

SEMINAR OF MATHEMATICS

MONDAY March 23, 2015 at 15h15, lecture hall [BI A0 448](#) (CIB)

*Prof. **Kiran KEDLAYA** (University of California) will present a seminar entitled:*

"Convergence polygons for p-adic differential equations"

Abstract:

The catalog of special functions in real and complex analysis is largely constructed by solving ordinary differential equations. In number theory, solutions of p-adic differential equations also play an important role; for instance, as discovered by Dwork in the 1960s, zeta functions of algebraic varieties over finite fields can often be described in terms of solutions of p-adic differential equations.

However, convergence of these solutions is in many respects a subtler question than in the archimedean case. We describe an emerging theory of "Newton polygons" for p-adic differential equations, which combines over 50 years of prior work with some recent innovations introduced in work of Baldassarri, Poineau, Pulita, and the speaker.

Lausanne, March 20 2015 / mg

The seminars taking place at the Section of Mathematics are announced on internet address:
<http://memento.epfl.ch/>