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SEMINÁRIO DE LÓGICA MATEMÁTICA

Dia 16 de dezembro (sexta-feira), às 15H00, sala 6.2.33

The strength of countable saturation

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Abstract:

The countable saturation principle is common in nonstandard arguments. We will show that it is a consequence of the theory for nonstandard Heyting arithmetic presented in the last seminar. We use the herbrandised functional interpretation to show this. The second part of the seminar will be dedicated to the behaviour of the countable saturation principle in a classical setting. We will see that Peano arithmetic together with a version of the axiom of choice, idealization, and the countable saturation principle has exactly the strength of second order arithmetic. These results are due to Benno van den Berg et al [1].

[1] van den Berg, B., Briseid, E., and Safarik, P. The strength of countable saturation. arXiv:1605.02534, 2016.

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