

Re: Why is there no *really* useful Algebra beyond complex numbers? (and if it were, would John Baez talk about it?)

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- From: "Roger Bersford" <beresford@xxxxxxxxxxxxxxxxxxx>
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Sorry- I was writing as a myopic engineer! I should have said "many", not "most"; many Banach algebras are Hoops. I made a worse error in writing "seminorm", which implies non-negativity. Quadratic conserved properties ("sizes" hereafter) can be negative. "Study numbers" $x + ky$ live on the hyperbolic plane, with $k^2=1$ but $k \neq -1$. Their dual is (u, ϕ) with $u^2 = x^2 - y^2$ (I call u an ulna) and $\phi = \text{ArcTanh}[x, y]$ (taking the octant into account). Until I checked the definition, I called u a seminorm. Does it have a recognised name? Some sizes look like Planck areas; in the Pauli-sigma example the points outside the light-cone have a negative size.

Roger Bersford.

"If we do not find anything pleasant, at least we shall find something new." (Voltaire)

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◆ *Thread*

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