**Model theory**

Model theory is the study of mathematical structures such as groups, topological spaces, Banach spaces, ordered sets and so on, by means of *logic*. Instead of caring about the particular groups/spaces, they classify structures and produce general theorems about these different kinds of structures.

Model theory started in the 1930’s-40’s with the works of Gödel, Löwenheim, Skolem among others, and slowly thereafter begun to see applications in both group theory, field theory and topology. It even created an entirely different way of doing analysis, called non-standard analysis, in which continuity and convergence can be defined without resorting to limits at all!

I will not assume prior knowledge of the subject, and will therefore introduce the basic concepts, as well as show a variety of different interesting results and applications from the theory. Some knowledge of vector spaces, fields and basic logical notation is useful, but not required.

The colloquium will be held in English if not everyone in the audience is Danish.