

SEMINÁRIO

LÓGICA MATEMÁTICA

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Simplicity of Proofs and Combinatory Logic

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ABSTRACT:

Related with investigations on simplicity of proofs, we focus on formulas of the form ϕ implies ϕ , adopting as framework the Pure Positive Implication Propositional Calculus based on Frege's axiomatization of implication. In this context, we search for a shortest proof of ϕ implies ϕ . There might be particular instances of this formula which admit proofs that are shorter than a shortest proof of ϕ implies ϕ in general. A first example is the case for ϕ itself of the form ψ implies ψ . More examples are obtained by means of combinatory logic. This is joint work with Reinhard Kahle and Paulo Guilherme Santos.

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