

# Foundations of mathematics: an optimistic message

**Speaker:** Stephen G. Simpson  
Pennsylvania State University, USA

**Date:** 6 January 2016

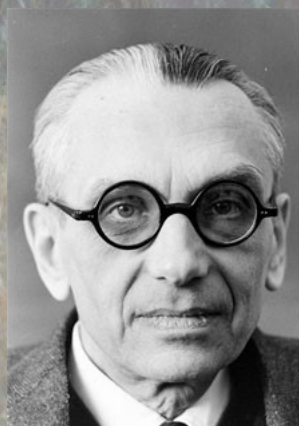
**Time:** 6:30 - 7:30 pm

**Venue:** LT31, Block S16, Level 3  
Faculty of Science  
National University of Singapore  
10 Lower Kent Ridge Road Singapore 117546



Plato and Aristotle

*"The infinite!  
No other  
question has  
ever moved so  
profoundly the  
spirit of man."* -- David Hilbert (1862-1943)



*"Objective concepts of  
mathematics are  
fundamental to my  
work in logic."*

-- Kurt Gödel (1906-1978)

## Abstract

Historically, mathematics has been regarded as a role model for all of science -- a paragon of abstraction, logical precision, and objectivity. The 19th and early 20th centuries saw tremendous progress. The great mathematician David Hilbert proposed a sweeping program whereby the entire panorama of higher mathematical abstractions would be justified objectively and logically, in terms of finite processes. But then in 1931 the great logician Kurt Gödel published his famous incompleteness theorems, thus initiating an era of confusion and skepticism. In this talk I show how modern foundational research has opened a new path toward objectivity and optimism in mathematics.

## About the Speaker

Stephen G. Simpson is a senior mathematician and mathematical logician. He is prominent as a researcher in the foundations of mathematics. His writings have been influential in promoting the foundations of mathematics as an exciting research area.



## Free Admission

For more information, visit [www2.ims.nus.edu.sg](http://www2.ims.nus.edu.sg) and [www.math.psu.edu/simpson/talks/nus1601/](http://www.math.psu.edu/simpson/talks/nus1601/).

Kurt Gödel. 17 November 2015. Online image. Retrieved from <http://guncelmatematik.com/kurt-godel-kindir.html>  
David Hilbert. 17 November 2015. Online image. Retrieved from <http://davidhilbertmth482.blogspot.in/>  
Plato and Aristotle. 24 November 2015. Online image. Retrieved from [https://en.wikipedia.org/wiki/Philosophy#/media/File:Sanzio\\_01\\_Plato\\_Aristotle.jpg](https://en.wikipedia.org/wiki/Philosophy#/media/File:Sanzio_01_Plato_Aristotle.jpg)



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