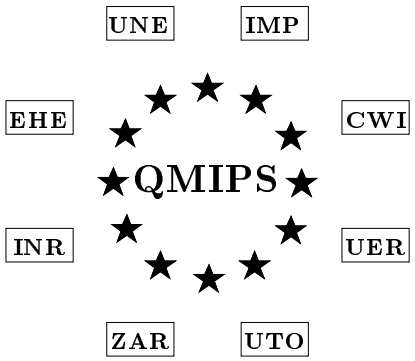

Quantitative
Modeling
In
Parallel
Systems

On the Determination of the Stationary Distribution of a Symmetric Clocked Buffered Switch

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Abstract The analysis of a symmetric clocked buffered switch leads to the study of a nearest neighbour random walk on the lattice in the first quadrant. The bivariate generating fuction of the stationary distribution of this random walk has to be obtained as a solution of a fuctional equation of a type which frequently occurs in the analysis of performance models. In this study it is illustrated that the functional equation for the present model can be solved very simply by using elementary properties of meromorphic functions.

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