

Lie description of higher obstructions to deforming submanifolds

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Abstract. To every morphism $\chi : L \rightarrow M$ of differential graded Lie algebras we associate a functors of artin rings Def_χ whose tangent and obstruction spaces are respectively the first and second cohomology group of the suspension of the mapping cone of χ .

Such construction applies to Hilbert and Brill-Noether functors and allow to prove with ease that every higher obstruction to deforming a smooth submanifold of a Kähler manifold is annihilated by the semiregularity map.

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