SEMINÁRIO
LÓGICA MATEMÁTICA

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Foundational aspects of singular integrals and divergent series – Part 2

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Abstract:

In this second talk I will start by reviewing the statement of Costin's and Friedman's results on the necessary use of the Axiom of Choice to build anti-derivative operators that satisfy the property that if two functions are equal in a neighborhood of a singularity then their anti-derivates are also equal in a neighborhood of the singularity. Following that I will review the basic facts about the use of the Axiom of Choice in Mathematics.
I will then proceed to the proof of the positive result.
The second result, the negative one, is of more foundational interest and will be the subject of the final part of this talk. Both proofs are very easy to follow and any student that has the more basic notions of General Topology will be able to understand this talk.