1105-57-115 **Yuanan Diao*** (ydiao@uncc.edu), Department of Mathematics and Statistics, UNC Charlotte, 9201 University City Blvd., Charlotte, NC 28223, and **Gabor Hetyei** (ghetyei@uncc.edu), Department of Mathematics and Statistics, UNC Charlotte, 9201 University City Blvd., Charlotte, NC 28223. *Tutte polynomials, relative Tutte polynomials and virtual knot theory.*

In this talk, I will present a new version of the Tutte polynomial (called relative Tutte polynomial) defined on plane graphs with certain restricted edges that are not subject to the usual contraction/deletion operation. I will then show how this Tutte polynomial can be used to compute the Jones polynomial of a virtual knot from its face graph, in a way very similar to the case of the classical knots. (Received September 12, 2014)