הסתברות ותורה ארגודית

ההרצאה

Markov Reversible in Estimation Time Mixing Path Sample Single a from Chains

תינתן על-ידי

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תקציר: We propose a procedure (the first of its kind) for computing a fully data-dependent interval that traps the mixing time t_mix of a finite reversible ergodic Markov chain at a prescribed confidence level. The interval is computed from a single finite-length sample path from the Markov chain, and does not require the knowledge of any parameters of the chain. This stands in contrast to previous approaches, which either provide only point estimates, or require a reset mechanism, or additional prior knowledge. The interval is constructed around the relaxation time t_relax, which is strongly related to the mixing time, and the width of the interval converges to zero roughly at a sqrt{n} rate, where n is the length of the sample path. Upper and lower bounds are given on the number of samples required to achieve constant-factor

restrictions further unless that, indicate bounds lower The accuracy. multiplicative before level accuracy this achieve can procedure no chain, the on placed are future Finally, average. the on times \Omega(t_relax) least at state each seeing identfiied. are research of directions

Szepesvári Csaba and Hsu Daniel with work Join