Morita equivalence of formal Poisson structures

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Building on Xu's Morita equivalence of Poisson manifolds, we introduce a notion of Morita equivalence of formal Poisson structures. The main result is a classification of Morita equivalent formal Poisson structures deforming the zero structure via the action of (formal) B-fields transformations. To do so, we study the problem of deforming a Poisson morphism between ordinary Poisson structures into a Poisson morphism between their formal deformation and use it to construct what we call formal dual pairs, which we use to establish Morita equivalence.

The aim of this talk is to introduce the necessary concepts so as to properly stand the above mentioned notions and the result, and to see how it sits into a bigger picture. Time permitting, I will present some open questions that arise from this work, particularly some related to notions of formal objects defined elsewhere.