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Agustín García Iglesias* (aigarcia@famaf.unc.edu.ar). *Hopf algebras of diagonal type.*

After the classification of the finite-dimensional Nichols algebras of diagonal type by Heckenberger, the determination of its defining relations and the verification of the generation in degree one conjecture by Angiono, there is still one step missing in the classification of complex finite-dimensional pointed Hopf algebras with abelian group of group-like elements, without restrictions on the order this group: the computation of all deformations or liftings. A technique towards solving this question, built on cocycle deformations, was developed previously by the author in collaboration with Andruskiewitsch, Angiono, Masuoka and Vay. In this talk, we shall discuss an article in collaboration with Andruskiewitsch and Angiono in which we elaborate further this technique and present an explicit algorithm to compute the liftings. In the same work, we applied this algorithm to classify all liftings of finite-dimensional Nichols algebras of Cartan type A , over a cosemisimple Hopf algebra. We shall also discuss an analogous result for Cartan type G_2 , in collaboration with Jury-Giraldi. (Received September 05, 2016)