

RECENT ADVANCES IN CORE MODEL THEORY

organized by
John Steel and Ernest Schimmerling

Workshop Summary

34 participants met at AIM Dec. 13-17, 2004. The program centered around 10 lectures by Hugh Woodin on his recent work. There were two such lectures, 90-120 minutes each, on each day. Between lectures, the participants broke into discussion groups led by relative experts on the work. In addition, there were three sessions devoted to listing open problems.

The conference led to immediate progress on one of the main topics addressed in Woodin's lectures. Inspired by conversations at the conference with Caicedo, Larson, Neeman, and Schimmerling, Steel was able (about a week after the conference ended) to significantly streamline Woodin's proof of UBH. This in turn led to further conversations between Steel and Neeman, and by mid-January they had found a completely new proof of UBH and CBH, proofs which use large cardinal hypotheses much weaker than those used in Woodin's proofs. Steel and Neeman are writing up this work, and it will be posted on the conference webpage.

Schimmerling led a seminar at CMU devoted to the simplified proof of UBH and related background material. Conference participants Cummings, Magidor, and Thompson were among those attending the seminar. Schimmerling wrote up a set of notes on this material, which he is now editing. It will be posted at the conference webpage. Steel led a seminar at Berkeley Jan. 20 to March 20 devoted to the same subject, with conference participants Closson and Sargsyan among those attending. Neeman led another such seminar at UCLA.

The twenty problems assembled at the conference problem sessions were recorded, and transformed into a tex file, by two graduate student participants (Closson and Sargsyan). The resulting document is now being edited, and will be posted at the conference webpage. Once notes taken by various people at Woodin's lectures are made reasonably presentable, the conference organizers will post them on the webpage too.

Finally, the conference topics will be a focal point of the set theory meeting to be held in Singapore, June 20, 2005 to July 20, 2005. Woodin will give a week-long tutorial there on work closely related to his work on UBH and CBH. Steel will give a week-long tutorial on work that he and Itay Neeman have done in extending Woodin's mouse set theorem (another one of the AIM conferences central topics.)