

**INNER MODEL THEORY SEMINAR:
HOD COMPUTATIONS
WINTERSEMESTER 2023**

SANDRA MÜLLER

We will follow the papers “An Outline of Inner Model Theory” by John Steel [Ste10] in the Handbook of Set Theory and “HOD as a Core Model” by John Steel and Hugh Woodin [SW16]. We focus on HOD in $L(\mathbb{R})$ under the assumption that this is a model of determinacy. For inner model theoretic background we will refer to [Ste10] as well.

Time: Fridays 13:00 - 14:30 in the “Dissertantenraum” on the 8th floor in the green area of the TU Wien Freihaus.

Fr 6.10. Julia Millhouse and Sandra Müller: Is HOD a canonical model? Consistency results and an overview of HOD computations.

Fr 13.10. No seminar because of the Luminy Meeting.

Fr 20.10. Grigori Stepanov: Fine structure and mice with Woodin cardinals in a nutshell. The mouse M_ω .

Fr 27.10. No seminar (“Fenstertag”).

Fr 3.11. Fernando Barrera: The reals of M_ω : \mathcal{Q} -structures, Definition 7.1, 7.3, 7.4, 7.5, Lemma 7.6, Theorem 7.8 in [Ste10].

Fr 10.11. Lukas Koschat: The reals of M_ω : the rest of Section 7.1 in [Ste10]

Fr 17.11. No seminar because of the Warsaw Perspectives Conference.

Fr 24.11. William Chan: Mouse capturing in $L(\mathbb{R})$: Theorem 7.15, Corollaries 7.17 and 7.18 in [Ste10] (see Section 7.2 in [Ste10] and Section 6.1 in [SW16], genericity iterations can be taken for granted as we discussed them in detail last semester).

Fr 1.12. Takehiko Gappo: Correctness for $L(\mathbb{R})$: Theorems 7.19 and 7.20 in [Ste10], Mouse Capturing

Fr 8.12. No seminar (public holiday).

Fr 15.12. Andreas Lietz: HOD in $L(\mathbb{R})$ below Θ : Section 8 in [Ste10] up to and including Lemma 8.8.

Fr 22.12., 29.12, 5.1. No seminar (Christmas break).

Fr 12.01. Benjamin Siskind: HOD in $L(\mathbb{R})$ below Θ : the direct limit systems, up to and including Corollary 8.16 in [Ste10].

Fr 19.01. Farmer Schlutzenberg: HOD in $L(\mathbb{R})$ below Θ : the height of M_∞ , up to and including Lemma 8.19 in [Ste10]. If time permits, Theorem 8.20 in [Ste10] and a selection of the results following it.

Fr 26.01.

LITERATUR

- [Ste10] STEEL, J. R.: An Outline of Inner Model Theory. In: FOREMAN, M. (Hrsg.) ; KANAMORI, A. (Hrsg.): *Handbook of Set Theory*. Springer, 2010
- [SW16] STEEL, J. R. ; WOODIN, W. H.: HOD as a core model. In: KECHRIS, A. S. (Hrsg.) ; LÖWE, B. (Hrsg.) ; STEEL, J. R. (Hrsg.): *Ordinal definability and recursion theory, The Cabal Seminar, Volume III*. Cambridge University Press, 2016