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Abstracts of Plenary and Invited Lectures

Section:

0. Plenary Lectures

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Some analogies between number theory and dynamical systems on foliated spaces

For the arithmetic study of varieties over finite fields powerful cohomological methods are available which among other applications have led to a proof of analogs of the Riemann conjecture. In the talk we first explain the shape that a corresponding cohomological formalism for varieties over $\mathbb{Q}$ should take. We then discuss how it would relate to the many conjectures on L-series and indicate a couple of consequences that can be proved by standard methods. Finally we explain how the quest for this elusive cohomology theory leads naturally into the theory of dynamical systems on foliated spaces.