

Imprecise probabilities in statistics and conformal change detection: elementary results and an open question

Vladimir Vovk

Royal Holloway, University of London

ISIPTA 2019, Ghent University, 6 July 2019

How to formalize random sequences:

- The old way, as in the algorithmic theory of randomness (Kolmogorov, Martin-Löf, . . .). Rigorous but **approximate**.
- In my poster I advertise using imprecise, namely upper, probabilities (without using algorithms). The results are **precise**.

Flavours of randomness:

- Being IID.
- Being exchangeable.
- Withstanding “conformal change detection”.

I will discuss connections.