

1046-15-568

Pauline van den Driessche* (pvdd@math.uvic.ca), Department of Mathematics and Statistics, University of Victoria, Victoria, BC V8W3R4, Canada. *Spectra of Matrices Applied to Dynamical Models of Infectious Disease.*

Compartmental models of infectious disease are frequently formulated as systems of ordinary differential equations. Matrices that appear in the analyses of equilibria of these systems often have known sign patterns. For example, they may be entrywise nonnegative or have the Z-sign pattern. Models appropriate for the spread of influenza illustrate how matrix analysis can be applied to determine the dynamical behavior of such systems. (Received September 08, 2008)