## The G/M/1 Queue revisited

Ivo Adan<sup>†</sup> Onno Boxma<sup>‡</sup> David Perry<sup>§</sup>

March 2005

**Abstract:** he G/M/1 queue is one of the classical models of queueing theory. The goal of this paper is two-fold: (i) To introduce new derivations of some well-known results, and (ii) to present some new results for the G/M/1 queue and its variants. In particular, we pay attention to the G/M/1 queue with a set-up time at the start of each busy period, and the G/M/1 queue with exceptional first service.

i

 $<sup>^\</sup>dagger EURANDOM$  and Department of Mathematics and Computer Science, Eindhoven University of Technology, P.O.Box 513, 5600 MB Eindhoven, The Netherlands

 $<sup>^{\</sup>ddagger}$ EURANDOM and Department of Mathematics and Computer Science, Eindhoven University of Technology, P.O.Box 513, 5600 MB Eindhoven, The Netherlands

 $<sup>\</sup>S{\rm Department}$  of Statistics, University of Haifa, Haifa, Israel 31905