

Cylindric partitions and Rogers Ramanujan identities

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Abstract: Rogers-Ramanujan identities have many connections and one of them is representation theory. Thanks to this connection, it is expected that A_n -Rogers Ramanujan identities exist. The case $n = 1$ corresponds to the Andrews-Gordon and Andrews-Bressoud identities. Foda and Welsh had the brilliant idea to give another proof of these identities using cylindric partitions with two columns. It is now conjectured that cylindric partitions with $n + 1$ columns are the good combinatorial objects to attack the A_n problem for any n . In this talk I will explain recent progress in the case $n = 2$ and will state conjectures for the general case.