

MAXIMAL SUBFIELDS OF QUATERNION ALGEBRAS IN CHARACTERISTIC 2

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The maximal subfields contained in an algebra determine many important things about the algebra's structure. It is therefore natural to ask whether the maximal subfields of an algebra determine the algebra up to isomorphism. In general, they do not.

We consider this question for quaternion algebras, where the maximal subfields are quadratic extensions of the centre. This is particularly interesting over fields of characteristic 2, where there are quadratic extensions of both separable and inseparable type. We may therefore consider quaternion algebras sharing all maximal subfields or those quaternion algebras sharing only maximal subfields of a certain type.

**This is joined work with Adam Chapman and Ahmed
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