

1090-20-65

**Paul-Hermann Zieschang\*** (zieschang@utb.edu), Brownsville, TX 78520. *Non-commutative association schemes of rank 6.*

The classification of non-commutative association schemes of finite order and of rank 6 is a major project in scheme theory that has been started in [2]. In [2], it was shown that normal closed subsets of these schemes must have cardinality 2 or 3. While no example of a non-commutative scheme of finite order and of rank 6 with a normal closed subset of cardinality 2 is known, such schemes with a normal closed subset of cardinality 3 are easy to construct. In fact, there are examples of non-commutative schemes of finite order and of rank 6 which have a symmetric normal closed subset of cardinality 3 and there are examples of such schemes which have a non-symmetric normal closed subset of cardinality 3. In my lecture, I will discuss the first of these two cases; cf. [1].

[1] French, C. and Zieschang, P.-H.: On the normal structure of non-commutative association schemes of rank 6, preprint.

[2] Hanaki, A. and Zieschang, P.-H.: On imprimitive non-commutative association schemes of order 6, to appear in *Comm. Algebra* (Received February 11, 2013)