Karlsruher Institut für Technologie

Institut für Stochastik

Einladung zu einem Vortrag in der

AG STOCHASTIK

am Dienstag, 23.06.2026, um 15.45 Uhr.

Prof. Dr. Nicolas Juillet

University of Haute-Alsace in Mulhouse

spricht über das Thema

The « Football Model » and the martingale transport problem

It is common practice to present the results of a sports league in the form of a table, with one of the columns showing the number of wins per team. When n teams have all played each other, this vector can take the form (0,1,\ldots,n-1) in the case a strictly ranked championship, or, conversely, a vector whose components are more concentrated around (n-1)/2. A theorem by E. Landau, generalized by Moon, states a necessary and sufficient condition for a vector to satisfy this property, using the partial order said of ‘majorization'. Whilst this condition translates easily into terms of conditional expectation, it was only recently, in 2022, that a probabilistic proof of Moon’s theorem was proposed by Aldous and Kolesnik. In this proof, the authors draw on an analogy: that of a ‘football’ statistical model. Our work, with Gaoyue Guo (Paris Saclay) and Wenpin Tang (Columbia University), has consisted of framing this proof within the context of a martingale transport problem in order to make it more tangible and to obtain new properties.

Ort: SR 2.058 (Geb. 20.30)

Die Dozentinnen und Dozenten der Stochastik