1116-00-2977   **Huaiping Zhu*** (`Huaiping@mathstat.yorku.ca<mailto:Huaiping@mathstat.yorku.ca>`).
Modeling and the dynamics of the Spread and Control of Dengue with L= imited Public Health Resources

To study the impact of available resource of the health system on= the spread and control of dengue fever, I will introduce a deterministic m= odel for the transmission dynamics of the disease incorporating a nonlinear= recovery rate reflecting the public health resources. Model results indic= ate the existence of multiple endemic equilibria; and system exhibits the phenomenon of backward bifurcation as a common feat= ure of vector-borne diseases. Additionally, the can undergo a Hopf bifurcat= ion. The results of this study could be helpful for public health plan the = resources essential for control of dengue disease. This is a joint work wi= th Ahmed Abdelrazec, Jacques Belair and Chunhua Shan. (Received September 28, 2015)