



THE FIELDS INSTITUTE FOR RESEARCH IN MATHEMATICAL SCIENCES

POSTDOCTORAL/GRADUATE STUDENT  
SEMINAR SERIES ON L-FUNCTIONS

SPEAKER:

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and The Fields Institute

On the Topic:

**On the Higher Étale Tame and Wild Kernel of a Number Field**

Let  $E$  be a totally real number field,  $l$  an odd prime and  $F_\infty = E(\mu_{l^\infty})$  with Galois group  $G_\infty = \text{Gal}(F_\infty/E)$ . Then J. Coates proved the following

$$l\text{-tor } K_2(O_E) \simeq A_\infty(1)^{G_\infty},$$

where  $A_\infty = \varinjlim A_n$ ,  $A_n$  the Sylow- $l$ -subgroup of the ideal class group of  $F_n = E(\zeta_{l^n})$ . As a consequence of the Main Conjecture proven by A. Wiles one obtains up to 2-torsion

$$\zeta_E(-1) = \pm \frac{|K_2(O_E)|}{w^2(E)}.$$

We generalize Coates' result to arbitrary number fields and higher  $K$ -theory.

**Thursday, December 9, 1993**  
**(Rescheduled from November 25)**

**3:30 pm, Room 3018**

**at**

**The Fields Institute**