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Positivity of divisors on blown-up projective spaces

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The minimal model program aims at a birational classification of algebraic varieties. The abundance conjecture and the existence of good models are among the main open problems in this field. In this talk we study log canonical pairs given by divisors on blow-ups of projective spaces. Vanishing theorems for the higher cohomology groups are used to give a systematic study of semi-ampleness and other positivity properties of these divisors. These imply a proof of the abundance conjecture for the corresponding pairs, and an explicit construction of good minimal models. This is joint work with Olivia Dumitrescu.

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