Minisymposium 21 - Automorphic forms and their applications

Modular units

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In this talk I will discuss a particular family of modular units constructed using functional solutions to q-difference equations found in the work of Selberg. Arising in this way, these objects are of interest for various analytic properties and combinatorial interpretations. Dually, we exhibit fundamental algebraic roles played by these modular units, including those within the modular function fields, the modular unit groups, the cuspidal divisor class groups, class field theory, and the cyclotomic theory.