The GW Department of Physics is proud to announce the Fall 2017

Frances E. Walker Lecture

The Promise and Challenges of Gravitational-Wave Astronomy

Dr. Vicky Kalogera
Daniel I. Linser Distinguished University Professor,
Department of Physics & Astronomy,
Northwestern University

The LIGO detectors have opened for us a new way of studying compact objects in the time domain with direct detections of gravitational-wave bursts from binary mergers of black holes. I will highlight what current results imply and what we can look forward to in terms of advancing our understanding of compact objects, their origins and the explosive phenomena they cause.

When: Thursday, September 21st, 2017 – 4:00 pm
Where: B1270 Lehman Auditorium, S.E.H.
800 22nd Street, N.W.

About the Speaker:

Vicky Kalogera received her Pthio (B.S.) in Physics in 1992 from the University of Thessaloniki in Greece and her Ph.D. in Astronomy in 1997 from the University of Illinois at Urbana-Champaign. In 1997 she joined the Harvard-Smithsonian Center for Astrophysics as a CfA Postdoctoral Fellow and in 2000 she was awarded the inaugural Clay Postdoctoral Fellowship. Dr. Kalogera was appointed Assistant Professor at Northwestern University in the Department of Physics and Astronomy in 2001, was promoted to Associate Professor in 2006, was named the Erastus Otis Haven Professor of Physics and Astronomy in 2009, and was appointed Associate Chair of the Physics and Astronomy Department in 2015. She is a co-founder (2009) and the current Director of CIERA, the Center for Interdisciplinary Exploration and Research in Astrophysics, an endowed research center at Northwestern focused on advancing astrophysics studies with emphasis on interdisciplinary connections. In 2017 the Northwestern University Board of Trustees appointed her to the Daniel I. Linzer Distinguished University Professorship.

Dr. Kalogera’s research interests are in the astrophysics of compact objects and in particular their formation and evolution in multiple stellar systems. She studies the physical properties of X-ray binaries, millisecond radio pulsars and double compact objects in our own and other galaxies and works on the theoretical interpretation of current observations of their electromagnetic emission.
and their anticipated gravitational radiation. She has expanded into projects in gravitational-wave data analysis and astrophysical modeling involving methods from applied mathematics, statistics, and computer science, with extensive use of high-performance computing. Within the LIGO Scientific Collaboration, Dr. Kalogera led the work on astrophysical implications of the historic gravitational-wave discovery announced in early 2016.

Dr. Kalogera serves on the Committee on Astronomy and Astrophysics of the National Research Council and the Executive Board of Directors of the Large Synoptic Survey Telescope Corporation (LSSTC). Among her awards and honors are the Hans A. Bethe Prize from the American Physical Society (APS), the David and Lucile Packard Foundation Fellowship in Science and Engineering, the Maria Goeppert-Mayer Award by APS, the Cottrell Scholar Award by the Research Corporation, the NSF CAREER Award in Astronomy, the A.J. Cannon Award by the American Astronomical Society (AAS), and a Fellowship in Theoretical Physics by the Simons Foundation. As a member of the discovery team of the first LIGO source (GW150914), she is also humbled to have been included in the 2016 Gruber Prize in Cosmology and the 2016 Special Breakthrough Prize in Fundamental Physics.

About the Lecture Series:

The Frances E. Walker Fund for Women in Physics was established by Dr. Mary Anne Frye to acknowledge her mother, Frances E. Walker and to support programs that encourage and increase the participation of women in the study of physics. The Walker Lecture Series brings prominent women physicists and astrophysicists to campus to highlight their accomplishments and incorporates a mentoring segment for students. The fund also supports a fellowship that is designed to give promising female U.S. citizens the opportunity to engage in research projects under the guidance of a GW Physics Department faculty member.

Dr. Frye received a B.A. in Physics in 1970 and earned a Ph.D. in Physiology in 1975 from the GW Columbian College of Arts and Sciences. Frances E. Walker graduated from GW with a B.A. in 1927 and a M.A in Latin in 1931.

The George Washington University Physics Department:

The GW Physics Department has a strong commitment to undergraduate and graduate education and has active research programs in astrophysics, biophysics, nuclear physics, and physics education.

Each gift, no matter how large or small, makes a positive impact on our educational mission and furthers our standing as a dynamic and growing physics department in one of the world’s outstanding universities. If you would like to contribute to this fund or another department initiative, you may make a gift to the Department in a number of ways:

- Securely online [https://my.gwu.edu/mod/onlinegiving/](https://my.gwu.edu/mod/onlinegiving/)
- By phone by calling the GW Annual Fund at 1-800-789-2611
- By mailing your check, made out to The George Washington University and with the name of the department in the memo line, to:

  The George Washington University  
  2100 M Street NW, Suite 310  
  Washington, DC 20052