



## W. HUGH WOODIN

W. Hugh Woodin is Professor of Philosophy and of Mathematics at Harvard University. Woodin has been an ICM speaker three times, is a member of the American Academy of Arts and Sciences, and for nearly 20 years has been a Distinguished Visiting Professor in the Mathematics Department at NUS.

### Lecture 1: A new basis theorem for $\Sigma_3^1$ sets Thursday, 6 June 2019, 9.30–10.30am

This is the first lecture in a two part series on recent applications of the fine-structure of inner models to problems in descriptive set theory. The focus of this first lecture will be on the projective sets and simple generalizations. The context will be determinacy hypotheses.

#### Venue

Auditorium  
Institute for Mathematical Sciences  
3 Prince George's Park, Singapore 118402

### Lecture 2: Counting Woodin cardinals in HOD Monday, 10 June 2019, 9.30–10.30am

The final synthesis of fine-structure and determinacy will yield a number of theorems about HOD in the context of the Axiom of Determinacy. However, there are some of these expected theorems which can be proved now before that final synthesis is achieved. We focus on one such recent theorem which concerns the relationship between the number of Woodin cardinals in HOD and the descriptive set theory of the universe within which HOD is defined.

One application shows that the axiom  $V = \text{Ultimate L}$  implies the  $\Omega$  Conjecture.