Technische Universität München
Institut für Informatik I07
Theoretical Computer Science

Quantitative Verification 6 - Solutions

Ex 1: Matrix Representation

Transition matrix:

$$P = \begin{bmatrix} 0.9 & 0.1 & 0.0 \\ 0.4 & 0.0 & 0.6 \\ 0.0 & 0.2 & 0.8 \end{bmatrix}$$

Transient distribution: $\pi_0 \cdot P^3 = (0.9, 0.1, 0) \cdot P^2 = [0.85, 0.09, 0.06] \cdot P = [0.801, 0.097, 0.102]$.

Ex 2: Modelling

This is taken from [1, Exercise 8.6].

References

[1] Mor Harchol-Balter, Performance Modeling and Design of Computer Systems.