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presents...

ALGEBRAIC STRUCTURES AND THE ALGEBRAIC STRUCTURES ON WHICH THEY LIVE

A Lecture by Professor Daniel Krashen

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ABSTRACT:

Mathematical objects often have two lives. On the one hand, they are something like creatures living in complex ecosystems, but on the other hand, they can also be like the planets on which these creatures live. Sometimes these "planetary" algebraic structures can be given additional geometric or topological features, giving a range of new tools from other mathematical disciplines.

In this talk I will try to push this metaphor, and use it as a lens through which to view some open problems in the theory of quadratic forms and division algebras. In particular, we will see how these problems connect to ideas in geometry, such as the (in)famous "hearing the shape of the drum" problem.

WEDNESDAY OCTOBER 20, 2021 HILL 525 AT 7:00 PM

Pizza and refreshments will be served at 6:30 at Hill 323

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