

# NUMBER THEORY SEMINAR

## *Integer valued polynomials on matrices*

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WHERE: Chase 319

ABSTRACT:

Let  $M_n(\mathbb{Z})$  denote the ring of  $n \times n$  matrices with integer coefficients. If  $f(x)$  is a polynomial with rational coefficients and  $M$  is a member of  $M_n(\mathbb{Z})$  then  $f(M)$  is again an  $n \times n$  matrix. When is it in  $M_n(\mathbb{Z})$ , i.e. when are its entries all integers? We will present some recent results, both computational results when  $f(x)$  is of low degree and general results for some subrings of  $M_n(\mathbb{Z})$ .

Any questions, please e-mail: [rnoble@mathstat.dal.ca](mailto:rnoble@mathstat.dal.ca).