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Philosophischnaturwissenschaftliche Fakultät Departement Mathematik und Statistik **Mathematisches Institut** 

## **Mathematical Colloquia**

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Monday, 18 March 2024

17:15 h, lecture room B6 (ExWi)

## Dr. Wesley Fussner, Czech Academy of Sciences

## **Recent Progress on Amalgamation**

**Abstract :** Given two mathematical structures **A** and **B** with a common substructure, an *amalgam* of them is another structure **C** in which **A** and **B** embed in such a way that the common substructure is preserved. Amalgamation appears throughout mathematics in many different contexts, and has a number of quite surprising links to seemingly unrelated phenomena. In this talk, we will survey some recent progress on understanding various kinds of amalgamation in the context of ordered algebraic structures. We will also discuss some of the applications of amalgamation to questions in logic, as well as some of the outstanding open problems in the area.