

DOTORATO

### Wednesday 27 September 2023 – at 10.00 am Seminar Room 1 Department of Mathematics

# **Emanuele Di Bella**

**PhD Student in Mathematics** 

## **Measurable Cardinals**

#### **Abstract:**

Measure theory plays a crucial role in set theory, in particular the theory of large cardinals owes its origin to the basic problem of measure theory, the Measure Problem of H. Lebesgue, which will be discussed during the talk. Moreover, the aim is to prove that if there is an atomless measure, then there exists a weakly inaccessible cardinal which is smaller or equal than the cardinality of real numbers (Ulam's theorem). The results above will be discussed step by step using basic set theory notions, making clear what are the main outcomes of the topic.

#### Contact person: Stefano Baratella

#### The seminar corresponds to the final exam of "Set Theory", a planned course within Emanuele Di Bella's first year PHD study program

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