

## Pre-symplectic structures and related deformation problems

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A pre-symplectic structure is a closed 2-form of constant rank, e.g. symplectic forms (full rank) or the trivial 2-form (rank 0). Such structures naturally appear in classical mechanics, for instance in the process of reduction of a system by Hamiltonian symmetries. Moreover, they are tightly related to coisotropic submanifolds and give rise to interesting foliations. I will report on an ongoing joint project with Marco Zambon (KU Leuven, Belgium), whose goal is to describe the space of all small deformations of a given pre-symplectic structure within the space of all pre-symplectic structures of some fixed rank. The second goal is to relate this description to other deformation problems (such as the deformations of foliations and deformations of coisotropic submanifolds).

### References

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