

Reflection principles - seminar 3

Tuesday 31st January, 11am-1pm.

January 24, 2012

1 Overview

In the second seminar we introduced some large cardinals, showed which were entailed by *Standard Reflection* in the language of second-order set theory, and stated a nice (small) upper bound for this type of reflection – namely $\kappa(\omega)$. In this session we will attempt to do two things: (1) set out a proof of the $\kappa(\omega)$ upper bound on *Standard Reflection*; and (2) introduce other reflection principles from the literature which are not so bounded – in particular, we will show that these new principles imply the existence of measurables.

2 Readings

Although the seminar will, like the second, be relatively self-contained, the material will be based around the following readings:

Kanamori, A. 1997. The Higher Infinite, Perspectives in Mathematical Logic, Springer–Verlag, Berlin. In particular, page 128 exercise 9.18, and pages 311-318.

Marshall, V. 1989. Higher Order Reflection Principles. The Journal of Symbolic Logic, 54(2), pp. 474-489.

Reinhardt, W., 1974. Remarks on reflection principles, large cardinals, and elementary embeddings. In: Proceedings of Symposia in Pure Mathematics. Vol. 10. pp. 189-205.

3 Location

The seminar will take place from 11-1 in the McFetridge Room, 14 Gower Street, London.