

On equivalences of the axiom of choice

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In 1904 Zermelo used the Axiom of Choice (AC) for proving that every set can be well ordered.

Zermelo's formulation of AC was as follows "The product of an infinite totality of sets, each containing at least one element itself, differs from zero."

Since that time different formulations and variations of this axiom were published. During the lecture there will be presented various classical and non-classical equivalences of AC not only in Set Theory but also in Algebra, Graph Theory and Game Theory.