

Seminar

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Heights of q -Rising Factorials and Some Related Series

Tuesday, October 24, 2017

at 15:15 h

ESI, Schrödinger Lecture Hall

Abstract: We will show that $(1-q)(1-q^2)\dots(1-q^m)$ is a polynomial in q with coefficients from $\{-1, 0, 1\}$ iff $m = 1, 2, 3$, or 5 and explore some interesting consequences of this result. We will also discuss the classification of the products $(1-q)(1-q^2)\dots(1-q^m)$ and some related series with respect to their heights (absolute largest coefficients) for any given height. We will also present explicit formulas for the q -series coefficients of $(1-q^2)(1-q^3)(1-q^4)(1-q^5)\dots$ and $(1-q^3)(1-q^4)(1-q^5)(1-q^6)\dots$. In doing so, we will extend some observations made by Sudler in 1964.

This talk is based on a recent joint work with Alexander Berkovich.

M. Drmota, C. Krattenthaler

October 19, 2017