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Phillip O Williams* (pwilliams@tkc.edu). *Towards a Dynamical Analogue of Szpiro's Conjecture.*

Szpiro's Conjecture says that the minimal discriminant of an elliptic curve over a number field is bounded in terms of its conductor. The analogue of this in the function field case has long since been proven, but the number field case is much more difficult, and is closely related to the ABC-conjecture.

The proper formulation of a dynamical analogue to Szpiro's conjecture, if such a formulation exists, is still very much an open project, and there are several promising ideas. We will assess the current state of the problem, discussing what the desirable features of such a conjecture might be, and what has been tried so far. Most generally, one would hope that such a conjecture would be approachable in the function field case and related to the ABC-conjecture in the number field case. The author along with Szpiro and Tepper have shown one natural formulation of the conjecture to be false in its full generality, in both the number field and function field cases. We will discuss ideas for repairing this, as well as another promising alternative approach recently suggested by Petsche.

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