

Saturday, April 25th 2026 at 14:00

FU Berlin, Silberlaube, Lecture Hall 1a, Otto-von-Simson-Str. 26, 14195 Berlin

Prof. Dr. Jürg Kramer
(Humboldt-Universität zu Berlin)

The Work of Gerd Faltings

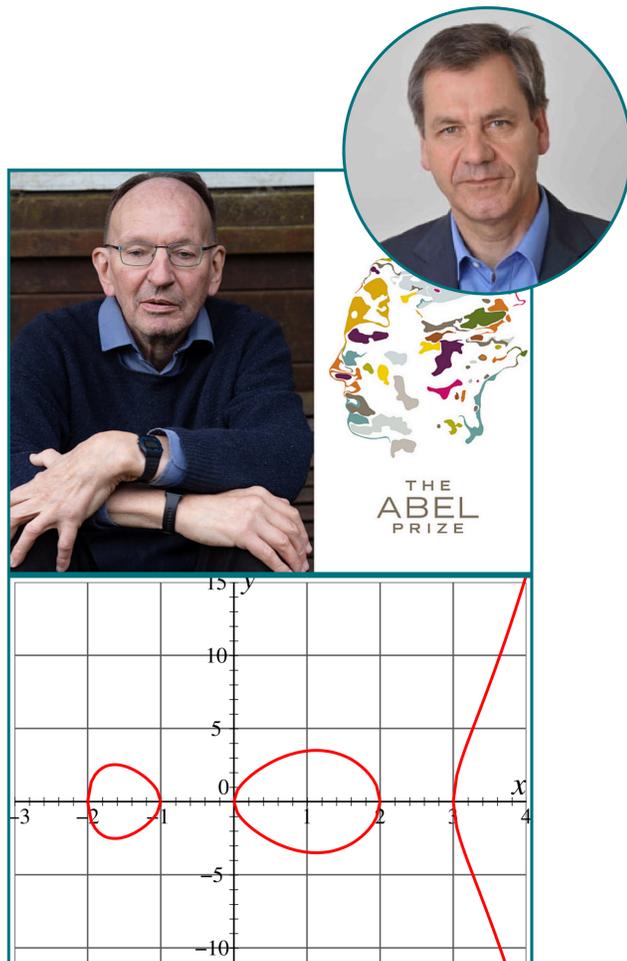
Diophantine equations are a classical topic in number theory: they are algebraic equations in which one seeks integer solutions. Despite their often simple appearance, they give rise to deep and structurally rich problems.

A modern approach is to consider rational solutions and to interpret the set of solutions as a geometric object. This leads to arithmetic geometry, a field that connects number theory with algebraic geometry.

At the center of this talk stands the work of Gerd Faltings. In the 1980s, he achieved a major breakthrough by proving a long-standing conjecture, now known as Faltings's theorem. It states that certain algebraic curves have only finitely many rational points. The hyperelliptic curve shown in the poster is an example of such a curve: it has only finitely many rational solutions.

For his fundamental contributions to arithmetic geometry, Faltings was awarded the Abel Prize in 2026.

The talk provides an accessible introduction to these ideas and highlights the deep connections between number theory and geometry.



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