

Jocelyn S. Read — Short Curriculum Vitae

CONTACT INFORMATION

Department of Physics and Astronomy
University of Mississippi
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EDUCATION

Doctor of Philosophy in Physics August 2008
Neutron stars in compact binary systems: from the equation of state to gravitational radiation.
University of Wisconsin–Milwaukee, Milwaukee, WI, USA
Advisors: John Friedman & Jolien Creighton

Bachelor of Science May 2002
Combined Honours in Physics and Mathematics
University of British Columbia, Vancouver, BC, Canada

RESEARCH EXPERIENCE

University of Mississippi, USA 2010–Present
Postdoctoral research, with Emanuele Berti. Testing alternative theories of gravity with neutron star observations. Redshift measurements and cosmology with advanced ground based detectors. Resonant neutron star crust shattering as a model of Short Gamma Ray Burst precursors.

MPIGP (Albert Einstein Institute), Potsdam, Germany 2008–2010
Postdoctoral research, Astrophysical Relativity group. Tidal effects on binary neutron stars and mixed binaries in perturbative/post-Newtonian and numerical frameworks. Gravitational wave astrophysics with advanced ground based detectors.

University of Wisconsin–Milwaukee, USA 2003–2008
Doctoral research, with John Friedman and Jolien Creighton. Parameterizing the nuclear equation of state for astrophysical constraints. Constructing binary neutron star initial data. Data analysis estimates from numerical gravitational waves.

University of Wisconsin–Milwaukee, USA 2003
Center for Gravitation and Cosmology, LSC Group. Template spacing for cosmic string signal searches in LIGO data with Jolien Creighton and Xavier Siemens.

University of British Columbia, Vancouver, Canada Summer 2002
Mathematica code for Bayesian analysis of period variation in binary star system, with Phil Gregory.

PUBLICATIONS

Online at: <http://bit.ly/jsread-spines>

“Measuring a cosmological distance-redshift relationship using only gravitational wave observations of binary neutron star coalescences.” C. Messenger, J. S. Read. arXiv:1107.5725, submitted to Phys. Rev. Lett.

“Will black hole-neutron star binary inspirals tell us about the neutron star equation of state?” F. Pannarale, L. Rezzolla, F. Ohme, J. S. Read. arXiv:1103.3526, accepted to Phys. Rev. D.

“The vacuum revealed: the final state of vacuum instabilities in compact stars.” P. Pani, V. Cardoso, E. Berti, J. S. Read, M. Salgado. Phys. Rev. D 83 (2011) 081501.

“Tidal deformability of neutron stars with realistic equations of state.” Tanja Hinderer, Benjamin D. Lackey, Ryan N. Lang, Jocelyn S. Read. Phys. Rev. D 81 (2010) 123016.

PUBLICATIONS
CONT'D

“Gravitational waves from neutron stars: Promises and challenges.” N. Andersson, V. Ferrari, D.I. Jones, K.D. Kokkotas, B. Krishnan, J. Read, L. Rezzolla, & B. Zink. *Gen. Rel. Grav.* 43 (2011) 409-436.

“Measuring the neutron star equation of state with gravitational wave observations.” J. S. Read, C. Markakis, M. Shibata, K. Uryu, J. D. Creighton, J. L. Friedman. *Phys. Rev. D* 79 (2009) 124033.

“Constraints on a phenomenologically parameterized neutron-star equation of state.” J. S. Read, B. D. Lackey, J. L. Friedman, B. Owen. *Phys. Rev. D* 79 (2009) 124032.

“Models of helically symmetric binary systems.” Shin’ichirou Yoshida, Benjamin C. Bromley, Jocelyn S. Read, Koji Uryu, John L. Friedman. *Class. Quantum Grav.* 23 (2006) S599-S613.

“Gravitational wave bursts from cosmic (super)strings: Quantitative analysis and constraints.” Xavier Siemens, Jolien Creighton, Irit Maor, Saikat Ray Majumder, Kipp Cannon, Jocelyn Read. *Phys. Rev. D* 73 (2006) 105001.

RECENT INVITED
TALKS

“Measuring a cosmological distance-redshift relationship using only gravitational wave observations of binary neutron star coalescences.” With C. Messenger. LSC-Virgo wide Data Analysis Council meeting. 12 August 2011.

“EOS/Parameter choices for NSNS/NSBH simulations.” Microphysics in Computational Relativistic Astrophysics, Perimeter Institute, Waterloo, Canada. 23 June 2011.

“Measuring the neutron-star equation of state using gravitational waves from binary observations.” APS April meeting. Anaheim, California. 30 April 2011.

“Constraining the equation of state using advanced gravitational-wave detectors.” Gravitational Wave Physics and Astronomy Workshop (GWPAW). Milwaukee, Wisconsin. 26 January 2011.

“Measuring waveforms of binary neutron stars.” Caltech-JPL Association for Gravitational Wave Research Seminar. Pasadena, California. 4 January 2011.

“Measuring the equation of state using gravitational waves from binary observations.” Exploring Physics with Neutron Stars, a celebration of Fred Lamb’s 65th Birthday. Tucson, Arizona. 19 November 2010.

“Modelling waveforms from binary neutron stars.” NRDA/CAPRA 2010: Theory Meets Data Analysis at Comparable and Extreme Mass Ratios. Perimeter Institute, Waterloo, Canada. 25 June 2010.

“Measuring tidal deformation from binary neutron star inspiral.” Yukawa Institute for Theoretical Physics, Kyoto, Japan. 14 May 2010.

TEACHING
AND SERVICE

Scientific Organizing Committee member
Numerical Relativity Meets Data Analysis (NRDA), Cardiff, Wales July 10-15 2011

Lecturer, 3rd International Summer School on Astroparticle Physics
Nijmegen, the Netherlands

“Gravitational waves: modelling sources” August 19-28, 2009