normal Noetherian local domain that is not catenary. He used a rather complicated construction using multi-ideal-adic completions. Ogoma's example also resolved—in the negative—the Chain Conjecture.

The present authors have been developing a procedure for building various examples of Noetherian and non-Noetherian rings using power series rings. This procedure yields a somewhat simpler "Ogoma-like" example with the properties of Ogoma's example. This example and many related topics are part of the authors' book in progress, "Integral Domains Inside Noetherian Power Series Rings: Constructions and Examples".

In this talk we present some of the theory, techniques, and features of the construction, and we show some of the properties of the Ogomo-like example. (Received February 21, 2017)