

1106-15-1171      **Shaun M Fallat\*** ([shaun.fallat@uregina.ca](mailto:shaun.fallat@uregina.ca)), Department of Mathematics and Statistics,  
University of Regina, Regina, Sask, S4S 0A2, Canada, and **Mahmoud Manjegani**. *On Products  
and Functions of Totally Positive Matrices*. Preliminary report.

A matrix is called totally positive (resp. nonnegative) if all of its minors are positive (resp. negative). It is known that such matrices are closed under conventional multiplication, but not necessarily closed under entry-wise or Hadamard multiplication.

In this talk, we will survey some recent work on continuous entry-wise and conventional powers of totally positive matrices, in the spirit of identifying a critical exponent, should one exist. We will consider a basic type of functions, when evaluated entry-wise preserves the property of being totally positive. (Received September 11, 2014)