1147-14-48 **Nivedita Bhaskhar*** (`nbhaskh@math.ucla.edu`). *Reduced Whitehead groups of algebras.*

Let A be a central simple algebra over a field K. Every element in the commutator subgroup [A*, A*] has reduced norm 1 and hence lies in $SL_1(A)$. Whether the reverse inclusion holds was formulated as a question in 1943 by Tannaka and Artin in terms of the triviality of the reduced Whitehead group $SK_1(A) := SL_1(A)/[A*, A*]$.

Platonov's well known example of a biquaternion algebra A over $\mathbb{Q}((x))((y))$ with non-trivial $SK_1(A)$ negatively settled the Tannaka-Artin question. We note that in this case, the base field has cohomological dimension (cd) 4. In the same paper, the triviality of $SK_1(A)$ was shown for all algebras over cd at most 2 fields.

It is a theorem of Merkurjev/Rost that for central simple algebras of degree 4, the reduced Whitehead group is trivial over cd at most 3 fields, which led Suslin to ask whether the same was true for index l^2 algebras for any prime l over cd 3 fields. In this talk, we address this question for l torsion algebras over function fields of p-adic curves where l is any prime not equal to p. The proof relies on the techniques of patching as developed by Harbater-Hartmann-Krashen and exploits the arithmetic of these fields to show triviality of the reduced Whitehead group. (Received November 13, 2018)