IWASAWA THEORY OF TOTALLY REAL FIELDS FOR NON-COMMUTATIVE p-EXTENSIONS OF STRICTLY UPPER TRIANGULAR TYPE

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Abstract:

Recently, Kazuya Kato has proven the Iwasawa main conjecture (in the sense of Coates, Fukaya, Kato, Sujatha and Venjakob) for non-commutative Galois extensions of "Heisenberg type" of totally real algebraic fields.

In this talk, we apply Kato's method to non-commutative p-extensions of "strictly upper triangular type" (i.e., extensions of totally real algebraic fields whose Galois groups are isomorphic to

$$\begin{pmatrix} 1 & \mathbb{F}_p & \cdots & \cdots & \mathbb{F}_p \\ 0 & 1 & \mathbb{F}_p & \cdots & \mathbb{F}_p \\ \vdots & \ddots & \ddots & \ddots & \vdots \\ \vdots & & \ddots & 1 & \mathbb{F}_p \\ 0 & \cdots & \cdots & 0 & 1 \end{pmatrix} \times \mathbb{Z}_p)$$

This is another generalization of Kato's result than M. Kakde.

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