

CURRICULAM VITAE
RUBAB KHAN

Work Address:

Department of Astronomy
Ohio State University
140 W 18th Avenue
Columbus, Ohio 43210-1173
tel: (614) 292-3099
fax: (614) 292-2928

Home Address:

133 W. Blake Ave., Apt. D
Columbus, Ohio 43202
tel: (614) 268-6835

e-mail: khan@astronomy.ohio-state.edu

web: <http://www.astronomy.ohio-state.edu/~khan/>

EDUCATION: **The Ohio State University**, Columbus, Ohio 2008 – current

Department of Astronomy
PhD. Expected 2013/14
M.S. Expected 2010
Research Advisor: Krzysztof Stanek

Columbia University, New York, NY 2004 – 2008

Columbia College (Major: Astrophysics)
Bachelor of Arts, May 2008
Research Advisor: Szabolcs Marka

AWARDS:

Departmental Honors in Astrophysics, Columbia University
Deans List (Spring 2007, Fall 2007, Spring 2008), Columbia College
Global Scholar, Columbia College Class of 2008. Associated financial support of over \$190,000 for 2004-2008 academic years.
Summer Undergraduate Research Fellowship, California Institute of Technology. Associated grant of \$5000 for summer 2006.
APS DAP Travel Grant, for attending April 2008 APS meeting.

EMPLOYEMENT: The Ohio State University, Columbus, Ohio

Research Associate June 2009 – Current
Teaching Associate September 2008 – June 2009

Columbia University, New York, NY

Teaching Assistant January 2008 – May 2008
Research Laboratory Assistant Summer 2005, 2007

MEMBERSHIPS: American Astronomical Society (since 2006)

American Physical Society (since 2006)

RESEARCH INTERESTS

Supernovae core-collapse, experimental detection of Gravitational Waves, variable stars, massive compact objects, instrumentation.

CURRENT PROJECTS

1. Cataloging obscured massive stars in nearby galaxies.
Advisor: Krzysztof Stanek. Timeline: Expected completion in 2009.
2. Search for Gravitational Wave Fingerprints of Soft Gamma Repeater QPOs.
Advisor: Szabolcs Marka. Timeline: Expected completion in 2010.

JOURNAL PUBLICATIONS:

1. B. P. Abbott et al. Search for gravitational wave ringdowns from perturbed black holes in LIGO S4 data. *Phys. Rev. D*, 80(6):062001-+, September 2009.
2. B. P. Abbott et al. First LIGO search for gravitational wave bursts from cosmic (super)strings. *Phys. Rev. D*, 80(6):062002-+, September 2009.
3. R. Khan and S. Chatterji. "Enhancing the Capabilities of LIGO Time-Frequency Plane Searches Through Clustering". *Classical and Quantum Gravity*, 26(15):155009 (14pp), August 2009.
4. B. P. Abbott et al. "Stacked Search for Gravitational Waves from the 2006 SGR 1900+14 Storm". *Astrophysical Journal Letters*, 701:L68-L74, August 2009.
5. B. P. Abbott et al. "An upper limit on the stochastic gravitational-wave background of cosmological origin". *Nature*, 460:990-994, August 2009.
6. B. P. Abbott et al. "Einstein@Home search for periodic gravitational waves in early S5 LIGO data." *Physical Review D*, 80(4):042003-+, August 2009.
7. B. P. Abbott et al. "Search for gravitational waves from low mass compact binary coalescence in 186 days of LIGO's fifth science run." *Physical Review D*, 80(4):047101-+, August 2009.
8. B. Abbott et al. "Observation of a kilogram-scale oscillator near its quantum ground state." *New Journal of Physics*, 11(7):073032-+, July 2009.
9. B. Abbott et al. "Search for Gravitational Waves from Low Mass Binary Coalescences in the First Year of LIGO's S5 Data". *Physical Review D*, 79(12):122001-+, June 2009.
10. B. Abbott et al. "All-Sky LIGO Search for Periodic Gravitational Waves in the Early Fifth-Science-Run Data". *Physical Review Letters*, 102(11):111102-+, March 2009.
11. B. Abbott et al. "Einstein@Home search for periodic gravitational waves in LIGO S4 data". *Physical Review D*, 79(2):022001-+, January 2009.
12. B. Abbott et al. "First joint search for gravitational-wave bursts in LIGO and GEO 600 data". *Classical and Quantum Gravity*, 25(24):245008-+, December 2008.
13. B. Abbott et al. "Search for Gravitational-Wave Bursts from Soft Gamma Repeaters". *Physical Review Letters*, 101(21):211102-+, November 2008.
14. B. Abbott et al. "Beating the Spin-Down Limit on Gravitational Wave Emission from the Crab Pulsar". *Astrophys. J.*, 683:L45-L49, August 2008.
15. B. Abbott et al. "Astrophysically triggered searches for gravitational waves: status and prospects". *Classical and Quantum Gravity*, 25(11):114051-+, June 2008.
16. P. Kalmus, R. Khan, L. Matone, S. Marka. "Search method for unmodeled transient gravitational waves associated with SGR flares". *Classical and Quantum Gravity*, 24:659-+, October 2007.

CONFERENCE PRESENTATIONS:

1. R. Khan, L. Matone, P. Kalmus, I. Bartos, J. Rollins, S. Marka. "Search Method for Gravitational Wave Fingerprints of Soft Gamma Repeater QPOs". Poster presented at the APS meeting, St. Louis, MO, April 12-15, 2008.
2. P. Kalmus, G. Jones, R. Khan, S. Klimenko, S. Marka, A. Mercer, P. Sutton, M. Was, I. Yakushin. "Complementing inspiral searches with burst pipelines". Poster presented at the GWDAW 12, MIT, December 13-16, 2007.
3. R. Khan, L. Matone, S. Marka, D. Sigg. "Recent Timing Diagnostic Results". Presented at LIGO/Virgo Collaborations Meeting, MIT, July 23-26, 2007.
4. P. Kalmus; R. Khan; S. Marka; L. Matone. "Search Method for Gravitational Wave Transients Associated with the SGR 1806-20 Giant Flare". Poster presented at the GWDAW 11, Potsdam, Germany, December 18-21, 2006.
5. R. Khan and S. Chatterji. "Enhancing the Capabilities of LIGO Time-Frequency Plane Searches Through Clustering". Poster presented at the GWDAW 11, Potsdam, Germany, December 18-21, 2006.

MISCELLANEOUS

- One of the few to have been inducted into the LIGO Scientific Collaboration author list as an undergraduate.
- Created and currently maintain the LSC membership slides and conferences page.
- Performed a total of 16 (160 hours) Science Monitoring expert shifts at the LIGO Livingston Observatory during LIGO's 5th science run.
- Helped prepare Columbia's successful bid for organizing the 8th Edoardo Amaldi Conference on Gravitational Waves to be held in 2009.
- Did multiple outreach talks on LIGO at the Society of Physics Students (Columbia).