

II Joint Conference of the Belgian, Royal Spanish and Luxembourg Mathematical Societies
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From elementary number theory to string theory and back again

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I will describe some surprising interactions between number theory, algebraic geometry and mirror symmetry that have appeared in my recent work with Mircea Mustata and Chenyang Xu and that have led to a solution of Veys' 1999 conjecture on poles of maximal order of Igusa zeta functions. The talk will be aimed at a general audience and will emphasize some key ideas from each of the fields involved rather than the technical aspects of the proof.

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