

PROGRAMME THÉMATIQUE
« POINTS RATIONNELS, COURBES RATIONNELLES ET COURBES ENTIÈRES SUR LES VARIÉTÉS ALGÈBRIQUES »
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THEMATIC PROGRAM
“RATIONAL POINTS, RATIONAL CURVES AND ENTIRE HOLOMORPHIC CURVES ON ALGEBRAIC VARIETIES”
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Arithmetic differential equations and diophantine geometry

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Usual differential equations are known to be useful in proving results in diophantine geometry over functions fields. It is therefore desirable to develop an arithmetic analogue of differential equations which could be used to prove results in diophantine geometry over number fields. Such a theory can indeed be developed and then applied to prove results about torsion points on curves, Heegner points, and the algebraic dynamics of Hecke correspondences. There are also links between the Galois theory of arithmetic differential equations and dynamics on projective space. The talk will explain results both old and new pertaining to this circle of ideas.

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