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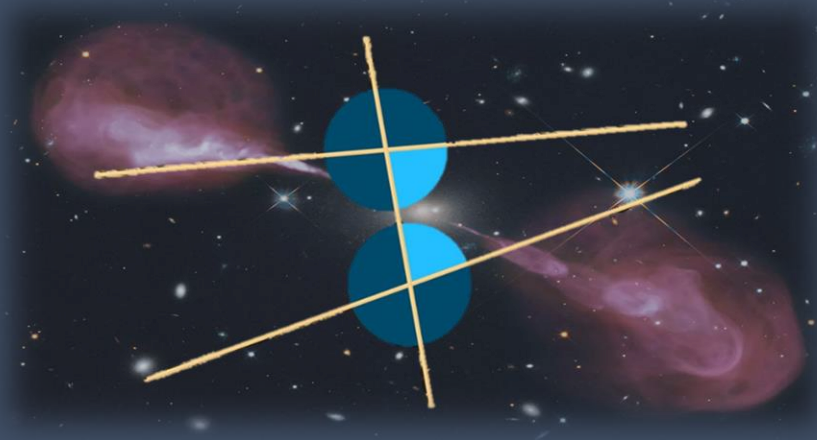
C H A N N E L  
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## *Graduate Mathematics Seminar*

The Curse of the 5<sup>th</sup> Postulate

**Dr. Oleg Gleizer**

*University of California, Los Angeles*



**Abstract:** In this talk, we will take a look at possibly the hardest and most influential math problem humanity has ever faced, proving that the 5<sup>th</sup> postulate of Euclid is indeed a postulate and does not follow from the first nine axioms of Euclidean geometry. First, we will explore some "elementary" math in the vicinity of the 5th to see how singular and complicated it actually is. Then we will pay homage to the three discoverers on non-Euclidean geometry, Gauss, Bolyai, and Lobachevsky. We will see why Gauss never published his finding and how publishing theirs led Lobachevsky and Bolyai to bankruptcy and mental illness. Finally, if time permits, we will take a look at the physical "proof" of the 5th and wonder if our universe is really Euclidean at large or whether we actually live inside of a 3D black hole or in the event horizon of a 4D one. The lecture requires no prior knowledge and is accessible to undergraduate students.

***When:*** Monday, September 14, 2020, 6:00 – 7:00 pm

***Where:*** Online, via Zoom

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