1003-13-1337 **Sunil Kumar Chebolu*** (chebolu@math.washington.edu), University of Washington, Department of Mathematics, Box 354350, Seattle, WA 98195. *A Krull-Schmidt theorem for wide subcategories of modules.*

A *wide* subcategory of R-modules is an abelian subcategory that is closed under extensions. A special case of a theorem due to Mark Hovey states that when R is a noetherian regular ring, the lattice of wide subcategories of finitely generated R-modules is isomorphic to the lattice of specialisation closed subsets of $\mathrm{Spec}(R)$. We use this isomorphism to show that these wide subcategories decompose uniquely into indecomposable ones. In fact, we associate a certain graph to every specialization closed subset of $\mathrm{Spec}(R)$ and show that the above decomposition reflects (under Hovey's isomorphism) precisely the decomposition of this graph into its connected components. A noteworthy feature of this decomposition is that it respects K-theory.

Similar results can be proved for thick subcategories of perfect complexes over a noetherian ring. (Received October 04, 2004)