WYDZIAŁ MATEMATYCZNO – FIZYCZNY
Instytut Matematyki

Zaprasza na wykład pod tytułem:

ARITHMETIC AND ANALYTIC STRUCTURES ON ALGEBRAIC SURFACES AND THE RANK PART OF THE BSD CONJECTURE

który wygłosi:

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The first BSD conjecture mysteriously relates the analytic and geometric-arithmetic ranks of elliptic curves over global fields. The classical methods to prove this relation in some very special cases are to work with the L-factors of the zeta function of the curve and use p-adic and noncommutative methods.

In the last ten years a new direction which directly studies zeta functions of arithmetic surfaces has been developed. In this direction one lifts zeta functions to zeta integrals on commutative adelic spaces and works with them as complex valued functions using higher Fourier duality. The analytic and arithmetic-geometric ranks come as numerical invariants associated to two adelic structures on the surface. Relations between the latter are given by explicit two dimensional class field theory. Using this relation the first BSD conjecture is reduced to a certain auxiliary property which is very natural from the point of view of class field theory, and thus, for the first time, we have an "explanation" of why this conjecture should be true.

Wykład odbędzie się **09 grudnia 2011 r.** (piątek)
o godz. **16.00** w sali 212
w budynku Wydziału Matematyczno – Fizycznego.