

1135-03-3142

Rachid Atmai* (ratmai@miracosta.edu), 4320 Cassanna Way apt#1809, Oceanside, CA 92057.
Definable counterexamples to the Continuum Hypothesis and consistency results from determinacy axioms. Preliminary report.

We present some partial results which point in the direction of obtaining new definable counterexamples to the Continuum Hypothesis. These results have the potential of leading to the identification of a canonical generic extension of $L(\mathbb{R})$, in which $\Theta^{L(\mathbb{R})} > \omega_3$, the Axiom of Choice holds and which settles combinatorial questions about ω_2 . In the context of Woodin's Ω -logic, the goal of this investigation is to identify axioms which mirror forcing axioms and which maximize the theory of initial segments of the universe V , but under which the Continuum Hypothesis fails. These partial results build on previous work of Jackson and Woodin. (Received September 26, 2017)