

Thomas W. Baumgarte

Curriculum Vitae

Department of Physics and Astronomy, 8800 College Station
Bowdoin College, Brunswick, ME 04011
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EDUCATION

- Doctorate
in physics, Ludwig-Maximilians-Universität München, Nov. 1995, magna cum laude
Thesis prepared at Cornell University, Ithaca, NY, USA
- Diplom
in physics, Ludwig-Maximilians-Universität München, April 1993, with distinction
Thesis prepared at Max-Planck-Institut für Astrophysik, Garching, Germany

CURRENT APPOINTMENTS

- Associate Professor, July 2005 – present
Department of Physics and Astronomy, Bowdoin College
- Adjunct Associate Professor, June 2005 – present
Department of Physics, University of Illinois at Urbana-Champaign

PREVIOUS APPOINTMENTS

- Assistant Professor, July 2001 – June 2005
Department of Physics and Astronomy, Bowdoin College
- Adjunct Assistant Professor, July 2001 – May 2005
Department of Physics, University of Illinois at Urbana-Champaign
- Visiting Scientist, June 2007
Laboratoire Univers et Theories, Observatoire de Paris, Meudon, France
- Visiting Associate, June 2002
Division of Physics, Mathematics and Astronomy, California Institute of Technology
- Visiting Research Assistant Professor, August 1999 – June 2001
Department of Physics, University of Illinois at Urbana-Champaign
- Visiting Assistant Professor, January 1999 – May 1999
Department of Astronomy, University of Illinois at Urbana-Champaign
- Postdoctoral Research Associate, August 1996 – August 1999
Department of Physics, University of Illinois at Urbana-Champaign
- Research Associate II, September 1995 – August 1996
Center for Radiophysics and Space Sciences, Cornell University

HONORS AND FELLOWSHIPS

- Kavli Institute of Theoretical Physics Scholar (2006 – 2008)
- Guggenheim Fellow (Aug. 2004 – May 2005)
- Fortner Fellow (Aug. 2000 – June 2001)
- German Academic Exchange Service Scholar (1993 – 95)
- Rotary International Scholar (1990 – 91)

GRANTS

- NSF grant No. PHY 0756514 (PI), Aug. 2008 – July 2011
“RUI: Numerical Simulations of Neutron Stars, Black Holes and Gravitational Radiation”
- NSF grant No. PHY 0456917 (PI), Aug. 2005 – July 2008
“RUI: Numerical Simulations of Neutron Stars, Black Holes and Gravitational Radiation”
- NSF grant No. PHY 0139907 (PI), Aug. 2002 – July 2005
“RUI: Numerical Simulations of Neutron Stars, Black Holes and Gravitational Radiation”
- NSF grant No. PHY 02-05155 (Co-PI), Oct. 2002 – Sept. 2007
“ITR: MHD Simulations in Full General Relativity”
- NSF grant No. PHY 99-02833 (Co-PI), May 1999 – April 2002
“Coalescence of Binary Black Holes and Neutron Stars: Computational Contributions to LIGO”,

MEMBERSHIPS

- American Physical Society
- American Astronomical Society

OTHER PROFESSIONAL ACTIVITIES

- Continuous Supercomputer Allocations at NCSA since 1999
- Organizer of the 7th Eastern Gravity Meeting, Bowdoin College, June 11 – 12, 2004
- Scientific Organizing Committee for a Program in Numerical Simulations
of Gravitational-Wave Sources at the California Institute of Technology (2002–2003)
- Co-organizer of Workshop on Quasi-adiabatic Binary Inspiral, Caltech, June 2 – Aug 30, 2002
- Co-organizer of the 9th Midwest Relativity Meeting,
University of Illinois at Urbana-Champaign, November 12 – 13, 1999
- Co-organizer of the meeting “Numerical Relativity and Data Analysis”, Nov. 6–7, 2006, MIT, Cambridge, MA
- Numerous reviews for various journals and funding agencies

Lecture Courses and Student Research

LECTURE COURSES

ASTR 210 General Astronomy (Spring 1999, University of Illinois at Urbana-Champaign)
PHYS 062 Contemporary Astronomy (Fall 2006)
PHYS 103 Introductory Physics I (Fall 2003, Spring 2004, Fall 2007)
PHYS 104 Introductory Physics II (Spring 2006)
PHYS 162 Stars and Galaxies (Spring 2002, 2003, 2007, 2008)
PHYS 262 Astrophysics (Fall 2001, 2003, 2006)
PHYS 275 Relativity (Spring 2002)
PHYS 300 Methods of Theoretical Physics (Spring 2003, 2004, 2006, 2008)
PHYS 302 Methods of Computational Physics (Fall 2002, 2005, 2007)
PHYS 320 Electromagnetic Theory (Fall 2005)
PHYS 370 Advanced Mechanics (Fall 2002)
PHYS 375 General Relativity (Spring 2007)

SUPERVISION OF STUDENT RESEARCH

Nick Lyford '02, Summer 2001 – Spring 2002
Eric Walker '03, Summer – Fall 2001
Andrew Knapp '03, Summer 2001 – Spring 2003
Monica Skoge '03, Summer 2002 – Spring 2003
Ian Morrison '05, Fall 2003 – Spring 2005
Alexia Lewis '08, Summer 2006
Keith Matera '08, Summer 2006 – Spring 2008
Morgan MacCleod, Summer 2008

HONORS THESES

Nick Lyford '02:
“The Effect of Differential Rotation on the Maximum Mass of Neutron Stars”
Monica Skoge '03:
“Numerical Models of Black Hole-Neutron Star Binaries”
Andrew Knapp '03:
“The Quasi-equilibrium Approximation for Binary Inspiral:
Analytical and Numerical Model Calculations in Scalar Gravity”
Ian Morrison '05:
“Black Hole-Neutron Star Binaries in General Relativity: Effects of Black Hole Rotation”
Keith Matera '08:
“Shells around black holes: the effect of freely specifiable quantities in Einstein’s constraint equations”

Publications

INVITED REVIEW ARTICLES

1. T. W. Baumgarte and S. L. Shapiro: Numerical Relativity and Compact Binaries; Physics Reports **376**, 41 (2003)

REFEREED JOURNALS

2. T. W. Baumgarte, Z. B. Etienne, Y. T. Liu, K. Matera '08¹, N. Ó Murchadha, S. L. Shapiro and K. Taniguchi: Equilibrium initial data for moving puncture simulations: The stationary 1+log slicing, submitted (2008)
3. G. B. Cook and T. W. Baumgarte: Excision boundary conditions for the conformal metric, submitted (2008)
4. T. W. Baumgarte, P. Brady, J. D. E. Creighton, L. Lehner, F. Pretorius and R. DeVoe: Learning about compact binary merger: the interplay between numerical relativity and gravitational-wave astronomy; Phys. Rev. D **77**, 084009 (2008)
5. Z. Etienne, J. A. Faber, Y. T. Liu, S. L. Shapiro, K. Taniguchi and T. W. Baumgarte: Fully Relativistic Simulations of Black Hole-Neutron Star Mergers, Phys. Rev. D **77**, 084002 (2008)
6. K. Taniguchi, T. W. Baumgarte, F. A. Faber and S. L. Shapiro: Relativistic black hole-neutron star binaries in quasiequilibrium: effects of the black hole excision boundary condition; Phys. Rev. D **77**, 044003 (2008)
7. K. Matera '08, T. W. Baumgarte and E.ourgoulhon: Shells around black holes: the effect of freely specifiable quantities in Einstein's constraint equations; Phys. Rev. D **77**, 024049 (2008)
8. F. A. Faber, T. W. Baumgarte, S. L. Shapiro and K. Taniguchi: Relativistic hydrodynamics in the presence of puncture black holes; Phys. Rev. D **76**, 104021 (2007)
9. Z. B. Etienne, J. A. Faber, Y. T. Liu, S. L. Shapiro and T. W. Baumgarte: Filling the holes: Evolving excised binary black hole initial data with puncture techniques; Phys. Rev. D **76**, 101503 (R) (2007)
10. K. Taniguchi, T. W. Baumgarte, F. A. Faber and S. L. Shapiro: Quasiequilibrium black hole-neutron star binaries in general relativity; Phys. Rev. D **75**, 084005 (2007)
11. T. W. Baumgarte and S. G. Naculich: Analytical representation of a black hole puncture solution; Phys. Rev. D **75**, 067502, (2007)
12. T. W. Baumgarte, N. Ó Murchadha and H. P. Pfeiffer: The Einstein constraints: uniqueness and non-uniqueness in the conformal thin sandwich approach; Phys. Rev. D **75**, 044009 (2007)
13. K. Taniguchi, T. W. Baumgarte, F. A. Faber and S. L. Shapiro: Quasiequilibrium sequences of black hole-neutron star binaries in general relativity; Phys. Rev. D **74**, 041502 (R) (2006)
14. K. A. Dennison, T. W. Baumgarte and H. P. Pfeiffer: Approximate Initial Data for Binary Black Holes; Phys. Rev. D **74**, 064016 (2006)
15. F. A. Faber, T. W. Baumgarte, S. L. Shapiro and K. Taniguchi: General Relativistic Binary Merger Simulations and Short Gamma-Ray Bursts; Astrophys. J. Letters **641**, L93 (2006)

¹Bowdoin College Undergraduate Students are underlined

16. F. A. Faber, T. W. Baumgarte, S. L. Shapiro, K. Taniguchi and F. A. Rasio: The Dynamical Evolution of Black Hole-Neutron Star Binaries in General Relativity: Simulations of Tidal Disruption; *Phys. Rev. D* **73**, 024012 (2006)
17. L. M. Burko, T. W. Baumgarte and C. Beetle: Towards a Wave-Extraction Method for Numerical Relativity: III. Analytical Examples for the Beetle-Burko Radiation Scalar; *Phys. Rev. D* **73**, 024002 (2006)
18. K. Taniguchi, T. W. Baumgarte, F. A. Faber and S. L. Shapiro: Black Hole-Neutron Star Binaries in General Relativity: Effects of Neutron Star Spin; *Phys. Rev. D* **72**, 044008 (2005)
19. I. A. Morrison '05, T. W. Baumgarte, S. L. Shapiro and V. R. Pandharipande: The Moment of Inertia of the Binary Pulsar J0737-3039A: Constraining the Nuclear Equation of State; *Astrophys. J. Letters* **617**, L135 (2004)
20. H.-J. Yo, J. N. Cook, S. L. Shapiro and T. W. Baumgarte: Quasi-equilibrium Binary Black Hole Initial Data for Dynamical Evolution; *Phys. Rev. D* **70**, 084033 (2004)
21. T. W. Baumgarte, M. L. Skoge '03 and S. L. Shapiro: Black Hole-Neutron Star Binaries in General Relativity: Quasiequilibrium Formulation; *Phys. Rev. D* **70**, 064040 (2004)
22. I. A. Morrison '05, T. W. Baumgarte and S. L. Shapiro: Effect of Differential Rotation on the Maximum Mass of Neutron Stars: Realistic Nuclear Equations of State; *Astrophys. J.* **610**, 941 (2004)
23. P. Marronetti, M. D. Duez, S. L. Shapiro and T. W. Baumgarte: Dynamical Determination of the Innermost Stable Circular Orbit: Binary Neutron Stars; *Phys. Rev. Lett.* **92**, 141101 (2004)
24. M. Saijo, T. W. Baumgarte and S. L. Shapiro: One-Armed Spiral Instability in Differentially Rotating Stars; *Astrophys. J.* **595**, 352 (2003)
25. M. D. Hannam, C. R. Evans, G. B. Cook and T. W. Baumgarte: Can a Combination of the Conformal Thin-Sandwich and Puncture Methods Yield Binary Black Hole Solutions in Quasi-equilibrium?; *Phys. Rev. D* **68**, 064003 (2003)
26. T. W. Baumgarte and S. L. Shapiro: Collapse of a Magnetized Star to a Black Hole; *Astrophys. J.* **585**, 930 (2003)
27. T. W. Baumgarte and S. L. Shapiro: General-Relativistic MHD for the Numerical Construction of Dynamical Spacetimes; *Astrophys. J.* **585**, 921 (2003)
28. M. D. Duez, P. Marronetti, S. L. Shapiro and T. W. Baumgarte: Hydrodynamic Simulations in 3+1 General Relativity; *Phys. Rev. D* **67**, 024004 (2003)
29. N. D. Lyford '02, T. W. Baumgarte and S. L. Shapiro: Effects of Differential Rotation on the Maximum Mass of Neutron Stars; *Astrophys. J.* **583**, 410 (2003)
30. M. L. Skoge '03 and T. W. Baumgarte: Comparing Criteria for Circular Orbits in General Relativity; *Phys. Rev. D* **66**, 107501 (2002)
31. H.-J. Yo, T. W. Baumgarte, and S. L. Shapiro: Improved Numerical Stability of Stationary Black Hole Evolution Calculations; *Phys. Rev. D* **66** 084026 (2002)
32. M. Saijo, T. W. Baumgarte, S. L. Shapiro, and M. Shibata: Collapse of a Rotating Supermassive Star to a Supermassive Black Hole: Post-Newtonian Simulations; *Astrophys. J.* **569**, 349 (2002)

33. A. M. Knapp '03, E. J. Walker '03 and T. W. Baumgarte, Illustrating Stability Properties of Numerical Relativity in Electrodynamics; Phys. Rev. D **65** 064031 (2002)
34. M. D. Duez, T. W. Baumgarte, S. L. Shapiro, M. Shibata, and K. Uryu: Comparing the Inspiral of Irrotational and Corotational Binary Neutron Stars; Phys. Rev. D **65** 024016 (2002)
35. H.-J. Yo, T. W. Baumgarte, and S. L. Shapiro: A Numerical Testbed for Singularity Excision in Moving Black Hole Spacetimes; Phys. Rev. D **64**, 124011 (2001)
36. M. D. Duez, T. W. Baumgarte, and S. L. Shapiro: Computing the Complete Gravitational Wavetrain from Relativistic Binary Inspiral; Phys. Rev. D, **63**, 084030 (2001)
37. H.-J. Yo, T. W. Baumgarte, and S. L. Shapiro: Gravitational Wavetrains in the Quasiequilibrium Approximation: A Model Problem in Scalar Gravitation; Phys. Rev. D **63**, 064035 (2001)
38. M. Saijo, M. Shibata, T. W. Baumgarte, and S. L. Shapiro: Dynamical Bar Instability in Rotating Stars: Effect of General Relativity; Astrophys. J. **548**, 919 (2001)
39. M. Shibata, T. W. Baumgarte, and S. L. Shapiro: The Bar-mode Instabilities in Differentially Rotating Neutron Stars: Simulations In Full General Relativity; Astrophys. J. **542**, 453 (2000)
40. V. Pavlidou, K. Tassis, T. W. Baumgarte, and S. L. Shapiro: Radiative Falloff in Neutron Star Spacetimes; Phys. Rev. D **62**, 084020 (2000)
41. T. W. Baumgarte: Innermost Stable Circular Orbit of Binary Black Holes; Phys. Rev. D **62**, 024018 (2000)
42. M. Shibata, T. W. Baumgarte, und S. L. Shapiro: Stability and Collapse of Rapidly Rotating, Supramassive Neutron Stars: 3D Simulations in General Relativity; Phys. Rev. D **61**, 044012 (2000)
43. T. W. Baumgarte, S. L. Shapiro, and M. Shibata: On the Maximum Mass of Differentially Rotating Neutron Stars; Astrophys. J. Letters **528**, L29 (2000)
44. T. W. Baumgarte and S. L. Shapiro: Evolution of Rotating Supermassive Stars to the Onset of Collapse; Astrophys. J. **526**, 941 (1999)
45. T. W. Baumgarte and S. L. Shapiro: Luminosity versus Rotation in a Supermassive Star; Astrophys. J. **526**, 937 (1999)
46. L. Rezzolla, M. Shibata, H. Asada, T. W. Baumgarte and S. L. Shapiro: Constructing a Mass-Current Radiation-Reaction Force for Numerical Simulations; Astrophys. J. **525**, 935 (1999)
47. T. W. Baumgarte, S. A. Hughes and S. L. Shapiro: Evolving Einstein's Field Equations with Matter: The 'Hydro without Hydro' Test; Phys. Rev. D **60**, 087501 (1999)
48. T. W. Baumgarte and S. L. Shapiro: Numerical Integration of Einstein's Field Equations; Phys. Rev. D **59**, 024007 (1999)
49. T. W. Baumgarte and S. L. Shapiro: Radiation of Angular Momentum by Neutrinos from Merged Binary Neutron Stars; Astrophys. J. **504**, 431 (1998)
50. M. A. Scheel, T. W. Baumgarte, G. B. Cook, S. L. Shapiro, and S. A. Teukolsky: Treating Instabilities in a Hyperbolic Formulation of Einstein's Equations; Phys. Rev. D **58**, 044020 (1998)
51. M. Shibata, T. W. Baumgarte and S. L. Shapiro: Stability of coalescing binary stars against gravitational collapse: hydrodynamical simulations; Phys. Rev. D **58**, 023002 (1998)

52. T. W. Baumgarte, G. B. Cook, M. A. Scheel, S. L. Shapiro, and S. A. Teukolsky: General Relativistic Models of Binary Neutron Stars in Quasiequilibrium; *Phys. Rev. D* **57**, 7299 (1998)
53. T. W. Baumgarte, G. B. Cook, M. A. Scheel, S. L. Shapiro, and S. A. Teukolsky: The Stability of Relativistic Neutron Stars in Binary Orbit; *Phys. Rev. D* **57**, 6181 (1998)
54. R. Gomez *et. al.* (The Binary Black Hole Grand Challenge Alliance): Stable characteristic evolution of generic 3-dimensional single-black-hole spacetimes; *Phys. Rev. Lett.* **80**, 3915 (1998)
55. G. B. Cook *et. al.* (The Binary Black Hole Grand Challenge Alliance): Boosted three-dimensional black-hole evolutions with singularity excision; *Phys. Rev. Lett.* **80**, 2512 (1998) (see also *Phys. Rev. Focus* **1**, Story 3 (1998))
56. A. M. Abrahams *et. al.* (The Binary Black Hole Grand Challenge Alliance): Gravitational wave extraction and outer boundary conditions by perturbative matching; *Phys. Rev. Lett.* **80**, 1812 (1998)
57. L. Rezzolla, A. M. Abrahams, T. W. Baumgarte, G. B. Cook, M. A. Scheel, S. L. Shapiro, and S. A. Teukolsky: Waveform propagation in black hole spacetimes: Evaluating the quality of numerical solutions; *Phys. Rev. D* **57**, 1084 (1998)
58. M. A. Scheel, T. W. Baumgarte, G. B. Cook, S. L. Shapiro, and S. A. Teukolsky: Numerical Evolution of Black Holes with a Hyperbolic Formulation of General Relativity; *Phys. Rev. D* **56**, 6320 (1997)
59. T. W. Baumgarte, G. B. Cook, M. A. Scheel, S. L. Shapiro, and S. A. Teukolsky: Binary Neutron Stars in General Relativity: Quasi-Equilibrium Models; *Phys. Rev. Lett.* **79**, 1182 (1997)
60. T. W. Baumgarte, G. B. Cook, M. A. Scheel, S. L. Shapiro, and S. A. Teukolsky: Implementing an apparent-horizon finder in three dimensions; *Phys. Rev. D*, **54**, 4849 (1996)
61. T. W. Baumgarte, H.-T. Janka, W. Keil, S. L. Shapiro and S. A. Teukolsky: Delayed Collapse of Hot Neutron Stars to Black Holes Via Hadronic Phase Transitions; *Astrophys. J.* **468**, 823 (1996)
62. T. W. Baumgarte, S. L. Shapiro and S. A. Teukolsky: Computing the Delayed Collapse of Hot Neutron Stars to Black Holes; *Astrophys. J.* **458**, 680 (1996)
63. T. W. Baumgarte, S. L. Shapiro and S. A. Teukolsky: Computing Supernova Collapse to Neutron Stars and Black Holes; *Astrophys. J.* **443**, 717 (1995)
64. T. W. Baumgarte and B. G. Schmidt: Quasi-normal Modes in Coupled Systems; *Class. Quantum Grav.* **10**, 2067 (1993)
65. T. W. Baumgarte: The Newtonian Limit in a Model Problem; *Gen. Rel. Grav.* **25**, 1189 (1993)
66. T. W. Baumgarte and A. D. Rendall: Regularity of Spherically Symmetric Static Solutions of the Einstein Equations; *Class. Quantum Grav.* **10**, 327 (1993)

CONFERENCE PROCEEDINGS

67. T. W. Baumgarte: Black Holes: from Speculations to Observations; in the Proceedings of the *Albert Einstein Century International Conference*, J.-M. Alimi, Ed., p. 161, AIP Conference Proceedings 861 (2006)
68. F. A. Faber, T. W. Baumgarte, S. L. Shapiro, K. Taniguchi and F. A. Rasio: Black Hole-Neutron Star Binary Merger Calculations: GRB Progenitors and the Stability of Mass Transfer; in the Proceedings of the *Albert Einstein Century International Conference*, J.-M. Alimi, Ed., p. 622, AIP Conference Proceedings 861 (2006)

69. H.-J. Yo, J. N. Cook, S. L. Shapiro, and T. W. Baumgarte: Initial Data for Dynamical Evolutions of Binary Black Holes in Quasicircular Orbit; in the Proceedings of the *14th Japan Workshop on General Relativity and Gravitation*, Nov. 29th - Dec. 3rd, 2004, eds. T. Tanaka (Kyoto University, 2005)
70. M. Saijo, M. Shibata, T. W. Baumgarte, and S. L. Shapiro: Dynamical Bar Instability in Relativistic Rotating Stars; in *Proceedings of the 20th Texas Symposium on Relativistic Astrophysics*, J. Craig Wheeler and H. Martel, Eds., AIP Conference Proceedings, New York (2001)
71. T. W. Baumgarte: The Innermost Stable Circular Orbit in Compact Binaries; in *Astrophysical Sources for Ground-based Gravitational Wave Detectors*, J. M. Centrella, Ed., p. 176, AIP Conference Proceedings 575, New York (2001)
72. T. W. Baumgarte, S. A. Hughes, L. Rezzolla, S. L. Shapiro and M. Shibata: Implementing Fully Relativistic Hydrodynamics in Three Dimensions; in *General Relativity and Relativistic Astrophysics – Eighth Canadian Conference*, C. P. Burgess and R. C. Myers, Eds., p. 53, AIP Conference Proceedings 493, Melville, New York (1999)
73. M. Shibata, T. W. Baumgarte and S. L. Shapiro: Hydrodynamic Simulations of Coalescing Binary Stars: Stability against Gravitational Collapse; in *Numerical Astrophysics*, S. Miyama *et. al.*, Eds., p. 277, Kluwer Academic Publishers (1999)
74. T. W. Baumgarte, S. L. Shapiro, G. B. Cook, M. A. Scheel and S. A. Teukolsky: Binary Neutron Stars in Quasi-Equilibrium Circular Orbit: A Fully Relativistic Treatment; in *Proceedings of the 18th Texas Symposium on Relativistic Astrophysics* Olinto, Frieman and Schramm, Eds., p. 592, World Scientific (1998)
75. T. W. Baumgarte: On the Regularity of Spherically Symmetric Static Spacetimes; in *Rotating Objects and Relativistic Physics*, F. J. China and L. M. González-Romero, Eds., p. 213, Springer Berlin (1993)

OTHER PUBLICATIONS

76. T. W. Baumgarte: The Apprentice Physicists; *Interactions* **37**, p. 34, March/April (2007)

Invited Talks, Seminars and Colloquia

Max-Planck-Institut für Astrophysik, Garching, Germany, June 2008
Laboratoire Univers et Theories (LUTH), Observatoire de Paris, Meudon, France, June 2007
Caltech Theoretical Astrophysics and Relativity Group, Caltech, Pasadena, CA, June 2006
April Meeting of the American Physical Society, Dallas, TX, April 2006
Department of Physics and Astronomy, Dartmouth College, Hanover, NH, Jan. 2006
Albert Einstein Century International Conference, Paris, France, July 2005
Banff International Research Station Workshop on Numerical Relativity, Banff, AB, April 2005
Max-Planck-Institut für Gravitationsphysik, Albert-Einstein-Institut, Golm, Germany, Dec. 2004
Institute for Gravitational Physics & Geometry, Pennsylvania State University, PA, Oct. 2004
Department of Physics, Bates College, Lewiston, ME, Oct. 2004
April Meeting of the American Physical Society, Denver, CO, May 2004
Focus Session on Evolutions in Numerical Relativity, Florida Atlantic University,
Boca Raton, FL, March 18 – 20, 2004
Mathematics of Gravitation II, Stefan Banach International Mathematical Center,
Warsaw, Poland, Sept. 1 – 5, 2003
Program on Gravitational Interaction of Compact Objects, Institute for Theoretical Physics,
University of California Santa Barbara, CA, June 23 – July 12, 2003
Gravitation: A Decennial Perspective, Center for Gravitational Physics and Geometry,
Pennsylvania State University, PA, June 2003
10th Canadian Conference on General Relativity and Relativistic Astrophysics,
University of Guelph, Guelph, Ontario, May 2003
Department of Physics, University of North Carolina, Chapel Hill, NC, March 2003
Workshop on Quasi-adiabatic Binary Inspiral, Caltech, Pasadena, CA, June 2002
Workshop on Formulations of Einstein's Equations for Numerical Relativity,
UNAM, Mexico City, May 2002
Department of Physics, University of Maine, Orono, ME, May 2002
Focus Session on Initial Data for Binary Systems, Center for Gravitational Wave Physics,
Pennsylvania State University, PA, March 2002
Workshop on Astrophysical Sources of Gravitational Radiation,
LIGO Livingston Observatory, LA, March 2002
Department of Physics, University of Guelph, Guelph, Ontario, Jan. 2001
Department of Physics, Simon Fraser University, Burnaby, British Columbia, Jan. 2001
Department of Astronomy, University of Washington, Seattle, WA, Jan. 2001
Department of Physics and Astronomy, Bowdoin College, Brunswick, ME, Nov. 2000
Institut für Astronomie und Astrophysik, Universität Tübingen, Germany, Nov. 2000
Fakultät für Physik, Universität des Saarlandes, Saarbrücken, Germany, Nov. 2000
Conference on Astrophysical Sources of Gravitational Radiation,
Drexel University, Philadelphia, PA, Oct. 2000
Department of Physics, Wake Forest University, Winston-Salem, NC, Oct. 2000
Program on Spin and Magnetism in Neutron Stars, Institute for Theoretical Physics,

University of California Santa Barbara, CA, July 31 – Aug. 26, 2000
Department of Astronomy and Physics, Saint Mary's University, Halifax, NS, May 2000
Department of Physics, Lafayette College, Easton, PA, April 2000
Department of Physics and Astronomy, Northwestern University, Evanston, IL, Feb. 2000
Department of Physics, California Institute of Technology, Pasadena, CA, Jan. 2000
Program on Colliding Black Holes, Institute for Theoretical Physics,
University of California Santa Barbara, CA, January 9 – 22, 2000
Center for Gravitational Physics and Geometry, Pennsylvania State University,
State College, PA, Feb. 1999
Department of Physics, Wake Forest University, Winston-Salem, NC, Feb. 1999
Binary Black Hole Grand Challenge Meeting, Austin, TX, Nov. 5 – 6, 1998
Department of Physics, University of Waterloo, Waterloo, Ontario, Oct. 1998
Department of Physics, University of Notre Dame, Notre Dame, IN, Sept. 1998
Department of Physics, University of Chicago, Chicago, IL, May 1998
Department of Physics, Washington University, St. Louis, MS, Nov. 1997
Binary Black Hole Grand Challenge Meeting, Los Alamos, NM, Oct. 1997
Department of Physics, University of Notre Dame, Notre Dame, IN, Sept. 1997
Department of Physics, University of Wisconsin at Milwaukee, Milwaukee, WI, June 1997
Binary Neutron Star Grand Challenge Meeting, NCSA, Urbana, IL, Jan. 1997
Department of Astronomy, University of Illinois at Urbana-Champaign, Urbana, IL, Oct. 1996
Max-Planck-Institut für Gravitationsphysik, Potsdam, Germany, Nov. 1995
Max-Planck-Arbeitsgruppe für Gravitationstheorie, Jena, Germany, Dec. 1994
Max-Planck-Institut für Astrophysik, Garching, Germany, July 1994