universität wien

Fakultät für Mathematik

Berufungsvorträge
„Mathematische Logik mit Berücksichtigung der Grundlagen der Informatik“

Die Berufungsvorträge schließen folgende Punkte mit ein:

Didaktischer Vortrag (25 Minuten)
Fragen/Pause (10 Minuten)
Wissenschaftlicher Vortrag (45 Minuten)
Fragen/Pause (15 Minuten)
Kommissionelles Hearing -
(Dekanatsbesprechungszimmer, 11. Stock)

Mittwoch, 10. Oktober 2018, Seminarraum 8

Prof. Manuel Bodirsky
(Technische Universität Dresden)

9:00 Uhr: Didaktischer Vortrag
“Amalgamation Classes and Homogeneous Limit Structures”

This lecture is an introduction to Fraïssé theory. We will learn how to construct very symmetric infinite limit structures from classes of finite structures. These classes have to satisfy a strong combinatorial property: the amalgamation property. Many famous mathematical structures can be constructed in this way.

9:35 Uhr: Wissenschaftlicher Vortrag
“Model Theory of Constraint Satisfaction”

The constraint satisfaction problem (CSP) of a structure T is the computational problem of deciding whether a given conjunction of atomic formulas is satisfiable in T. Such problems are abundant in theoretical computer science. A very fruitful research direction is the classification of the computational complexity of the CSP of T depending on the structure T. Such a classification has been achieved in 2017 for the class all finite structures T. For infinite structures T, model theory is an essential tool to understand for which classes of structures T we can hope for complete complexity classifications. The questions that arise have multiple and deep links with many areas of mathematics, for example with Ramsey theory in combinatorics, topological dynamics, finite model theory, and universal algebra