Gravitational waves (GWs) are distortions in the fabric of space and time, predicted by Einstein's General Theory of Relativity and confirmed on September 14, 2015, by the Laser Interferometer Gravitational-Wave Observatory (LIGO). The detection of GWs from the binary black-hole merger of LIGO detectors provides the direct evidence of Einstein's theory of gravitational waves. A well-organized collaboration of approximately 760 scientists worldwide who have joined together in the search for gravitational waves from the most violent events in the universe, such as the merger of black holes and neutron stars, the explosion of supernovae and the Big Bang.

**External Collaborations:**

- **The Ligo Scientific Collaboration (LSC)**[^3]: A well-organized collaboration of approximately 760 scientists who have joined together in the search for gravitational waves from the most violent events in the universe, such as the merger of black holes and neutron stars, the explosion of supernovae and the Big Bang.

- **The LCGT and DECIGO collaborations**[^13]: These are Japanese ground-based and space gravitational wave antenna projects.

- **The Ninja Project**[^14]: The goal of the Numerical Injection Analysis (NINA) project is to bring the numerical relativity and data analysis communities together to pursue projects of common interest in the areas of gravitational wave detection, astrophysics and astronomy.