SE&T Colloquium Series-Winter 2014

Speaker	Dr. Simplice Tchamna Department of Mathematics Georgia College State University
Title	***A Noetherian local domain whose ideal completion is not Noetherian***
	Host: Dr. Olivier Heubo-Kwegna
Abstract	The ideal topology on a commutative ring R is the linear topology which has as a fundamental system of neighborhoods of 0 the nonzero ideals of R. We investigate the properties of the ideal topology on a Noetherian local domain (R, m), and we establish connections between the m-adic completion and the ideal completion. We study the generic fiber of the map $\mathrm{Spec}(\tilde{R}) \to \mathrm{Spec}(R)$, as well as the generic fiber of the map $\mathrm{Spec}(\hat{R}) \to \mathrm{Spec}(\tilde{R})$, where $\hat{R}$ and $\tilde{R}$ denote, respectively, the m-adic completion and the ideal completion of R. We give conditions under which the completion in the ideal topology is Noetherian and we show that, unlike the m-adic completion, the completion in the ideal topology is not always Noetherian.
Date	Tuesday, April 8
Time	4:10-5:00pm
Place	Pioneer 240
	Refreshments will be served at 4:00pm.