



## Colloquium

# Local-global principle for the existence of solutions for diophantine equations with hopefully many solutions

**Jean-Louis Colliot-Thélène**

Université Paris-Saclay

Host: Tim Browning

A hundred years ago, extending earlier results of Fermat, Legendre, Hilbert, Minkowski, Helmut Hasse established a "local-global principle" for the existence of rational solutions of quadratic polynomial equations with integral coefficients. The "local" conditions essentially require that no congruences prevent the existence of solutions. For polynomials of higher degree, but with a number of variables bigger than the degree, one might hope for a similar local-global principle. I shall survey the proto-history and history of this problem and the many techniques developed to prove or disprove this "principle" for specific classes of polynomials.

**Wednesday, June 3, 2026 03:30pm - 04:30pm**

Raiffeisen Lecture Hall, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.