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Christopher Park Mooney* (cpmooney@viterbo.edu), 900 Viterbo Dr, Reinhart Center,
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In this talk, I present research from a paper due to appear studying generalized irreducible divisor graphs. This research comes out of a fruitful program initiated by Istvan Beck (1988) in which the author studied the relationship between a commutative ring and an associated zero-divisor graph. This connection between graph theory and algebra has become quite popular recently. It has been further advanced by studying co-maximal graphs and irreducible divisor graphs. These graphs have given much insight into other characterizations of various finite factorization properties.

This paper, uses advances in generalized factorization theory, in particular τ -factorization, to exploit the connection between associated graphs and τ -finite factorization properties of commutative rings. (Received September 17, 2013)