Bruno Giacomazzo

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Research Interests

computational astrophysics; binary neutron stars; gamma-ray bursts; black hole binaries; gravitational waves; relativistic magnetohydrodynamics; neutron star collapse; numerical relativity

Positions

October 2016 - to date:	Associate Professor
Institution:	Department of Physics, University of Trento, Italy
October 2013 - September 2016:	Assistant Professor (tenure-track RTDb contract)
Institution:	Department of Physics, University of Trento, Italy
October 2011 - September 2013:	Research Associate
Institution:	JILA, University of Colorado, Boulder (CO), USA
October 2009 - September 2011:	Research Associate
Institution:	University of Maryland, College Park (MD), USA joint with NASA Goddard Space Flight Center, USA
November 2006 - September 2009:	PostDoc
Institution:	Max Planck Institute for Gravitational Physics (Albert Einstein Institute), Potsdam, Germany

Education

2002 - 2006:	Ph.D. training at SISSA (International School for Advanced Studies), Trieste, Italy.
Degree:	PhD in Astrophysics.
Date:	October 26th, 2006.
Supervisor:	Prof. Luciano Rezzolla.
Thesis:	General Relativistic Magnetohydrodynamics: fundamental aspects and applications
1996 - 2002:	Undergraduate studies in Physics at the University of Parma, Parma, Italy.
Degree:	M.Sc. in Physics (Laurea 110/110).
Date:	July 17th, 2002.
Advisor:	Prof. Enrico Onofri.
Thesis:	Development of algorithms to study matter at gravitational collapse

Grants (80000 USD, 313000 EUR, and 68 M cpu hours as a PI)

- PI, 33.4 million core hours PRACE computer time grant 2016153613 "Magneto - Effect of Magnetar Level Fields in Binary Neutron Star Mergers", 2017-2018
- co-I (PI Troja), ATCA (Australia Telescope Compact Array) observational grant no. C3059, 2015-2016
- PI, 0.2 million core hours CINECA computer time grant IsC34_HMBNS, 2015-2016
- PI, $\sim$ 16 million core hours PRACE computer time grant "GRSimStar - General Relativistic Simulations of binary neutron Star mergers", 2015-2016
- PI, 1 million service units CINECA computer time grant IsC24_GRMHDNS, 2014-2015
- co-PI (PI Zachariah Etienne), 1 million service units NSF XSEDE computer time grant TG-AST140068, 2014-2015
- PI, MIUR FIR Grant No. RBFR13QJYF (3 years, **EUR 313000**, 2014-2017)
- collaborator (PI John Baker), NASA Grant No. 13-ATP13-0077 (3 years, **$440000**, 2014-2017)
- PI, 4 million service units NSF XSEDE computer time grant TG-PHY110027, 2013-2014
- PI, NASA Grant No. NNX12AO67G (1 year, **$80000**, 2012-2013)
- PI, 8 million service units NSF XSEDE computer time grant TG-PHY110027, 2012-2013
- PI, 6.4 million service units NSF Teragrid computer time grant TG-PHY110027, 2011-2012
- co-I (PI Sean McWilliams), 1.5 million service units NSF Teragrid computer time grant TG-AST100027, 2010-2011
- co-PI (PI Erik Schnetter), 21.2 million service units NSF Teragrid computer time grant TG-MCA02N014, 2010

Teaching Experience

- University of Trento (2013 - Present)
  - 2016 - Present: "Fisica Generale III (Physics III)" (84 hour course for Bachelor students)
  - 2014 - Present: "High Energy Astrophysics" (48 hour course for M.Sc. students)
  - 2013 - 2014: "Computational Physics (Advanced)" (12 hour course for M.Sc. students)
- International Schools
  - July 4 - 8 2016: 10 hour lectures on "Neutron Star Mergers and Gravitational Waves" given at the 2016 ECT* Doctoral Training Programme
  - May 6 2008: 2 hour invited lecture on "Gravitational Collapse" given at the 3^{rd} VESF School on Gravitational Waves, Cascina (Pisa), Italy
  - March 18 2008: 45 minute lecture on "Numerical Relativity at AEI: Simulating Single and Binary Neutron Stars" given at the *Ferienkurs in Gravitationsphysik 2008* (Semester break courses on Gravitational Physics) at AEI, Potsdam, Germany

Students and Postdocs Mentored (14 undergraduates, 7 graduates, 2 postdocs)

- University of Trento (2013-present)
  - Postdocs: Riccardo Ciolfi, Wolfgang Kastaun
  - PhD students: Takumu Kawamura, Andrea Endrizzi
  - master students: Andrea Endrizzi
  - bachelor students: Elisa Ritondale, Francesco Gramendola, Luigi Bassini, Lumen Boco, Lorenzo Zandonella Dall'Aquila, Giulio Isacchini, Riccardo La Placa, Federico Zangrandi, Simone Veronese
- JILA, University of Colorado (2011-2013)
  - undergraduate students: John Mark Demopoulos
- University of Maryland and NASA GSFC (2009-2011):
  - graduate students: John Capone (2010 summer internship at NASA Goddard Space Flight Center)
  - undergraduate students: Philip Cowperthwaite (2011 summer internship at NASA Goddard Space Flight Center)
- Albert Einstein Institute (2006-2009):
  - graduate students: Kyriaki Dionysopoulou (advisor L. Rezzolla), Filippo Galeazzi (advisor L. Rezzolla), Aaryn Tonita (advisor L. Rezzolla), Thorsten Kellermann (2011, advisor L. Rezzolla)
  - undergraduate students: David Link (2009, advisor L. Rezzolla), Filippo Galeazzi (2008, advisor L. Rezzolla)

Refereeing Activities

Proposal Reviewer for:	NSF (2013, 2015, 2017), NASA (2013), NSERC (2014), LinkSCEEM/Cy-Tera (2014)
Referee for:	*Astrophysical Journal, Astrophysical Journal Letters, Astrophysics and Space Science, Classical and Quantum Gravity, Journal of Fluid Mechanics, Mathematical Reviews, Physical Review D, SIAM Journal on Scientific Computing, SIGMA: Symmetry, Integrability and Geometry: Methods and Applications*

Administrative Duties

October 2016 - Present:	Coordinator of International Agreements for the Physics Department of the University of Trento
October 2014 - Present:	Member of the committee of the SISSA-Trento Joint Master Degree
October 2014 - Present:	Member of the committee of the Tuebingen-Trento Joint Master Degree
July 2014 - Present:	Colloquium organizer for the Department of Physics of the University of Trento (Italy)
June 2014 - Present:	Member of the Executive and Faculty committees of the PhD School in Physics at the University of Trento
October 2010 - September 2011:	Organizer of Seminars on Computational Astrophysics at NASA Goddard Space Flight Center, Greenbelt, MD, USA
January 2007 - July 2009:	Organizer of Seminars and Journal Clubs for the Numerical Relativity group at AEI, Potsdam, Germany
November 2004 - October 2006:	PhD Students' Representative for the Astrophysics Sector at SISSA, Trieste, Italy

Conference Organization

November 2016 - Present:	Member of the Local Organizing Committee of the Annual Meeting of the Italian Physical Society (Trento, September 11-15 2017)
May 2014 - Present:	Topic Leader for the topic on "Numerical modelling in binary inspirals" in the EU COST Action *NewCompStar*
June 13 - 17 2016	Chair of the "Einstein Toolkit EU School and Workshop 2016" (Trento, Italy)
August 11 - 14 2015	Organizer of the "Einstein Toolkit Workshop 2015" (Stockholm, Sweden)
April 7 - 8 2008:	Organizer (together with R. De Pietri and L. Rezzolla) of the Whisky Retreat 2008, Parma, Italy

Awards and Societies

April 2017 - Present	Member of the Virgo Collaboration
March 28 2017	Awarded the Italian National Scientific Qualification (Abilitazione Scientifica Nazionale) to become a full professor in astronomy and astrophysics (02/C1)
January 8 2014	Awarded the Italian National Scientific Qualification (Abilitazione Scientifica Nazionale) to become an associate professor in theoretical physics (02/A2)
October 1 2009 - Present:	Member of the American Physical Society
September 1 2015 - Present:	Member of the Italian Physical Society

Invited Seminars and Talks (31 in total)

January 25 2017:	**invited seminar** at Stony Brook University (Stony Brook, NY, USA) on "Magnetic Field Effects in Merging Binary Neutron Stars"
November 8 - 11 2016:	"IV National Congress on GRBs" (Bergamo, Italy) - **invited review talk** on "General Relativistic Simulations of Gamma-Ray Burst Engines"
September 9 2016:	international workshop "SHORT GAMMA-RAY BURSTS: From observation to numerical simulations" (Trento, Italy) - **invited review talk** on "General Relativistic Simulations of Neutron Star Binaries and Short Gamma-Ray Bursts"
June 4 2015:	**invited seminar** at CENTRA (Instituto Superior Tecnico, Lisbon, Portugal) on "General Relativistic Simulations of Binary Neutron Star Mergers"
November 25 2014:	**invited seminar** at University of Parma (Parma, Italy) on "General Relativistic Simulations of Binary Neutron Star Mergers: Gravitational Waves and Short Gamma-Ray Bursts"
November 14 2014:	**invited seminar** at Institut fur Theoretische Physik, Johann Wolfgang Goethe-Universitaet (Frankfurt, Germany) on "Investigating the Progenitors of Short Gamma-Ray Bursts via General Relativistic Simulations of Neutron Star Mergers"
November 11 2014:	**invited seminar** at Technische Universitaet Darmstadt (Darmstadt, Germany) on "General Relativistic Simulations of Binary Neutron Star Mergers: Gravitational Waves and Short Gamma-Ray Bursts"
September 15 - 19 2014:	Conference "XXI SIGRAV Conference on General Relativity and Gravitational Physics" (Alessandria, Italy) - **invited talk** on "General Relativistic Simulations of Binary Neutron Stars: Gravitational Waves and Gamma-Ray Bursts"
August 27 2014:	**invited seminar** at Stony Brook University (Stony Brook, NY, USA) on "General Relativistic Simulations of Binary Neutron Star Mergers: Gravitational Waves and Short Gamma-Ray Bursts"

July 14 - 18 2014:	International Workshop "Astro-GR/VESF-School" (Rome, Italy) - **invited review talk** on "General Relativistic Simulations of Neutron Star Binaries"
June 23 2014:	**invited seminar** at the Institute of Astrophysics (Paris, France) on "General Relativistic Magnetohydrodynamic Simulations of Binary Neutron Star Mergers"
April 22 - 25 2014:	International Conference "Sant Cugat Forum on Astrophysics: Gravitational Waves Astrophysics" (Sant Cugat, Spain) - **invited review talk** on "Simulations of NS-NS mergers: gravitational waves and electromagnetic signals"
September 23 - 27 2013:	International Conference "MICRA 2013" (ECT*, Trento, Italy) - **invited review talk** on "General Relativistic Simulations of NS-NS and NS-BH mergers"
May 13 - 17 2013:	International Conference "FOE Fifty-One Erg" (NCSU, Raleigh, NC, USA) - **invited talk** on "General Relativistic Simulations of Compact Binary Mergers"
April 13 - 16 2013:	April Meeting of the American Physical Society (Denver, CO, USA) - **invited talk** on "General Relativistic Magnetohydrodynamic Simulations of Compact Binary Mergers"
June 4 - 8 2012:	International Conference "CompStar: the physics and astrophysics of compact stars" (Tahiti, French Polynesia) - **invited talk** on "Magnetized binary neutron star mergers"
May 11 2012:	JSI Mini-Symposium on "Electromagnetic Counterparts to Gravitational Wave Sources", NASA Goddard Space Flight Center (Greenbelt, MD, USA) - **invited talk** on "GRMHD Simulations Of Binary Neutron Stars and Binary Black Holes"
March 12 2012:	**invited seminar** at CITA (Toronto, Canada) on "General Relativistic Magnetohydrodynamic Simulations of Neutron Stars and Black Holes"
September 7 - 9 2011:	"Parma Workshop on Numerical Relativity and Gravitational Waves 2011", University of Parma, Italy - **invited talk** on "Magnetized Binary Neutron Star Mergers"
June 13 - 17 2011:	International Conference "Astronum 2011", Valencia, Spain - **invited talk** on "Magnetized Binary Neutron Star Mergers"
October 15 2010:	**invited seminar** at JILA, University of Colorado (Boulder, Colorado, USA) on "General Relativistic Simulations of Binary Neutron Star Mergers"
February 26 2010:	**invited seminar** at Canadian Institute for Theoretical Astrophysics (Toronto, Canada) on "General Relativistic Simulations of Binary Neutron Star Mergers"

February 25 2010:	**invited seminar** at Perimeter Institute (Waterloo, Canada) on "General Relativistic Simulations of Single and Binary Neutron Stars"
January 26 - 29 2010:	International Conference "14th Gravitational Wave Data Analysis Workshop", University of Rome "La Sapienza", Rome, Italy - **invited review talk** on "General Relativistic Simulations of Compact Binaries"
December 9 - 11 2009:	Gravitational Wave Bursts Meeting, Chichen-Itza, Yucatan, Mexico - **invited talk** on "Binary NSs and NS-BH mergers: a theoretical overview"
November 2 2009:	CIGR Collaboration Meeting, GeorgiaTech, Atlanta, Georgia, USA - **invited talk** on "The Whisky(MHD) code"
October 19 2009:	**invited seminar** at the Physics Department of the University of Maryland (College Park, Maryland, USA) on "General Relativistic Simulations of Binary Neutron Stars: Gravitational Waves and Matter Dynamics"
June 18-20 2009:	Workshop on "Probing Neutron Stars with Gravitational Waves", State College, Pennsylvania, USA - **invited talk** on "GR Simulations of Binary NSs: GWs and matter dynamics"
February 17 2009:	ILIAS 6th Annual Meeting, Dresden, Germany - **invited talk** on "Fully General Relativistic Simulations of Binary Systems"
November 13 2008:	**invited seminar** at the Department of Mathematics of the Katholieke Universiteit Leuven (Leuven, Belgium) on "Fully General Relativistic Simulations of Binary Neutron Stars Mergers"
August 8 2008:	**Colloquium** at NSSTC (Huntsville, Alabama, USA) on "Fully General Relativistic Simulations of Binary Neutron Stars Mergers"

Contributed Seminars and Talks
(48 in total, only most recent ones listed)

January 28 - 31 2017:	"April Meeting" of the American Physical Society (Washington DC, USA), talk on "General Relativistic Simulations of Low-Mass Magnetized Binary Neutron Star Mergers"
December 14 - 16 2016:	Conference "CoCoNut Meeting 2016" (Valencia, Spain), talk on "General Relativistic Simulations of Binary Neutron Star Mergers with WhiskyMHD"
December 13 2016:	"Workshop on Numerical Relativity in matter spacetimes for Gravitational Wave astronomy (NRmGW)" (Valencia, Spain), talk on "Magnetic Field Effects in Neutron Star Binaries"
September 26 - 30 2016:	Conference "Meeting of the Italian Physical Society (SIF)" (Padova, Italy), talk on "High-Mass Magnetized Binary Neutron Star Mergers And Short Gamma-Ray Bursts"
September 13 - 14 2016	Workshop "NewCompStar meeting on oscillations and instabilities in neutron stars" (Southampton, UK), talk on "Structure of Stable Binary Neutron Star Merger Remnants: A Case Study"
April 16 - 19 2016:	April Meeting of the American Physical Society (Salt Lake City, UT, USA), talk on "High-Mass Magnetized Binary Neutron Star Mergers and Short Gamma-Ray Bursts"
December 13 - 18 2015:	Conference "28th Texas Symposium on Relativistic Astrophysics" (Geneva, Switzerland), talk on "Magnetar formation from the merger of binary neutron stars"
September 21 - 25 2015:	Conference "Meeting of the Italian Physical Society (SIF)" (Rome, Italy), talk on "Magnetar formation from the merger of binary neutron stars"
July 13 - 18 2015:	Conference "Fourthteenth Marcel Grossmann Meeting" (Rome, Italy), talk on "GRMHD simulations of binary neutron star mergers and the central engine of short gamma-ray bursts"

Public Seminars

September 16 2006:	"The Bizarre Universe: Black Holes, Quasar, Gamma-Ray Bursts", SISSA OpenDay, Trieste, Italy
October 25 2005:	"The Bizarre Universe: Black Holes, Quasar, Gamma-Ray Bursts", seminar given to high-school students of UWCAd (United World College of the Adriatic) visiting SISSA, Trieste, Italy
September 18 2004:	"The Bizarre Universe: Black Holes, Quasar, Gamma-Ray Bursts", SISSA OpenDay, Trieste, Italy

Press Releases

- October 10, 2012: JILA research highlight, "Messages from the Abyss", `https://jila.colorado.edu/news-highlights/messages-abyss`
- September 27, 2012: NASA Goddard press release, "Simulations Uncover 'Flashy' Secrets of Merging Black Holes", `http://www.nasa.gov/topics/universe/features/black-hole-secrets.html`
- April 7, 2011: NASA press release No. 11-103, "Breakthrough Study Confirms Cause Of Short Gamma-Ray Bursts", `http://www.nasa.gov/home/hqnews/2011/apr/HQ_11-103_Gamma_Rays.html`

Numerical Codes

- developer of the general relativistic magnetohydrodynamic code `Whisky`
- developer of the first complete exact Riemann solver for relativistic MHD

Computational Skills

Operating Systems:	DOS, Linux, Mac OS X, Windows
Programming Languages:	C, C++, Fortran 77, Fortran 90
Software:	Amira, Mathematica, Matlab, OpenDX, VisIt
Working experience:	Computer Management Assistant of the Astrophysics sector at SISSA (Nov 2004 - Oct 2006)
Scientific Visualization:	excellent experience in visualizing results from numerical simulations through the use of programs such as VisIt, Matlab, and OpenDX
High-performance computing:	excellent experience in using several HPC resources

Personal

- *Citizenship*: Italian citizen
- *Spoken Languages*: Italian (native), English (fluent)

Refereed Publications
(h-index=22, more than 1500 citations in NASA ADS)

1. Ciolfi R., Kastaun W., **Giacomazzo B.**, Endrizzi A., Siegel D., Perna R. 2017, *General relativistic magnetohydrodynamic simulations of binary neutron star mergers forming a long-lived neutron star*, Phys. Rev. D, **95**, 063016

2. Kastaun W., Ciolfi R., **Giacomazzo B.** 2016, *Structure of Stable Binary Neutron Star Merger Remnants: a Case Study*, Phys. Rev. D, **94**, 044060

3. Kawamura T., **Giacomazzo B.**, Kastaun W., Ciolfi R., Endrizzi A., Baiotti L., Perna R. 2016, *Binary Neutron Star Mergers and Short Gamma-Ray Bursts: Effects of Magnetic Field Orientation, Equation of State, and Mass Ratio*. Phys. Rev. D, **94**, 064012

4. Endrizzi A., Ciolfi R., **Giacomazzo B.**, Kastaun W., Kawamura T. 2016, *General Relativistic Magnetohydrodynamic Simulations of Binary Neutron Star Mergers with the APR4 Equation of State*, Classical and Quantum Gravity, **33**, 164001

5. Perna R., Lazzati D., **Giacomazzo B.** 2016, *Short Gamma-Ray Bursts from the Merger of Two Black Holes*, ApJ Letters, **821**, L18

6. **Giacomazzo B.**, Zrake J., Duffell P., MacFadyen A. I., Perna R. 2015. *Producing Magnetar Magnetic Fields in the Merger of Binary Neutron Stars*, ApJ, **809**, 39

7. Dall'Osso S., **Giacomazzo B.**, Perna R., and Stella L. 2015, *Gravitational waves from massive magnetars formed in binary neutron star mergers*, ApJ, **798**, 25

8. Read J. S., Baiotti L., Creighton J. D. E., Friedman J. L., **Giacomazzo B.**, Kyutoku K., Markakis C., Rezzolla L., Shibata M., Taniguchi K. 2013, *Matter effects on binary neutron star waveforms*, Phys. Rev. D, **88**, 044042

9. Dionysopoulou K., Alic D., Palenzuela C., Rezzolla L., and **Giacomazzo B.** 2013, *General-Relativistic Resistive Magnetohydrodynamics in three dimensions: formulation and tests*, Phys. Rev. D, **88**, 044020

10. **Giacomazzo B.** and Perna R. 2013, *Formation of Stable Magnetars from Binary Neutron Star Mergers*, ApJ Letters, **771**, L26

11. Andersson N., Baker J., Belczynski K., Bernuzzi S., Berti E., Cadonati L., Cerda-Duran P., Clark J., Favata M., Finn L. S., Fryer C., **Giacomazzo B.**, et al 2013, *The Transient Gravitational-Wave Sky*, Classical and Quantum Gravity, **30**, 193002 (note: I was one of the main authors and responsible in particular of section IIA "Compact Object Binaries and Short Gamma-ray Bursts" and of the Conclusions)

12. **Giacomazzo B.**, Perna R., Rezzolla L., Troja E., and Lazzati D. 2013, *Compact Binary Progenitors of Short Gamma-Ray Bursts*, ApJ Letters, **762**, L18

13. **Giacomazzo B.** and Perna R. 2012, *General Relativistic Simulations of Accretion Induced Collapse of Neutron Stars to Black Holes*, ApJ Letters, **758**, L8

14. **Giacomazzo B.**, Baker J. G., Miller M. C., Reynolds C. S., and van Meter J. R. 2012, *General Relativistic Simulations of Magnetized Plasmas around Merging Supermassive Black Holes*, ApJ Letters, **752**, L15

15. **Giacomazzo B.**, Rezzolla L., and Stergioulas N. 2011, *Collapse of differentially-rotating neutron stars and cosmic censorship*, Phys. Rev. D. **84**, 024022

16. Baiotti L., Damour T., **Giacomazzo B.**, Nagar A., and Rezzolla L. 2011, *Accurate numerical simulations of inspiralling binary neutron stars and their comparison with effective-one-body analytical models*, Phys. Rev. D, **84**, 024017

17. Rezzolla L., **Giacomazzo B.**, Baiotti L., Granot J., Kouveliotou C., and Aloy M. A. 2011, *The missing link: Merging neutron stars naturally produce jet-like structures and can power short Gamma-Ray Bursts*, ApJ Letters, **732**, L6

18. **Giacomazzo B.**, Rezzolla L., and Baiotti L. 2011, *Accurate evolutions of inspiralling and magnetized neutron-stars: equal-mass binaries*, Phys. Rev. D, **83**, 044014

19. Baiotti L., Damour T., **Giacomazzo B.**, Nagar A., and Rezzolla L. 2010, *Analytic modeling of tidal effects in the relativistic inspiral of binary neutron stars*, Phys. Rev. Letters, **105**, 261101

20. Rezzolla L., Baiotti L., **Giacomazzo B.**, Link D., and Font J. A. 2010, *Accurate evolutions of unequal-mass neutron-star binaries: properties of the torus and short GRB engines*, Classical and Quantum Gravity, **27**, 114105

21. Corvino G., Rezzolla L., Bernuzzi S., De Pietri R., and **Giacomazzo B.** 2010, *On the shear instability in relativistic neutron stars*, Classical and Quantum Gravity, **27**, 114104

22. **Giacomazzo B.**, Rezzolla L., and Baiotti L. 2009, *Can magnetic fields be detected during the inspiral of binary neutron stars?*, MNRAS Letters, **399**, L164-L168

23. Baiotti L., **Giacomazzo B.**, and Rezzolla L. 2009, *Accurate evolutions of inspiralling neutron-star binaries: assessment of the truncation error*, Classical and Quantum Gravity, **26**, 114005

24. Mizuno Y., Zhang B., **Giacomazzo B.**, Nishikawa K.-I., Hardee P. E., Nagataki S., and Hartmann D. H. 2009, *Magnetohydrodynamic Effects in Propagating Relativistic Jets: Reverse Shock and Magnetic Acceleration*, ApJ Letters, **690**, L47-L51

25. Kellerman T., Baiotti L., **Giacomazzo B.**, and Rezzolla L. 2008, *An improved formulation of the relativistic hydrodynamics equations in 2D Cartesian coordinates*, Classical and Quantum Gravity, **25**, 225007

26. Meliani Z., Keppens R., and **Giacomazzo B.** 2008, *Faranoff-Riley type I jet deceleration at density discontinuities: Relativistic hydrodynamics with realistic equation of state*, Astronomy & Astrophysics, **491**, 321-337

27. Baiotti L., **Giacomazzo B.**, and Rezzolla L. 2008, *Accurate evolutions of inspiralling neutron-star binaries: prompt and delayed collapse to black hole*, Phys. Rev. D, **78**, 084033

28. **Giacomazzo B.** and Rezzolla L. 2007, *WhiskyMHD: a new numerical code for general relativistic magnetohydrodynamics*, Classical and Quantum Gravity, **24**, 235-258

29. **Giacomazzo B.** and Rezzolla L. 2006, *The Exact Solution of the Riemann Problem in Relativistic Magnetohydrodynamics*, J. Fluid Mech., **562**, 223-259

Publications in Conference Proceedings

1. Aloy M. A., Rezzolla L., **Giacomazzo B.**, and Obergaulinger M. 2012, *Powering Short GRBs by Mergers of Moderately Magnetized Neutron Stars*, proceedings of the international conference "Numerical modeling of space plasma flows (astronum 2011)", *ASP Conference Series*, **459**, 49

2. Font J. A., Rezzolla L., **Giacomazzo B.**, Baiotti L., and Link D. 2011, *Towards modelling the central engine of short GRBs*, proceedings of the "Spanish Relativity Meeting (ERE 2010)", *Journal of Physics: Conference Series*, **314**, 012013

3. **Giacomazzo B.**, Rezzolla L., Baiotti L., Link D., and Font J. A. 2011, *General Relativistic Simulations of Binary Neutron Star Mergers*, proceedings of the "Gamma Ray Bursts 2010 Conference", *AIP Conference Series*, **1358**, 187-190

4. Mizuno Y., Zhang B., **Giacomazzo B.**, Nishikawa K.-I., Hardee P. E., Nagataki S., and Hartmann D. H. 2010, *Magnetohydrodynamic Effects in Relativistic Ejecta*, proceedings of the international conference "High-Energy Phenomena in Relativistic Outflows II", *International Journal of Modern Physics D*, **19**, 991-996

5. Mizuno Y., Zhang B., **Giacomazzo B.**, Nishikawa K.-I., Hardee P. E., Nagataki S., and Hartmann D. H. 2009, *Magnetohydrodynamic Effects in Propagating Relativistic Ejecta: Reverse Shock and Magnetic Acceleration*, proceedings of the "GAMMA-RAY BURST: Sixth Huntsville Symposium", *AIP Conference Series*, **1133**, 229-231

General Public Articles

- L. Baiotti and **B. Giacomazzo**, *"Chi fa l'onda"*, article in italian about sources of gravitational waves published by INFN (Italy) on the public magazine *Asimmetrie*, **5/9.07**, September 2007