Errata of the textbook
"Traffic Flow Dynamics – Data, Models, and Simulation"

Martin Treiber und Arne Kesting

August 25, 2014

In the following, we list only errors relating to the content.

- **Chapter 3.1, page 14:** The second term of Eq. (3.3) is incorrect. The correct equation reads
$$\rho = \frac{Q}{V}\left(\frac{1}{1+\frac{\sigma_V}{V}Q\sigma_{\Delta t}\ r_{v_\alpha,\Delta t_\alpha}}\right) \tag{3.4}$$
where $\sigma_{\Delta t}$ is the standard deviation of the (vehicle-to-vehicle) time headways.

- **Chapter 3.3, page 19:** Equation (3.20) is incorrect. The correct equation reads
$$\rho = \frac{Q}{V}\left(\frac{1}{1+\frac{\sigma_V}{V}Q\sigma_{\Delta t}\ r_{v_\alpha,\Delta t_\alpha}}\right) \tag{3.21}$$
where $\sigma_{\Delta t}$ is the standard deviation of the (vehicle-to-vehicle) time headways.

- **Chapter 9.5, page 146:** There are sign errors in Equation (9.31): The correct equation reads
$$S_{\text{inh}} = -\frac{Q^2}{\rho I}\frac{\mathrm{d}I}{\mathrm{d}x} + \frac{Q\nu_{\text{rmp}}}{\rho} + \rho A_{\text{rmp}}. \tag{9.31}$$

- **Solutions to Problem 9.5, page 455:** In the last equation of this solution, there are sign errors related to that of Chapter 9.5: The right-hand side of this equation should read
$$\frac{\rho V_{\text{e}}^* - Q}{\tau} - \frac{Q^2}{\rho I}\frac{\mathrm{d}I}{\mathrm{d}x} + \frac{Q\nu_{\text{rmp}}}{\rho} + \rho A_{\text{rmp}}.$$

- **Table 11.2, page 190:** The typical parameter values of this table are valid for cars, only. On freeways/highways, trucks (and their drivers) are characterized by a desired speed of 80 km/h. In any scenario, the time-gap parameter of trucks is of the order of 2 s, and the acceleration and comfortable deceleration parameters are somewhat lower than that for cars, e.g.,

Parameter	Typical Value Cars, Highway	Typical Value Cars, City Traffic	Typical Value Trucks
Desired speed v_0	120 km/h	54 km/h	50 km/h/80 km/h
Time gap T	1.0 s	1.0 s	1.8 s
Minimum gap s_0	2 m	2 m	3 m
Acceleration exponent δ	4	4	4
Acceleration a	1.0 m/s^2	1.0 m/s^2	0.5 m/s^2
Comfortable deceleration b	1.5 m/s^2	1.5 m/s^2	1.0 m/s^2