CMPP conjectures and proofs

Mirko Primc

University of Zagreb Faculty of Science, Department of Mathematics
Bijenička cesta 30, 10000 Zagreb, Croatia

Abstract

In a joint work with S. Capparelli, A. Meurman and A. Primc (2022) three series of Rogers-Ramanujan-type partition identities were conjectured for nonnegative integers $n > 1$ and $k_0 + k_1 + \ldots + k_n = k > 1$. S. Kanade, M. Russell, S. Tsuchioka and O. Warnaar (2024) conjectured the corresponding analytic identities with product sides corresponding to certain specialization of Weyl-Kac character formulas for affine Lie algebras of types $C_n^{(1)}$, $A_{2n}^{(2)}$ and $D_{n+1}^{(2)}$. In my talk I'll explain these CMPP and KRTW identities and comment on the recent results and proofs.