BINARY PARTITION POLYNOMIALS

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The n-th binary partition polynomial is the n-th coefficient in the power series expansion

$$B(t,x) = \prod_{n=0}^{\infty} \frac{1}{1-tx^{2^n}} = \sum_{n=0}^{\infty} b_n(t)x^n.$$

The aim of the talk is to present basic properties of these polynomials. In praticular, we will show generalizations of some known facts about ordinary binary partitions. Moreover, we will find a connection between the coefficients of the polonomials $b_n(t)$ and so-called S-partitions, i.e., representations of natural numbers as sums of numbers of the form $2^k - 1$.

This is joint work with Maciej Ulas