

# DALHOUSIE MATHEMATICS COLLOQUIUM

Monday March 19, 3:30 pm, Chase 319

Speaker: Alex Kasman  
(College of Charleston)

## *On the Duplexing of DNA's Genetic and Geometric Codes*

This talk (which is non-technical and should be understandable to non-experts and students) will mathematically investigate the relationship between two naturally arising “codes”. One is the famous genetic code which associates protein chains to DNA sequences. The other, in which the three-dimensional geometry of a DNA molecule is determined by its DNA sequence, was only discovered much more recently. Two different methods will be used to determine how well-duplexed these codes are with each other. One method is geometric and based only on the expected value of the random variables. The other is information theoretic and takes into account the variance of those variables. These two very different methods reach the same surprising and disappointing conclusion.