

## **Making HOD to be Far from V**

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We produce three models of set theory in which  $HOD$  is far from  $V$ . In the first model,  $\alpha^+$  is bigger than  $\alpha^+$  of  $HOD$  for all infinite cardinals  $\alpha$ , in the second model,  $GCH$  fails everywhere, while it holds in  $HOD$ , and in the third model there exists a club  $C$  of cardinals so that all  $\alpha \in C$  are regular in  $HOD$ .

The construction of the first model is joint work with James Cummings and Sy David Friedman.

## **References**

- [1] Cummings, James; Friedman, Sy-David; Golshani, Mohammad; Collapsing the cardinals of  $HOD$ , submitted.
- [2] Golshani, Mohammad;  $HOD$ ,  $V$  and the  $GCH$ , submitted.
- [3] Golshani, Mohammad; Changing the cofinality of the cardinals of  $HOD$ , in preparatin.