ON CONSECUTIVE INTEGER POWERS

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We give an overview of the complete algebraic proof of "Catalan's conjecture", stating that the only consecutive (non-trivial) integer powers are $x = 9$ and $y = 8$.

This corresponds to the diophantine equation $x^p - y^q = 1$ having the only solution $32 - 23 = 1$. Some comments on related cyclotomic norm equations will also be included in the lecture.