Gravitational Waves BATUHAN BASERDEM, State Univ of NY- Stony Brook — General relativity is the theory that explains gravitational interaction as geometry. It addresses the shortcomings of the Newtonian theory and has been tested to great accuracy on larger scales. One prediction that general relativity makes is the existence of radiation due to gravitational forces. In my talk, I will give a brief theoretical introduction to the formulation of gravitational waves with the perturbative approach; geometry as a tensor field on otherwise flat spacetime. Detection methods and viability will be discussed, along with existing efforts of detection. As experimental evidence, the merger of binary neutron stars and black holes will be presented.