

# COLLOQUIUM

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On the algebraic relations  
of polynomial roots



Mathematics  
and  
Statistics

Date: Friday, January 23, 2015

Time: 3:30 - 4:30 PM

Room: RIC 209

**Abstract:** Let  $f(Z) = Z^n - a_1Z^{n-1} + \dots + (-1)^{n-1}a_{n-1}Z + (-1)^na_n$  be a monic polynomial with coefficients in a ring  $R$  with identity, not necessarily commutative. We study the ideal  $I_f$  of  $R[X_1, \dots, X_n]$  generated by  $\sigma_i(X_1, \dots, X_n) - a_i$ , where  $\sigma_1, \dots, \sigma_n$  are the elementary symmetric polynomials, as well as the quotient ring  $R[X_1, \dots, X_n]/I_f$ .