Department of Mathematics,
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Zoom for Thought

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Polynomial Identity Algebras and the Kurosh Problem

Abstract:

The Kurosh problem can be seen as an analogue of the Burnside problem for algebras. It asks whether or not a finitely generated algebra over a field has finite dimension. While the answer is negative in general, you don't have to go all the way to **Chinatown** to find a class of algebras for which the answer is affirmative.

In this talk, we will show that for algebras satisfying a polynomial identity (PI algebras), the Kurosh problem is true. Along the way, we will have a **(The) Conversation** about the basics of the theory of PI algebras, discussing their properties, constructing specific identities for classes of algebras, and looking at their structure. Time permitting, before we say our **(Long) Goodbyes** we will also look at another type of **Nice (Guys)** identities: central polynomials. Additionally, we will use them to prove a not so **Small (Town Crime)** result, Rowan's theorem.

Hopefully, after this talk, as **Twilight** turns into **Night (Moves)**, you will go to **(The Big) Sleep** dreaming about PI algebras.

Tuesday, January 19, 2021
2:00 PM
Please see email with subject "Zoom for Thought Information."

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