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Mostafa Ghandehari* (ghandeha@uta.edu), BNuiv. of Texas at Arlington, Civil Engineering, Box 19308, Arlington, TX 76019, and **Shahrzad Sheibani**. *The Z-transform of queuing systems*. Preliminary report.

The Z-transform is used to analyze the differential-difference equation for a queuing system. After taking the Z-transform a linear first order ordinary differential equation is obtained. The solution of the differential equation will give transform of transitional probabilities. The inverse Z-transform will give analytic expressions for transitional probabilities. An application in CPU scheduling is discussed. (Received July 06, 2009)