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Objet: **AUJOURD'HUI À QUÉBEC**COLLOQUE DES SCIENCES MATHÉMATIQUES DU QUÉBEC (01/03/2018, Glenn Stevens)

Date: 1 mars 2018 09:37

À: activites@CRM.UMontreal.CA



COLLOQUE DES SCIENCES MATHÉMATIQUES DU QUÉBEC
<http://www.crm.umontreal.ca/Colloques/index.html>

DATE :

Le jeudi 1 mars 2018 / Thursday, March 1, 2018

HEURE / TIME :

15 h 30 - 16 h 30 / 3:30 p.m. - 4:30 p.m.

CONFERENCIER(S) / SPEAKER(S) :

Glenn Stevens (Boston University)

TITRE / TITLE :

p-adic Variation in the Theory of Automorphic Forms

LIEU / PLACE :

Université Laval, Pavillon Vachon, salle 3840

RESUME / ABSTRACT :

This will be an expository lecture intended to illustrate through examples the theme of p-adic variation in the classical theory of modular forms. Classically, modular forms are complex analytic objects, but because their fourier coefficients are typically integral, it is possible to do elementary arithmetic with them. Early examples arose already in the work of Ramanujan. Today one knows that modular forms encode deep arithmetic information about elliptic curves and galois representations. The main goal of the lecture will be to motivate a beautiful theorem of Robert Coleman and Barry Mazur, who constructed the so-called Eigenvariety, which leads to a geometric approach to varying modular forms, their associated galois representations, as well as their L-functions, in p-adic analytic families. We will briefly discuss important applications to Number Theory and Iwasawa Theory.

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