

Euler's partition theorem and the combinatorics of  $\ell$ -sequences

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Euler's partition theorem says that the number of ways to partition an integer into odd parts is the same as the number of ways to partition it into distinct parts.

We show how the combinatorics of " $\ell$ -sequences" gives rise not only to a generalization of Euler's theorem (discovered by Bousquet-Melou and Eriksson in 1997), but also to a generalization of Sylvester's bijective proof.

This is joint work with Ae Ja Yee.