Berufungsvorträge
"Computational Medicine"

Die Berufungsvorträge schließen folgende Punkte mit ein:

Didaktischer Vortrag (30 Minuten)
Wissenschaftlicher Vortrag (45 Minuten)
Fragen/Pause (30 Minuten)
Kommissionelles Hearing -
(Dekanatsbesprechungszimmer, 11. Stock)

Freitag, 18. Oktober 2019, HS 17

Doron Levy
(University of Maryland)

09:00 Uhr: Didaktischer Vortrag
"Modeling the development of drug resistance"
In this lecture addressed to students in mathematics, computer science, and medicine, we will overview basic concepts in modeling the development of drug resistance. We will start with a brief description of the Luria & Delbrück (LD) analysis for the development of antibiotic resistant bacteria. This work received the Nobel prize in medicine (1969). We will then demonstrate how the LD analysis was extended by Goldie and Coldman to model resistance to chemotherapy in cancer.

09:30 Uhr: Wissenschaftlicher Vortrag
"Mathematical modeling the role of the immune response in leukemia"
Modern targeted therapies have significantly improved the treatment of chronic myelogenous leukemia (CML). Yet, most patients are not cured for undetermined reasons. In this talk we will show how mathematical methods can be applied to model the immune response to CML. Along the way, we will discuss cancer vaccines, drug resistance, and cancer stem cells. We will demonstrate how mathematical methods can be used to integrated clinical and experimental data in order to guide treatment options.