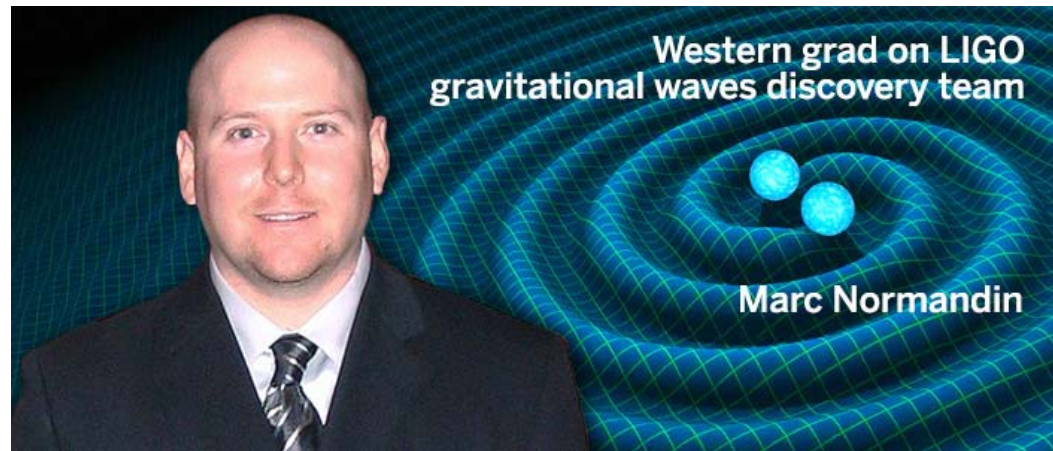


Current Year News[Current Year](#)[Making Headlines](#)[News Archives \(2005 - previous year\)](#)[Media Archives](#)[Local Conferences](#)[Student Awards Archives](#)**Western grad Marc Normandin is on gravitational waves discovery team**

The [announcement of the first detection of gravitational waves](#) rippled around the world on February 11, 2016.

The discovery was made by NSF's [Laser Interferometer Gravitational-Waves Observatory \(LIGO\)](#). LIGO is funded by the U.S. National Science Foundation.

One member of the discovery team is Western graduate of Physics and Astronomy Marc Normandin.

Marc is presently a University of Texas at Brownsville doctoral student, studying under gravitational waves expert **Professor Soumya Mohanty**.

According to Professor Mohanty, "**Marc is a member of the LIGO-Virgo Scientific Collaboration and an author on the detection paper. He has been working on developing a method that optimally combines data from gravitational wave and electromagnetic observations of sources, such as gamma ray bursts, to provide information about the population properties of such sources. Such a method will allow us to draw astrophysically useful conclusions even for sources that are too far away, hence too weak, to be detected confidently as individual gravitational wave events. It uses the idea of combining data from many events to build up confidence in the estimation of properties of a population of sources as a whole and complements the search for gravitational wave counterparts of individual electromagnetic triggers. Thus, the work Marc has been doing is forward looking and likely to play an important role in the new era of gravitational wave astronomy inaugurated by the first detection.**"



Prof. Mohanty (l) and Marc Normandin (r)

The tentative title for Marc's PhD thesis is, "**Optimal approach to population study using joint Electromagnetic and Gravitational Wave Observations**".

Describing his current research on his LinkedIn page, Marc writes, "**It involves population parameter estimation of model parameters as applied to multi-messenger datasets relating to Gamma-ray Burst (GRB) events. Electromagnetic information and gravitational wave information is combined to yield improved parameter estimations, whereas previous studies focus on only one type of information**".



Toasting the discovery of gravitational waves.
(l) Ram Valluri, and (r) Peter Komorowski




Marc had completed his MSc in Physics and Astronomy at Western under the supervision of gravitational waves researcher **Dr. Ram Valluri**. The title of Marc's MSc thesis is "**Pattern Recognition of a Gravitational Wave Pulsar Signal**".



Shown in the photo 'Celebrating the discovery of gravitational waves' are Ram Valluri and Peter Komorowski. Peter was supervised by Ram Valluri and Martin Houde on his PhD thesis which was titled "***An Analytical and Numerical Treatment of Inclined Elliptical Orbits about a Kerr Black Hole***". Peter's PhD thesis was the first ever in the field of General Relativity within the Department of

Physics and Astronomy at Western. The extreme black holes which Peter studies also emit gravitational waves, which one day may be detected.

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