

**M. Roczen: On the String-Theoretic Euler Numbers  
of 3-dimensional Simple Singularities**

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**Abstract.**

This is a report on joint work with D. I. Dais.

The string-theoretic E-functions  $E_{str}(X; u, v)$  of normal complex varieties  $X$  having at most log-terminal singularities are defined by means of snc-resolutions. We give a direct computation of them in the case in which  $X$  is the underlying space of the 3-dimensional **A-D-E** singularities by making use of a canonical resolution process. Moreover, examining  $e_{str}(X) = \lim_{u, v \rightarrow 1} E_{str}(X; u, v)$ , we prove, for this class of singularities, that a conjecture of Batyrev concerning the possible range of the string-theoretic index is true only after a slight revision. Finally, we compute the string-theoretic Euler number for several compact complex threefolds with prescribed **A-D-E** singularities.