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Abstracts of Short Communications and Posters

Section:

2. Algebra

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Dascalescu, Sorin, University of Bucharest, Romania
Pointed Hopf algebras by Ore extensions and classification results
A general construction producing pointed Hopf algebras is presented. Briefly, we start with a group algebra [the coradical], add indeterminates [the skew primitives] by repeated Ore extensions and then factor by a Hopf ideal. Many interesting quantum groups are obtained, in particular we construct infinitely many types of Hopf algebras of dimension p^4 over an algebraically closed field of characteristic zero, answering in the negative a conjecture of I. Kaplansky. Pointed Hopf algebras of dimension p^3 are classified, all such objects being obtained by the general construction. These results are joint work with M. Beattie, S. Caenepeel and L. Grunenfelder.