# Pfaffians, the BKP hierarchy, and asymptotics of maps in nonorientable surfaces

## Ian P. Goulden[*]

[ipgoulden@uwaterloo.ca](mailto:ipgoulden@uwaterloo.ca)

In this talk I will describe some recent results of my doctoral student Sean Carrell on certain formal power series solutions to the BKP hierarchy. These are regarded as symmetric functions, in which the Schur function expansion has Pfaffians as coefficients. An application is given to enumerating graphs embedded in nonorientable surfaces, including the proof of a conjecture of Garoufalidis and Marino concerning asymptotic enumeration.

[*]Department of Combinatorics and Optimization, Faculty of Mathematics, University of Waterloo, 200 University Ave. W., Waterloo, ON N2L 3G1, CANADA.