

Arithmetic D-modules

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Timetable: 12 hrs. First lecture on October 21, 2015, 14:00, (dates already fixed, see the calendar), Torre Archimede, Room 2BC/30.

Course requirements:

Examination and grading:

SSD: MAT/02-03

Aim:

Course contents:

Thanks to hard works by many people including Prof. Baldassarri and Chiarellotto, most of the fundamental properties of p-adic cohomology theory are well-established. However, as in the étale cohomology theory, six functor formalism for such theory had been required for some applications such as Langlands correspondence. Following algebraic D-module theory, Berthelot introduced so called arithmetic D-modules, and showed us a road map towards constructing such theory. In this lecture, I'd like to explain the current status of the theory including D. Caro's foundational contribution to the theory as well as my recent results.