



Pacific Institute *for the*
Mathematical Sciences

University of Victoria

Distinguished Chair Lecture Series:

**C*-ALGEBRAS ASSOCIATED WITH
NUMBER FIELDS**

by

Prof. Joachim Cuntz
Mathematics Institute
University of Münster



Mathematics Colloquium, Open to General Public

Thursday, October 7 @ 3:30 – 4:30 pm

Social Sciences and Mathematics Building
Room: A102

*Refreshments @ 2:30 – 3:30 SSM A514

Additional Seminars

Friday, October 8 @ 2:30 – 3:30 pm

Wednesdays, October 13, 20, and 27
@ 3:30 – 4:30 pm

Social Sciences and Mathematics Building
Room: A102

Abstract

We will first present the algebras $A(K)$ associated with a number field K which were introduced and analyzed in joint work with X.Li. The computation of their K -theory is a challenging problem. It turns out to be determined by the multiplicative group of the field. The requirement of functoriality of the construction leads to a canonical "Toeplitz type"-extension of the algebra $A(K)$ which very closely reflects the structure of the number field K (zeta-function, class number etc.). We will then discuss this new type of algebra in detail.