



UNIVERSITY OF
CALGARY

The Calgary Mathematics
& Philosophy Lectures

WHAT WE DON'T UNDERSTAND & WHY IT MATTERS

From High Dimensional Geometry to Modern AI

DEANNA NEEDELL

Professor of Mathematics, UCLA

THURSDAY, FEBRUARY 26, 2026

4:30PM (Doors open at 4:00)

Blue Room, University of Calgary Dining Center

In this talk, we journey through several “big” mathematical ideas, from familiar large numbers to simple geometric concepts that behave in surprising ways in high dimensions. These examples set the stage for why mathematics remains essential to understanding modern AI. We focus especially on open questions

in deep learning, including why neural networks are able to generalize so effectively, and why this matters for real-world systems. The talk concludes with applications in medicine and criminal justice, highlighting ongoing work with community partners that illustrates the practical impact of mathematical methods.

Free & Open to the Public | Event is In-person

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This event will follow
the Graduate College's
AI & Ethics conference.
For more information
on the conference visit:

