Abstract

We introduced the fading memory effect to the model portraying the prediction in physical condition. The classical model is known as the Banister model. We presented the existence and uniqueness conditions of the exact solutions of this model using three different memory including the bad memory induces by the power law and the good memories induced by exponential decay law and the Mittag-Leffler law. We derived the exact solutions using the Laplace transform for the non-delay version.