# A Journey through Irreducible Polynomials

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The irreducibility of polynomials has a long history. In 1797, Gauss proved that the only irreducible polynomials with complex coefficients are linear polynomials. However, in view of Eisenstein Irreducibility Criterion proved in 1850, for each number $n \geq 1$, there are infinitely many irreducible polynomials of degree $n$ over rationals. We discuss some generalizations of this criterion as well as of the classical Schönemann Irreducibility Criterion and present a simple proof of Eisenstein-Dumas irreducibility criterion which has been published in 2020.