

PROGRAMME THÉMATIQUE  
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“RATIONAL POINTS, RATIONAL CURVES AND ENTIRE HOLOMORPHIC CURVES ON ALGEBRAIC VARIETIES”  
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## Weak approximation for cubic hypersurfaces

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Given an algebraic variety  $X$  over a field  $F$  (e.g. number fields, function fields), a natural question is whether the set of rational points  $X(F)$  is non-empty. And if it is non-empty, how many rational points are there? In particular, are they Zariski dense? Do they satisfy weak approximation? For cubic hypersurfaces defined over the function field of a complex curve, we know the existence of rational points by Tsen's theorem or the Graber–Harris–Starr theorem. In this talk, I will discuss the weak approximation property of such hypersurfaces.

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