

ASHLEY J. RUITER

CURRICULUM VITAE

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Citizenship: Canadian

PROFESSIONAL EMPLOYMENT

09.2009-Present: **Postdoctoral Fellow**, Max-Planck-Institut für Astrophysik, Garching, Germany.
Interests: binary evolution, SN Ia progenitors, chemical evolution, GWR sources.

UNIVERSITY EDUCATION

08.2009: **Ph.D.** Astronomy, New Mexico State University, Las Cruces, NM, USA
“White Dwarfs in Close Binaries: Gravitational Waves, X-rays & Type Ia Supernova Progenitors”. (Advisor: K. Belczynski).

07.2008-06.2009: **Smithsonian Predoctoral Fellow**, Harvard-Smithsonian Center for Astrophysics
Cambridge, MA, USA (Advisor: J. Grindlay).

10.2005: **M.Sc.** Astronomy, Saint Mary’s University, Halifax, Canada *“Infrared Imaging of the Sub-millimetre Protocluster Near NGC 2068 in Orion B”*. (Advisor: G. Mitchell).

06.2002: **B.Sc.** Physics & Astronomy with honours, York University, Toronto, Canada.

ATTENDED SUMMER SCHOOLS

06.2006: Third Summer School in Gravitational Wave Astronomy, SPI Center, TX, USA.
08.2005: Fourth International X-ray Summer School, Cambridge, MA, USA.

SELECTED AWARDS & GRANTS

2007-2009: Graduate Research Enhancement Grant (NMSU graduate fellowship; 3 years)

07.2008: Smithsonian Astrophysical Observatory Predoctoral Fellowship (07.’08 - 06.’09)

2008: NMSU Graduate School Merit-based Enhancement Award

2007: Murrell Award - Recognizing outstanding research/professional development (NMSU)

2006: Zia Award - Recognizing outstanding research by a graduate student (NMSU)

12.2005: *Chandra* Theory Grant (Co-I): ‘XLF Modeling for Starburst Galaxies’

03.2005: Sigma Xi Grant ‘Gravitational Waves - What Will We See With *LISA*?’

REFEREED PUBLICATIONS

11. 2D simulations of the double-detonation model for thermonuclear transients from low-mass carbon-oxygen white dwarfs (S. A. Sim, M. Fink, M. Kromer, F. K. Röpke, **A. J. Ruiter** & W. Hillebrandt, 2012, MNRAS 420, 3003)
10. Delay times and rates for Type Ia supernovae and thermonuclear explosions from double-detonation sub-Chandrasekhar mass models (**A. J. Ruiter**, K. Belczynski, S. A. Sim, W. Hillebrandt, C. L. Fryer, M. Fink & M. Kromer, 2011, MNRAS 417, 408)
9. Spectra of Type Ia Supernovae from Double Degenerate Mergers (C. L. Fryer, **A. J. Ruiter**, K. Belczynski, P. J. Brown, F. Bufano, S. Diehl, & 10 co-authors, 2010, ApJ 725, 296)
8. The *LISA* Gravitational Wave Foreground: A Study of Double White Dwarfs (**A. J. Ruiter**, K. Belczynski, M. Benacquista, S. L. Larson & G. Williams, 2010, ApJ 717, 1006)
7. On The Maximum Mass of Stellar Black Holes (K. Belczynski, T. Bulik, C. L. Fryer, **A. J. Ruiter**, J. S. Vink & J. R. Hurley, 2010, ApJ 714, 1217)
6. Detonations in Sub-Chandrasekhar Mass C+O White Dwarfs (S. A. Sim, F. K. Röpke, W. Hillebrandt, M. Kromer, R. Pakmor, M. Fink, **A. J. Ruiter** & I. R. Seitenzahl, 2010, ApJ Letters, 714, 52)
5. Sub-luminous type Ia supernovae from the mergers of equal-mass white dwarfs with mass $\sim 0.9 M_{\text{solar}}$ (R. Pakmor, M. Kromer, F. K. Röpke, S. A. Sim, **A. J. Ruiter** & W. Hillebrandt, Nature, 2010, 463, 61)
4. Rates and Delay Times of Type Ia Supernovae (**A. J. Ruiter**, K. Belczynski & C. L. Fryer, 2009, ApJ, 699, 2026)
3. The Contribution of Halo White Dwarf Binaries to the *LISA* Signal (**A. J. Ruiter**, K. Belczynski, M. Benacquista & K. Holley-Bockelmann, 2009, ApJ 693, 383)
2. The Nature of the Faint *Chandra* X-ray Sources in the Galactic Center (**A. J. Ruiter**, K. Belczynski & T. E. Harrison, 2006, ApJ Letters, 640, 167)
1. New Constraints on Type Ia Supernova Progenitor Models (K. Belczynski, T. Bulik & **A. J. Ruiter**, 2005, ApJ 629, 915)

COMMUNITY INVOLVEMENT

- Scientific Referee: MNRAS, ApJ, A&A
- Member of Minerva FemmeNet since 2012
- Elected member of the Betriebsrat (Works Council) at MPA since 2010
- Canadian Astronomical Society member since 2004; American Astronomical Society member 2005-2010
- Conducted astronomy-oriented public events/lectures in Toronto, Halifax, Las Cruces & Garching

TEACHING/MENTORING EXPERIENCE

- 01.2010 : Guest Lecturer for Prof. Dr. P. Mazzali at Scuola Normale Superiore, Pisa, Italy
(Lecture Topic: Stellar/Binary Evolution; Population Synthesis)
- 10.2009-12.2009: Advisor for Advisor-Seminar Astro-Kern-Physik, Technischen Universität München:
“From the Big Bang to supernovae: the role of nuclear structure in astrophysics”
- 08.2004-12.2006: New Mexico State University: Teaching Assistant for undergraduate astronomy labs;
Head Teaching Assistant for undergraduate astronomy labs (Fall 2005)
- 09.2002-04.2004: Saint Mary’s University: Teaching Assistant for undergraduate physics labs;
Guest Lecturer for physics tutorials and forensics labs; physics tutor
- 10.1998-04.2002: York University Astronomical Observatory Research Assistant and Tour Leader
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ATTENDED MEETINGS/WORKSHOPS

- 03.2012: **16th Workshop on Nuclear Astrophysics**, Ringberg Castle, Lake Tegernsee, Germany
- 09.2010: **Workshop on SN Ia Progenitors**, The Lorentz Center, Leiden, The Netherlands
- 06.2010: **International Conference on Binaries**, Mykonos, Greece
- 05.2010: **Meeting of the Canadian Astronomical Society**, Halifax, Nova Scotia, Canada
- 03.2010: **15th Workshop on Nuclear Astrophysics**, Ringberg Castle, Lake Tegernsee, Germany
- 09.2009: **Workshop on Stellar Mergers**, The Lorentz Center, Leiden, The Netherlands
- 08.2009: **Stellar Death and Supernovae**, KITP, Santa Barbara, CA, USA
- 01.2009: **213th Meeting of the American Astronomical Society**, Long Beach, CA, USA
- 09.2008: **2nd International Workshop on AM CVn Stars**, Cape Town, South Africa
- 05.2008: **Supernova Rates 2008**, Florence, Italy
- 02.2008: **LISA Astro-GR Workshop**, Como, Italy
- 01.2008 **211th Meeting of the American Astronomical Society**, Austin, TX, USA
- 10.2007: **23rd New Mexico Symposium**, Socorro, NM, USA
- 06.2007: **Meeting of the Canadian Astronomical Society**, Kingston, ON, Canada
- 08.2006: **15th European White Dwarf Workshop**, Leicester, England
- 06.2006 **LISA 6 Symposium**, Greenbelt, MD, USA
- 09.2005 **The X-ray Universe Symposium**, El Escorial, Madrid, Spain
- 01.2005 **205th Meeting of the American Astronomical Society**, San Diego, CA, USA
- 06.2004 **Meeting of the Canadian Astronomical Society**, Winnipeg, MB, Canada

COLLOQUIUM & SEMINAR TALKS

DATE	INSTITUTION	TITLE
03.2012	Physics & Astronomy Seminar Université de Montréal, Montréal, Canada	The Progenitors of Type Ia Supernovae: A binary evolution perspective
11.2010	Astrophysikalisches Kolloquium University of Tübingen, Tübingen, Germany	Rates and Delay Times of sub-Chandrasekhar mass SNe Ia
06.2010	Astro Coffee Seminar University of Alberta, Edmonton, Canada	Sub-Chandrasekhar Mass White Dwarfs in Binaries: Likely SN Ia Progenitors?
02.2010	MPA Institute Seminar MPA, Garching, Germany	Investigating White Dwarf Binary Mergers With Population Synthesis
11.2009	Coffee Seminar Jacobs University Bremen, Germany	Evolution of White Dwarfs in Binaries with Population Synthesis
05.2009	NMSU Astronomy Colloquium Las Cruces, NM, USA	White Dwarfs in Close Binaries: Gravitational Waves, X-rays & SNe Ia; <i>PhD Thesis Defense</i>
03.2009	Mount Stromlo Observatory RSAA Colloquium, Canberra, Australia	Evolutionary Channels of SNe Ia Progenitors and their Associated Delay Times
03.2009	Swinburne University of Technology CAS Colloquium, Melbourne, Australia	Evolutionary Channels of SNe Ia Progenitors and their Associated Delay Times
02.2009	Institute for Physics and Mathematics of the Universe Seminar, Kashiwa, Japan	Double Compact Objects
02.2009	Kyoto University Seminar Dept. of Astronomy, Kyoto-shi, Japan	Synthetic Delay Times of Type Ia Supernovae
01.2009	Max Planck Institute for Astrophysics Garching, Germany	Astrophysics of White Dwarfs in Close Binaries: GWs, CVs & SNe Ia
12.2008	Space Telescope Science Institute Baltimore, MD, USA	Gravitational Waves from Galactic Populations of White Dwarf Binaries
12.2008	University of Maryland College Park, MD, USA	Gravitational Waves from Galactic Populations of White Dwarf Binaries
04.2008	Univ. of Las Vegas Colloquium Las Vegas, NV, USA	Formation Channels of SNe Ia & their Associated Delay Times
02.2008	Harvard-SAO HEAD Lunch Talk Series Cambridge, MA, USA	Binaries with White Dwarfs: LISA and SNe Ia Progenitors
10.2007	NMSU Lunch Talk Series Las Cruces, NM, USA	Double Degenerate Mergers & Type Ia Supernova Progenitors
09.2007	Radboud University Astron. Colloquium Nijmegen, The Netherlands	Gravitational Waves from Galactic White Dwarf Binaries
06.2007	Astronomical Society of Las Cruces Colloquium	White Dwarf Binaries: <i>LISA</i> , X-rays & SN Ia
05.2007	Northwestern Univ. Astron. Colloquium Evanston, IL, USA	White Dwarf Binaries & <i>LISA</i>
04.2007	Univ. Texas at Brownsville Physics Seminar Series, Brownsville, TX, USA	Faint X-ray Sources in the Galactic Centre
03.2007	NMSU Astron. Colloquium Las Cruces, NM, USA	White Dwarf Binaries: <i>LISA</i> , X-rays & SN Ia; <i>PhD Thesis Proposal</i>
02.2006	NMSU Lunch Talk Series Las Cruces, NM, USA	The Nature of the Faint <i>Chandra</i> X-ray Sources in the Galactic Centre
04.2005	NMSU Lunch Talk Series Las Cruces, NM, USA	Close White Dwarf Binaries: Implications for Gravitational Wave Detection with <i>LISA</i>
12.2004	Saint Mary's Univ. Astronomy Halifax, NS, Canada	IR Imaging of the Sub-mm Protocluster Near NGC 2068 in Orion B; <i>MSc Thesis Defense</i>

Contact information for references is available upon request. *Last Updated April 2012.*