

Multicolor Compositions and Conjugation of N -Color Compositions

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We introduce n -multicolor compositions which generalize the n -color compositions that Agarwal first defined twenty-four years ago. A summand may bear a set of many integer-valued colours which it bounds from above. In this talk we enumerate such compositions using generating functions. Then we isolate the conjugable class of multicolor compositions known as cracked compositions. A concise exposition of the conjugation of n -colour compositions is presented in the classical tradition of Percy Alexander MacMahon (1854 - 1929). Our set of conjugable n -colour compositions turn out to be considerably larger than previously known ones.

This is joint work with Margaret Archibald and Abdulaziz Alanazi.