

- ▶ RALF SCHINDLER, *The evolution of inner models*.

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In mathematics, things evolve through stimulation by the right problems, spontaneous insights, and tedious verifications. Only the best methods and fittest classes of structures survive. The tutorial discusses the significance of inner model theory from historical and mathematical perspectives. It will be explained which natural questions led and lead to the production of mice (the building blocks of inner model theory) of greater and greater complexity, and why mice are necessary, useful, and exciting objects to study. Starting with Gödel, inner model theory has been used successfully for manufacturing (sometimes spectacular) results whose statements do not mention concepts of inner model theory but for which no "direct" proofs are in sight. The tutorial will present key ideas on tools, theorems, and open questions (concerning the construction of mice and core models, covering properties, combinatorial analyses, complexity issues, and their applications) in a way to be accessible to every logician.