A Note on Ebola's Outbreak and Human Migration Dynamic

E. F. Doungmo Goufo** and R. Maritz**

*Department of Mathematical Sciences, University of South Africa, Florida, South Africa
E-mails: *<dgoufef@unisa.ac.za>, **<maritr@unisa.ac.za>*

ABSTRACT In the present research, a multi-country system modelling people travelling between four countries touched by ebola-virus and a multi-compartmental model of ebola dynamic are analysed. The travel model showed how total population present in a country is affected by other infected residents or visitors. Numerical simulations are performed for a sample population of 1000 people and clearly, they reveal that, even a small amount of infected visitors may cause, within a short period of time, the extermination of an entire human population in a region if nothing is done to stop the disease. This result is pertinent since it corresponds to the ongoing situation in West Africa. Further, it agrees with countries closing their borders to limit individuals' flux coming in. Thus, the urgency of educating people about the disease process, ways to stop its spread and finding its cure is huge and looks like a race against time for the world.