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)

Donnerstag, 11. Oktober 2018, Seminarraum 12

Prof. Grigor Sargsyan
(Rutgers University)

9:00 Uhr: Didaktischer Vortrag
"The pumping lemma for regular languages"

The pumping lemma for regular languages is a basic theorem in theoretical computer science concerning the regular languages. It essentially says that in regular languages words that have sufficiently long lengths have a middle part that can be repeated arbitrary many times to form new words.

9:35 Uhr: Wissenschaftlicher Vortrag
"Determinacy and Large Cardinals, an approach to Gödel's Program"

In set theory, Gödel's Program is the program of removing the incompleteness phenomenon by considering hierarchy of theories that have natural models, much like natural numbers have a canonical and minimal model, namely the set of natural numbers. Large Cardinal Axioms are axioms describing powerful properties of infinity that have a dramatic effect on "small" sets, such as sets of reals or even reals themselves. Gödel himself suggested these axioms as the axioms that will complete mathematics. On the other hand, determinacy of two player games of perfect information has emerged as the dominant principle deciding almost all classical questions about sets of reals. And therefore it is not an accident that there is an intimate connection between determinacy and large cardinals. In this talk, I will introduce Gödel's program more precisely, outline the connection between determinacy and large cardinals, and explain the current state of Gödel's program.