Sudesh K. Khanduja : A Walk through Irreducible Polynomials over $\mathbb{Q}$

In this lecture, we shall discuss some generalizations of the classical irreducibility criteria of Eisenstein, Schönemann and Dumas using Newton polygons and theory of valuations. A recently proved extension of the well known result of Schur regarding the irreducibility of the polynomial $1 + x + \frac{x^2}{2!} + \cdots + \frac{x^n}{n!}$ over $\mathbb{Q}$ for each $n \geq 1$ will also be discussed. This talk is partly based on joint work with Ankita Jindal, Anuj Bishnoi and Bablesh Jhorar.