1052-39-104   **Mostafa Ghandehari*** (`ghandeha@uta.edu`), Civil Engineering, Box 19308, Univ. of Texas at Arlington, Arlington, TX 76019, and **Siamak Ardekani**. *The differential-difference equation for the car-following.* Preliminary report.

Velocities and spacings in the linear car-following model satisfy a differential-difference equation. After taking the Z-transform a linear first order ordinary differential equation is obtained. The solution of differential equation will give the Z-transform of the nth car in the platoon. the inverse Z transform will give analytic expressions for velocities and spacings of the n cars. (Received August 23, 2009)