Minisymposium 7 - Stochastic algorithms and Markov processes

Perfect simulation for length-interacting polygonal Markov fields in the plane

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We construct perfect samplers for length-interacting Arak-Clifford-Surgailis polygonal Markov fields in the plane. This is achieved by providing for the polygonal fields a hard-core-interacting marked point process representation with individual points carrying polygonal loops as their marks. This enables us to use the general framework and software of (Van Lieshout and Stoica, 2006), in particular their generalised coupling-from-the-past (Kendall, 1998) and clan of ancestors (Fernandez et al, 2002) routines for our particular purposes.