

In this talk I will review the linearized equations of motion in three dimensional Born-Infeld gravity theory. Motivated by this model, I will calculate the quasinormal modes (QNMs) of BTZ black hole solutions of any parity-even gravity models in three dimensions by using numerical methods and I will compare with know analytical results. I will classify the QNMs in three families and they are so accurate such that it allows us to propose analytical form for the frequencies. New QNMs are found which have been missing in the literature of the analytical studies of three dimensional massive gravitons. These new modes do not have the known tower structure and they are purely imaginary for any value of the angular momenta. Considering the complete set of the QNMs, one can show that the BTZ black hole solutions are unstable for any value of the parameters of the theory. In this talk I will review the linearized equations of motion in three dimensional Born-Infeld gravity theory. Motivated by this model, I will calculate the quasinormal modes (QNMs) of BTZ black hole solutions of any parity-even gravity models in three dimensions by using numerical methods and I will compare with know analytical results. I will classify the QNMs in three families and they are so accurate such that it allows us to propose analytical form for the frequencies. New QNMs are found which have been missing in the literature of the analytical studies of three dimensional massive gravitons. These new modes do not have the known tower structure and they are purely imaginary for any value of the angular momenta. Considering the complete set of the QNMs, one can show that the BTZ black hole solutions are unstable for any value of the parameters of the theory.