



## Minisymposium 7 - Stochastic algorithms and Markov processes

### Markov chains in the analysis of algorithms

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Abstract: The classical approach to the analysis of randomized algorithms or deterministic algorithms with random input concentrated on the average case behaviour, i.e. on the expectation  $EX_n$  of some random variable  $X_n$  that represents the complexity or running time of the algorithm as a function of the input size  $n$ . In the last 15-20 years considerable progress has been made in the analysis of the full distribution of  $X_n$ , and many limit results as  $n \rightarrow \infty$  have been obtained for a variety of standard algorithms. In this context, Markov chains play an important role. We give several examples and discuss the general methodology.