

# Curriculum Vitae

Name: **Luciano REZZOLLA**, Prof. Dr.  
Office Address: Institute for Theoretical Physics  
Max-von-Laue Str. 1,  
D-60438 Frankfurt am Main, Germany  
Tel. +49-69-79847871 – Fax. +49-69-79847879  
email: rezzolla@th.physik.uni-frankfurt.;  
webpage (group): <http://relastro.uni-frankfurt.de>  
webpage (personal): <http://astro.uni-frankfurt.de/rezzolla>  
Nationality: Italian

## Education

1994 – 1997 Ph.D. in Relativistic Astrophysics at SISSA, Trieste, Italy Supervisor: Prof. John C. Miller  
1993 – 1994 Served as Officer (Midshipman) in the Technical Corp of the Italian Navy  
1991 – 1992 Research work for the Laurea (MSc) Thesis at the Astronomical Observatory, Trieste, Italy  
1992 Laurea (MSc) in Physics: 110/110 cum Laude  
1989 – 1991 Undergraduate work at the Department of Physics, University of Trieste, Italy  
1986 – 1988 Undergraduate work at the Department of Physics, University of Bari, Italy

## Employment

2017 – Director, Institute for Theoretical Physics, Frankfurt am Main  
2016 – Deputy Director, Institute for Theoretical Physics, Frankfurt am Main  
2015 – Senior Fellow at the Frankfurt Institute for Advanced Studies  
2013 – Chair of Theoretical Astrophysics, Institute for Theoretical Physics, Frankfurt am Main  
2006 – 2014 Head of the Numerical Relativity Group, Albert Einstein Institute  
2004 – 2006 Director of the Computing Centre at SISSA, Trieste, Italy  
2004 – 2006 Associate Professor in Relativistic Astrophysics at SISSA, Trieste, Italy  
2004 – 2013 Adjunct Professor at the Department of Physics and Astronomy  
Louisiana State University, Baton Rouge, USA  
2000 – 2003 Assistant Professor (Ricercatore) in Relativistic Astrophysics at SISSA, Trieste, Italy  
2001 – 2002 Visiting Professor during the summer period at the *Albert Einstein Institute*, Golm, Germany  
1999 – 2000 Five-year Senior Research Fellow, Astrophysics Sector at SISSA, Trieste, Italy  
1998 – 1999 Postdoctoral Fellowship, Physics Dept., University of Illinois at Urbana (with Prof. F. K. Lamb)  
1996 – 1998 Postdoctoral Fellowship, NCSA, University of Illinois at Urbana (with Prof. S. L. Shapiro)  
1993 – 1994 Served as Officer (Midshipman) in the Italian Navy. Assigned to the submarine “Gazzana”

## Professional Highlights

- 2016 – Elected Director, Institute for Theoretical Physics, Frankfurt am Main (starting in 2017)
- 2016 – Member of the Editorial Board of *Nature Physics*
- 2016 Elected *Outstanding Referee* from the American Physical Society
- 2015 – Member of the Steering Board of the *Event Horizon Telescope Collaboration*
- 2015 – Appointed *Senior Fellow* at the Frankfurt Institute for Advanced Studies
- 2014 – Member of the Interim Board of the *Event Horizon Telescope Collaboration*
- 2014 – Member of the Editorial board of *Computational Astrophysics and Cosmology*
- 2013 Max-Planck Award 2013
- 2013 – 2020 Awarded ERC Synergy Grant “BlackHoleCam”
- 2013 – 2017 Chair of “NewCompStar”(MPS1304), an ESF-funded COST Action
- 2012 – 2016 Member of the Review Panel for the Canadian NSERC
- 2012 – Member of the Editorial board of *Living Reviews in Computational Astrophysics*
- 2012 Invited member on the AERES review panel for the Observatory of Paris, Meudon
- 2010 – Member of the International Society of General Relativity and Gravitation
- 2014 – Chief Editor of `hyperspace@gu`: a web blog about General Relativity and Gravitation
- 2009 – 20014 Chief Editor of `hyperspace@aei`: a web blog about General Relativity and Gravitation
- 2009 Member of SOC of *COSPAR 10, Event H02* (Probing strong gravity with gravitational and electromagnetic waves), Bremen, Germany 2010
- 2009 Member of LOC of the Conference *NRDA 2009* (Numerical Relativity, Data Analysis), Potsdam, Germany 2009
- 2009 Member of SOC 19th of *GRG19* (International conference on General Relativity and Gravitation), Mexico City, Mexico 2010
- 2007 – Member of the Executive Board of the Virgo-EGO Scientific Council (VESF)
- 2007 – Co-Chair of `CompStar`, an ESF-funded research network on compact stars
- 2007 – Member of the Steering Committee of `CompStar`
- 2006 – Member of the Editorial Board of the Journal *Classical and Quantum Gravity*
- 2006 Chair of LOC of the Conference *New Frontiers in Numerical Relativity*, Potsdam, Germany 2006
- 2006 Member of LOC of the *XI Marcel Grossman meeting*, Berlin, Germany 2006
- 2002 – 2006 Director of the Computing Centre at SISSA, Trieste, Italy
- 2004 – Adjunct Professor at the Department of Physics and Astronomy, Louisiana State University, USA
- 2004 – 2006 Member of the Executive Board of the Italian Society of Gravitational Physics and Relativity (SIGRAV)
- 2004 – Member of the Italian Society of Gravitational Physics and Relativity (SIGRAV)
- 2003 Co-Chair of LOC of the Conference *Sources of Gravitational Waves*, Trieste, Italy 2003
- 2003 Co-Director of the *Advanced School on Sources of Gravitational Waves*, Trieste, Italy 2003
- 2002 – 2004 Deputy Director of the Computing Centre at SISSA, Trieste, Italy
- 2000 Member of LOC of the Conference *Gravitational Waves: a Challenge to Theoretical Astrophysics*, Trieste Italy 2000

Over the years I have produced many images from the simulations that I have carried out. Many of them have been used by me and others for public outreach and have appeared on newspapers, magazines, calendars, and of course the internet; you can find many of them after searching for “black holes” or “neutron stars”. Some of these images have also won prestigious awards. Animations of my simulations have ended up on the NASA YouTube totalling more than 700,000 downloads, eventually ending-up on the New York Times.

## SCIENTIFIC JOURNALS for which I act as Referee:

- *Annalen der Physik*,
- *Astroparticle Physics*,
- *Astrophysical Journal*,
- *Classical and Quantum Gravity*,
- *International Journal of Modern Physics A*,
- *Journal of Applied Mathematics and Physics*,
- *Journal of Cosmology and Astroparticle Physics (JCAP)*,
- *Journal of Geometry and Physics*,
- *Monthly Notices of the Royal Astronomical Society*,
- *Physical Review Letters*,
- *SIAM Journal on Scientific Computing*
- *Astronomy and Astrophysics*,
- *Astrophysical Journal Letters*,
- *Astrophysics and Space Science*,
- *General Relativity and Gravitation*,
- *International Journal of Modern Physics D*,
- *Journal of Computational Physics*,
- *Journal of Fluid Mechanics*,
- *Journal of High Energy Physics (JHEP)*,
- *Physical Review D*,
- *Physics Letters B*,

## FUNDING AGENCIES for which I act as Referee:

- *Austrian Science Fund (FWF), Austria*
- *Czech Academy of Science (CAS), Czech Republic*
- *Danish Council for Independent Research, Denmark*
- *Deutsche Forschungsgemeinschaft (DFG), Germany*
- *European Research Council (ERC), EU*
- *German-Israeli Foundation, Germany-Israel*
- *Italian Ministry of University and Research (MIUR), Italy*
- *Irish Research Council for Science, Engineering and Technology (IRCSET), Ireland*
- *National Research Foundation (NRF), South Africa*
- *National Science Foundation (NSF), USA*
- *Natural Sciences and Engineering Research Council (NSERC), Canada*
- *Netherlands Organisation for Scientific Research (NWO), The Netherlands*
- *Research Research Foundation Flanders (FWO), Belgium*
- *Research Grants Council Hong Kong (CERG), China*
- *Science & Technology Facilities Council (STFC), United Kingdom*
- *Swiss National Science Foundation (SNF), Switzerland*

## BOOKS

- 2013      *Astrophysical Black Holes*  
L. Rezzolla, Chapter 1, Springer Verlag, Heidelberg
- 2013      *Relativistic Hydrodynamics*  
L. Rezzolla, O. Zanotti, Oxford University Press
- 2010      Editor of the Special Issue *MICRA2009*  
C. Ott, C. Pethick, and L. Rezzolla, *Class. Quantum Grav.* 27 (2010) 110302
- 2007      Editor of the Special Issue *New Frontiers in Numerical Relativity*  
M. Campanelli and L. Rezzolla, *Class. Quantum Grav.* 24 (2007) S1-S379
- 2001      Editor of the Proceedings Book *Gravitational Waves: A Challenge to Theoretical Astrophysics*  
V. Ferrari, J. C. Miller and L. Rezzolla, ICTP Lecture Series, Vol. 3, ISBN 92-95003-05-5

## Teaching Experience and Courses Given

I have taught a variety of subjects at different levels. These range from more analytic courses (such as General Relativity, Advanced General Relativity, Astrophysics of Compact Objects, Astrophysical Relativity) to more computationally oriented ones (such as Numerical Methods for Astrophysics, Numerical Analysis of Hyperbolic and Parabolic Equations, Introduction to Numerical Relativity). Below is the complete list. At the moment, my teaching is mostly concentrated on the graduate courses given for the students of the International Max-Planck Research School (IMPRS) on gravitational-wave astronomy, as well as to specialized Summer and Winter Schools.

### FULL COURSES

- 2016 – 2017 *Hydrodynamics and Magnetohydrodynamics*, Undergrad. Course, ITP Frankfurt (Winter Semester)
- 2016 *Advanced General Relativity*, Undergrad. Course, ITP Frankfurt (Summer Semester)
- 2015 – 2016 *General Relativity*, Undergrad. Course, ITP Frankfurt (Winter Semester)
- 2015 *Advanced General Relativity*, Undergrad. Course, ITP Frankfurt (Summer Semester)
- 2014 – 2015 *Hydrodynamics and Magnetohydrodynamics*, Undergrad. Course, ITP Frankfurt (Winter Semester)
- 2014 *Numerical Relativity*, Undergrad. Course, ITP Frankfurt (Summer Semester)

### SERIES OF LECTURES AT SCHOOLS (2010–2016)

- Sep. 2016 *Giesch International Symposium: Introduction to General Relativity*, Frankfurt, Germany
- Sep. 2016 *NewCompStar School: Neutron stars: gravitational physics theory and observations*, Coimbra, Portugal
- Jan. 2014 *Astrophysics School: Look and Listen*, Playa del Carmen, Mexico
- Apr. 2013 *Modelling black hole binaries*, VESF International School, Monte Porzio, Italy
- Mar. 2013 *Introduction to numerical relativity*, IMPRS graduate course, Spreewald, Germany
- Mar. 2012 *Advanced general relativity: Compact Objects*, Ferienkurs (spring-break course), AEI
- May 2012 *Theoretical foundations of astrophysical black holes*, XI SIGRAV International School, Como, Italy
- Feb. 2012 *Introduction to general relativity*, IMPRS graduate course, Germany
- Mar. 2011 *Advanced general relativity: Compact Objects*, Ferienkurs (spring-break course), AEI
- Feb. 2011 *Introduction to general relativity*, IMPRS graduate course, Erkner
- Mar. 2010 *Modelling sources of gravitational waves*, Ferienkurs (spring-break course), AEI
- Mar. 2010 *Numerical Methods in General Relativity*, IMPRS graduate course, Wandlitz, Germany
- Feb. 2010 *Solution of hyperbolic PDEs*, Course given at the Computational Astrophysics Winter School, Caen, France

## Graduate and Undergraduate Studies Advisees

### Bachelor (BSc) Students:

- 2015–2016 *Cosima Breu*, Institute for Theoretical Physics, Frankfurt, Germany
- 2015–2016 *Fabian Hoffmann*, Institute for Theoretical Physics, Frankfurt, Germany
- 2015–2016 *David Kling*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016–2017 *Stephan Wystub*, Institute for Theoretical Physics, Frankfurt, Germany

### Laurea-Diplom (MSc) Students:

- 1999–2000 *Ilija Musco*, University of Trieste (with J. C. Miller)
- 2001–2002 *Bruno Giacomazzo*, SISSA & University of Parma (with E. Onofri)
- 2003–2004 *Luca Naso*, SISSA & University of Catania (with A. Bonanno)
- 2004–2005 *Gregor Leiler*, SISSA & University of Udine
- 2007–2008 *Michael Jasiulek*, von Humboldt University, Berlin
- 2007–2008 *Filippo Galeazzi*, AEI & University of Padua, Italy
- 2007–2008 *Philipp Moesta*, AEI & University of Kassel, Germany
- 2008–2009 *David Link*, von Humboldt University, Berlin, Germany
- 2008–2009 *David Radice*, AEI & Politecnico di Milano, Milano (Prof. G. Magli)
- 2013–2014 *Francesca Lepori*, AEI & Udine University, Italy (Prof. )
- 2014–2015 *Fabian Mueller*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016–2017 *Elias Most*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016– *Cosima Breu*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016– *Natascha Wechselberger*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016– *Lukas Weih*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016– *David Kling*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016– *Jonas Köhler*, Institute for Theoretical Physics, Frankfurt, Germany

### Ph.D. Students:

- 1999–2002 *Olindo Zanotti*, SISSA; now researcher at Trento Univ., Italy
- 2000–2004 *Luca Baiotti*, SISSA; now Ass. Prof. at Osaka Univ., Japan
- 2000–2004 *Pedro Montero-Muriel*, SISSA (with J. Miller); now postdoc at Garching, Germany
- 2002–2005 *Bruno Giacomazzo*, SISSA; now assistant prof. at Trento Univ., Italy
- 2004–2008 *Enrico Barausse*, SISSA; now postdoc at Univ. of Maryland, USA
- 2005–2009 *Ernazar Abdikamalov*, SISSA (with J. Miller); now postdoc at Caltech, USA
- 2006–2010 *Christian Reisswig*, AEI; now Einstein Fellow at Caltech, USA
- 2006–2010 *Jennifer Seiler*, AEI; now postdoc at NASA/Goddard, USA
- 2009–2012 *Philipp Moesta*, AEI; now postdoc at Caltech, USA
- 2005–2012 *Thorsten Kellermann*, AEI; now consultant in private company, Munich, Germany
- 2010–2013 *David Radice*, AEI; now Prize Fellow at Caltech, USA.
- 2008–2014 *Filippo Galeazzi*, AEI; now postdoc in Frankfurt, Germany
- 2013–2015 *Joachim Friebe*, AEI
- 2009–2015 *Kyriaki Dionysopoulou*, AEI; now postdoc in Southampton, UK
- 2014– *Luke Bovard*, Institute for Theoretical Physics, Frankfurt, Germany
- 2014– *Federico Guercilena*, Institute for Theoretical Physics, Frankfurt, Germany
- 2015– *Jens Papenfort*, Institute for Theoretical Physics, Frankfurt, Germany
- 2015– *Sven Köppel*, Institute for Theoretical Physics, Frankfurt, Germany
- 2016– *Hector Olivares*, Institute for Theoretical Physics, Frankfurt, Germany