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Yuanan Diao, Department of Mathematics and Statistics, UNC-Charlotte, Charlotte, NC 28223-0001, **Gabor Hetyei*** (ghetyei@uncc.edu), Department of Mathematics and Statistics, UNC-Charlotte, Charlotte, NC 28223-0001, and **Kenneth Hinson**, Department of Mathematics and Statistics, UNC-Charlotte, Charlotte, NC 28223-0001. *Tutte polynomials of tensor products of colored graphs.*

As a continuation of Kenneth Hinson's talk, we explore a generalization of our formulas to Tutte polynomials of multi-colored graphs, and some applications. In particular, our formulas can be used to calculate (with relative ease) the expected number of connected components after an accident hits a composite network in which some major links are identical subnetworks in themselves. (Received September 07, 2007)