

CV - ROSALBA PERNA

Research Interests

High Energy Astrophysics

Gamma-ray bursts, neutron stars with special focus on magnetars, accretion disks, X-ray binaries, ultra-luminous X-ray sources, mergers of binary compact objects, gravitational waves and their electromagnetic counterparts, tidal disruption events.

Cosmology

Gravitational lensing, interstellar medium and dust in high-redshift galaxies, foregrounds for CMB and 21 cm measurements, growth of supermassive black holes, axions.

Exoplanets

Magnetohydrodynamics and turbulence in the atmospheres of hot Jupiters. Dynamical effects from stellar encounters on planetary systems.

N -body Dynamics

Scattering in the small- N regime with applications ranging from supermassive black hole dynamics in galactic centers, to production of hypervelocity stars, to binary compact object formation, to exoplanetary architectures in dense star clusters.

Education

Ph.D. in Physics **September 1994- June 1999**

Harvard University, Cambridge, MA Thesis title: *Theoretical studies of Gamma-Ray Bursts.*

Piano Diploma **September 1993**

Conservatorio di Musica, Potenza, Italy.

Laurea in Physics, 110/110 cum laude **November 1989–July 1993**

Università di Salerno, Italy. Thesis title: *Theory of the Integer and Fractional Quantum Hall Effect*

Academic Appointments

Stony Brook University **September 2021 –**
Associate Department Chair

Stony Brook University **September 2017 –**
Professor of Physics and Astronomy

Stony Brook University **January 2014 – August 2017**
Associate Professor of Physics and Astronomy

University of Colorado at Boulder **March 2011 – December 2013**
Associate Professor of Astrophysics

University of Colorado at Boulder **September 2004 – March 2011**
Assistant Professor of Astrophysics

Princeton University **September 2003 – August 2004**
Lyman Spitzer Fellow

Harvard Society of Fellows **July 1999 – June 2003**
Junior Fellow

Visiting Scientist Positions

Carnegie Observatories (01/2017); California Institute of Technology (04/2002–06/2002); Osservatorio Astronomico di Roma (01/2002–03/2002); Istituto di Astrofisica Spaziale, Italy (10/2001–12/2001); CCA, Flatiron Institute (2018–)

Awards and Honors

Aspen Institute Italia Award For significant US-Italian collaborative research	2022
OCIW Distinguished Scientific Visitor Carnegie Observatories	2017
Fellowship in the American Physical Society American Physical Society	2014
SIGRAV Prize Italian Society of General Relativity and Gravitational Physics	2010
Astronomy Magazine Feature Personal profile as an Astrophysicist featured in the Astronomy magazine	January 2010
Provost's Faculty Achievement Award University of Colorado at Boulder	2009
Kavli Frontiers of Science Fellow National Academy of Science and Kavli Foundation	2007, 2013
Lyman Spitzer Fellowship Department of Astrophysics, Princeton University	September 2003 - August 2004
Harvard Junior Fellowship Harvard Society of Fellows	July 1999 - June 2003
Award of Excellence (Top Graduate of 30 years) Faculty of Science, University of Salerno (Italy)	2002
Predoctoral Fellowship Smithsonian Astrophysical Observatory.	August 1998 - May 1999
Amelia Earhart Fellowship Zonta International Foundation	September 1998 - May 1999
AWIS Predoctoral Award Association for Women in Science Educational Foundation	1998
Goldhaber Prize (Top Theory Student) Physics Department, Harvard University	1997
Fellowship for Research Abroad Physics Department, Università di Salerno (Italy).	September 1996 – August 1998
Rudmose Fellowship Physics Department, Harvard University	September 1995 – June 1996
Top Student Award (National) ENAM (Italy)	September 1984 – June 1998

Teaching

Stony Brook University:

"Tutorial in Advanced Topics", Fall 2021

"Interstellar Medium", graduate course, Fall 2016

"Graduate Seminar II" (Nuclear, Particle, Astronomy), Spring 2014, Fall 2014, Fall 2017

"Stars and Radiation", for undergraduate science majors, Fall 2014, Fall 2016

"Introduction to Astronomy: Stars and Galaxies", for non science majors, Spring 2015, Fall 2015

"Astronomy Laboratory", for non science majors, Spring 2015, Fall 2015

"Introduction to the Solar System", for non science majors, Spring 2016, Fall 2019, Fall 2020

"Modern Physics" (Recitation), Fall 2017

"Introduction to Planetary Sciences", for both science and non-science majors, Fall 2020, Fall 2021, Fall 2022

University of Colorado:

"Black Holes", an undergraduate course for non-science majors (taught seven times)

"Internal Processes in Gases, part II", a graduate level course (taught twice)

"Astrophysics I, Stellar and Interstellar", for undergraduate science majors (taught once)

"Stars and Galaxies", for undergraduate non-science majors (taught twice)

"Neutron Stars", graduate seminar (taught once)

"Radiative and Dynamical Processes", a 4-credit core course for graduate students (taught three times)

Student and Postdoctoral supervision

Postdocs

Matthew van Adelsberg, JILA, 09/2006 - 08/2008

Bruno Giacomazzo, JILA, 10/2011 - 09/2013

Takamitsu Tanaka, Stony Brook University, 09/2014 - 08/2016

Simone Dall'Osso, Stony Brook University, 05/2016 - 02/2018

Nathan Leigh, Stony Brook University, 01/2018 - 31/2018

Graduate Students

Joseph Flasher, University of Colorado, 2004-2006

Kevin Heng, University of Colorado, 2005-2007

Enrico Bozzo, University of Rome and JILA, 2003-2006

Peter Robinson, University of Colorado, 2007-2009

Federico Bernardini, University of Rome and JILA, 2007-2010

Ting Yan, University of Colorado, 2009-2011

Daniele Viganó, University of Alicante and JILA, 2013

Sebastien Guillot, McGill University and JILA, 2013-2014

Taeho Ryu, Stony Brook University, 2014 - 2018

Yunan Xie, Stony Brook University (Master thesis), 2020

Yihan Wang, Stony Brook University, 2017 - 2022

Michael Ray, Stony Brook University (Master thesis), 2021, 2022

Claudia Soriano, University of Barcelona, 2021 - present

Undergraduate Students

Michelle Villeneuve, University of Colorado, 2012-2013

Shawn Hoose, Stony Brook University, 2014 - 2015

Samantha Scibelli, Stony Brook University, 2015 - 2016

Rina Lim, Stony Brook University, 2016-2017

Antonio Frigo, Stony Brook University, 2020-2021

Braeden Bierwiler, Stony Brook University, WISE program, Honors thesis, 2021

Invited Lectures

Princeton University, Physics dept., July 2004, lecture on “Black Holes” for the Princeton-Gran Sasso summer school.

La Scuola Normale Superiore, Dec. 2003; lectures for PhD students on the topic of “Accretion in Astrophysics”.

Selected Invited Conference Talks, Colloquia and Seminars

Invited Talk, “First National Meeting on GRBs”, Rome, Dec. 2001

Astronomy Colloquium, Caltech, April 2002

Invited Talk, “Gamma-Ray Bursts: The Brightest Explosions in the Universe”, Harvard University, May 2002

Invited Talk, 2nd Workshop ”Gamma-Ray Bursts in the Afterglow Era”, Rome, Sept. 2002

Astrophysics Seminar, University of Santa Cruz, May 2002

Astrophysics Seminar, University of Santa Barbara, May 2002

Astrophysics Colloquium, University of Chicago, January 2003

Astrophysics Seminar, New York University, January 2003

Astronomy Colloquium, Columbia University, January 2003

Astrophysics Seminar, Harvard/CfA, January 2003

Astrophysics Seminar, Rutgers University, February 2003

Astrophysics Colloquium, University of Colorado, February 2003

Physics Colloquium, University of Rochester, March 2003

Astrophysics Colloquium, Stanford University, April 2003

Theoretical Astrophysics Seminar, UC Berkeley, April 2003
Astrophysics Seminar, Lawrence Livermore National Labs, April 2003
Astrophysics Colloquium, Princeton University, December 2003
Astrophysics Seminar, La Scuola Normale, Pisa, Italy, December 2003
Invited Talk, “GRB Physics before Swift”, State College, PA, April 2004
Astronomy Colloquium, Cornell University, February 2005
Astrophysics Colloquium, American Museum of Natural History, February 2005
Astrophysics Colloquium, Northwestern University, March 2005
Astrophysics Colloquium, University of Chicago, April 2005
Astrophysics Seminar, Rutgers University, April 2005
Invited Talk, , “Pulsar Wind Nebulae”, Harvard-Radcliffe, May 2005
Astronomy Colloquium, Harvard University, March 2006
Astrophysics Colloquium, Nanjing University, China, July 2006
Invited Talk in the session on “Gamma-Ray Bursts”, 36th COSPAR Scientific Assembly, Beijing, China, July 2006
Astrophysics Colloquium, McGill University, Montreal, Canada, October 2006
Theoretical Astrophysics Seminar, UC Berkeley, April 2007
Astronomy Colloquium, University of Nevada at Las Vegas, May 2007
Astrophysics Colloquium, University of Colorado, September 2008
Astronomy Colloquium, Columbia University, March 2009
Astronomy Seminar, Yale University, May 2009
Astrophysics Colloquium, American Museum of Natural History, May 2009
Astrophysics Seminar, New York University, October 2009
Physics Colloquium, University of Southern California, October 2009
ITC Colloquium, Harvard/ITC, October 2009
Astronomy Colloquium, Ohio State University, November 2009
Invited Talk, “From Planets to Galaxies”, Budapest, Hungary, June 2010
Invited Prize Talk at “XIX SIGRAV conference on General Relativity and Gravitational Physics”, Pisa, Italy, September 2010
Physics Colloquium, University of Missouri at Columbia, November 2010
Invited Review Talk, “The Prompt Activity of Gamma-Ray Bursts”, Raleigh, NC, March 2011
All JILA Colloquium, JILA, March 2011
Astronomy Colloquium, University of Maryland, April 2011
Astrophysics Seminar, Max Planck Institute for Gravitational Physics, Potsdam, Germany, June 2011
Astrophysics Seminar, Institute of Space Sciences, Barcelona, Spain, September 2011
Physics Colloquium, West Virginia University, October 2011
High Energy Seminar, Max Planck Institute, Garching, Germany, November 2011
Astronomy Colloquium, University of British Columbia, Vancouver, Canada, November 2011
Astronomy Colloquium, ETH, Zurich, Switzerland, November 2011
Invited Talk, “Planet-Z: atmospheres and interiors of exoplanets”, Zurich, Switzerland, November 2011
Astrophysics Seminar, Rutgers University, December 2011
Astronomy Seminar, Stony Brook University, February 2012
ITC lunch talk, Harvard/ITC, March 2012
Astrophysics Seminar, Center for Relativistic Astrophysics, Georgia Tech, March 2012

Physics Colloquium, University of Barcelona, March 2012
Astrophysics Joint Seminar, McGill University, Montreal, Canada, April 2012
Astrophysics Seminar, North Carolina State University, Raleigh, April 2012
Astrophysics Seminar, New York University, April 2012
Astrophysics Seminar, Osservatorio Astronomico di Roma, Italy, June 2012
Invited Talk in the session on “Magnetars”, 39th COSPAR Scientific Assembly, Mysore, India, July 2012
Astrophysics Colloquium, Institut Astrophysique de Paris, September 2012
Physics Colloquium, University of Texas at San Antonio, October 2012
Cosmology Seminar, Carnegie Mellon University, December 2012
Physics Colloquium, Grinnell College, December 2012
Astrophysics Colloquium, Anton Pannekoek Institute, Amsterdam, Netherlands, December 2012
Physics Colloquium, University of Massachusetts at Amherst, January 2013
Astrophysics Seminar, La Scuola Normale, Pisa, Italy, February 2013
Astrophysics Seminar, Stony Brook University, February 2013
Astronomy Colloquium, Cornell University, April 2013
Invited Talk, STARS2013 - SMFNS2013 meetings, Cuba, May 2013
Astrophysics Colloquium, SISSA, Trieste, Italy, May 2013
Invited Introductory Speaker for “Cosmic Explosions”, Kavli Frontiers of Science Symposium, National Academy of Sciences, Irvine, June 2013
Invited Talk on the topic of ‘Magnetars’, KIPAC@10, “Big Questions in Particle Astrophysics and Cosmology”, Stanford, September 2013
Invited Talk, “Explosive Transients: Lighthouses of the Universe”, Santorini, September 2013
Astrophysics Colloquium, Northwestern University, October 2013
Exoplanet Seminar, Kavli Institute, Cambridge, UK, November 2013
Astrophysics Colloquium, Institute of Astronomy, Cambridge, UK, November 2013
Invited Review Talk on ‘X-ray flares as clues of the central engine’, “GRB-Magnetar Thinkshop”, Bormio, Italy, January 2014
Physics/Mathematics Joint Colloquium, New York University Abu Dhabi, January 2014
High Energy Seminar, University of Michigan, Ann Arbor, March 2014
Physics Colloquium, Wayne State University, March 2014
Invited Talk in the session on “The Transient Gravitational Wave Sky”, APS April Meeting, Savannah, April 2014
Astronomy & Astrophysics Colloquium, University of Rochester, April 2014
Physics Colloquium, University of Rochester, April 2014
Astronomy Tea Talk, Caltech, May 2014
Joint CSH-WP Colloquium, University of Bern, Switzerland, May 2014
Invited Review Talk on ‘Progenitors of short Gamma-Ray Bursts’, “Gamma-Ray Burst in the Multi-Messenger Era”, Paris, June 2014
Invited Talk in the session on “Magnetars”, 40th COSPAR Scientific Assembly, Moscow, Russia, August 2014
Invited Review Talk on ‘Gamma-Ray Bursts and Magnetars’, “SWIFT 10 Years of Discovery”, Rome, December 2014
ESO/MPA/MPE/USM Joint Astronomy Colloquium, Garching, Germany, January 2015
Astronomy Colloquium, Penn State University, February 2015
Physics Colloquium, Brookhaven National Laboratory, March 2015
Institute of Advanced Studies - Princeton University Joint Astrophysics Colloquium, April 2015

Invited Plenary Talk at the NewCompStar Meeting, Budapest, Hungary, June 2015.

Invited Review Talk on “Highly magnetized neutron stars: theory, observations and connection with gamma-ray bursts” at the Fourteenth Marcel Grossmann Meeting on General Relativity and Relativistic Astrophysics, Rome, Italy, July 2015

Invited Talk in “The Zoo of Accreting Compact Objects”, Lorentz Center of Leiden, Netherlands, August 2015

Astronomy Colloquium, University of Massachusetts at Amherst, October 2015

Invited Talk on “Magnetar Formation” at the ISSI workshop on Relativistic Compact Objects, Bern, Switzerland, November 2015

Astrophysics Colloquium, KIPAC/Stanford, December 2015

Astronomy Colloquium, Yale, December 2015

Physics Colloquium, Stony Brook University, April 2016

Physics Colloquium, Oregon State University, November 2016

Astrophysics Colloquium, Carnegie Observatories, January 2017

BWIS (Brookhaven Women in Science) Colloquium, Brookhaven national Laboratory, February 2017

Astrophysics Seminar, American Museum of National History, February 2017

Physics Colloquium, New York University, April 2017

Physics Colloquium, Texas Tech., April 2017

Invited Talk on “GRBs from compact-binary mergers” at “New Frontiers in Gravitational-Wave Astrophysics”, Rome, Italy, June 2017

Invited Talk at the workshop “A multi-messenger look at the origin of gamma-ray busts”, in “European Week of Astronomy and Space Science”, Prague, Czech Republic, June 2017

Invited Discussion Starter Talk on “Heating a long-lived dead disk” at the Lorentz Workshop on “Potential Electromagnetic signatures of stellar mass binary black hole mergers”, Leiden, Netherlands, September (2017)

Invited Plenary Talk at the MAS Meeting of the American Physical Society, NJIT, November 2017

Invited Plenary Talk on “EM counterparts of compact object binary mergers” at the conference “Deciphering the violent Universe”, Playa del Carmen, Mexico, Dec. 2017

Astrophysics Seminar, University of Waterloo, CA, March 2018

Theoretical Astrophysics Seminar, UC Berkeley, April 2018

Harvard-CfA Colloquium, April 2018

Invited Talk in conference on ”Unsolved Problems in Astrophysics and Cosmology”, Budapest, Hungary, July 2018

Astrophysics Seminar, Osservatorio Astronomico di Roma, Italy, June 2018

Astrophysics Seminar, CITA, Toronto, Canada, November 2018

Astronomy Seminar, Michigan State University, February 2019

Astronomy Colloquium, University of Michigan, February 2019

Invited Talk, “Fifty-One Ergs” conference, Raleigh, NC, May 2019

Invited Talk at the “Multi-Messenger Astrophysics in the Gravitational Wave Era”, Yukawa Institute for Theoretical Physics (YITP), Kyoto University, Kyoto, Japan, October 2019

Physics Colloquium, Georgia Tech, November 2019

Astrophysics Colloquium, Center for Computational Astrophysics, Flatiron Institute, November 2019

Invited Talk at the workshop on “The Origins of Black Hole Mergers and Gravitational Waves”, Lorentz center, Leiden, Netherlands, December 2019

Physics Colloquium, City College of New York, November 2020 (virtual)

Astrophysics Seminar, McGill Space Institute, Montreal, Canada, January 2021 (virtual)
Astrophysics Seminar, University of Concepcion, Chile, May 2021 (virtual)
Astrophysics Seminar, University of Milano Bicocca, Italy, June 2021 (virtual)
High Energy Astrophysics seminar, UNAM, Mexico, June 2021 (virtual)
Astrophysics seminar, Monash University, Melbourne, Australia, February 2022 (virtual)
CIERA Astrophysics seminar, Northwestern university, May 2022
Astrophysics Seminar, University of Milano Bicocca, Italy, June 2022

Grants

Reported only RP's amount when shared grant

NASA/Swift (theory): (PI) Constraining the Properties of the Gamma-Ray Burst Environment through time-variable absorption. Dates: 05/01/2005 - 04/30/2007. Award amount: \$40,000

NSF-AST: (PI) Gamma-Ray Bursts as Cosmological Probes. Dates: 07/01/2005 - 06/30/2008. Award amount \$277,707

NASA/XMM: (CoI) Unveiling the broad band properties of the fading transient AXP XTE J1810-197. Dates: 09/18/2006 - /09/17/2008. Award amount: \$39,044

NASA/Spitzer: (CoI) Gamma-Ray Burst Physics in the Spitzer/Swift Era. Dates: 06/13/2006 - 09/30/2008. Award amount: \$19,605

NASA/Hubble: (CoI) Searching for Light Echoes After the SGR 1806-20-Hyperflare. Dates: 04/01/2006 - 03/31/2009. Award amount: \$21,419

NASA/XMM: (CoI) Unveiling the quiescent emission properties of the fading transient AXP XTE J1810-197. Dates: 07/24/2008 - 07/23/2009. Award amount: \$33,500

NASA/XMM: (CoI) The Transient Bursting Anomalous X-Ray Pulsar in Westerlund 1. Dates: 08/17/2007 - 08/16/2009. Award amount: \$33,645

NASA/XMM: (CoI) Unveiling the Quiescent State Properties of the Transient AXP XTE J1810-197. Dates: 01/01/2008 - 12/31/2009. Award amount: \$33,626

NASA/XMM: (CoI) The post-awakening of the transient bursting anomalous X-ray pulsar in Westerlund 1. Dates: 07/24/08 - 07/23/2010. Award amount: \$16,919

NASA/XMM: (CoI) Prompt study of AXP outbursts with XMM. Dates: 01/01/2009 - 12/31/2010. Award amount: \$34,800

NASA/Chandra: (CoI) Prompt Study of Burst-Selected Outbursts from AXPs. Dates: 03/15/2009 - 02/08/2012. Award amount: \$20,727

NASA/XMM: (CoI) Unveiling the nature of the Period evolution of XTE J180-197. Dates: 08/13/2009 - 08/12/2011. Award amount: \$25,165

NASA/XMM: (CoI) XMM-Newton Observation of the new SGR 0501+4516 in its return to quiescence. Dates: 09/01/2009 - 08/31/2011. Award amount: \$26,376

NASA/XMM: (CoI) From Outburst to Quiescence: Monitoring the Transient X-ray Pulsar in Westerlund 1. Dates: 09/01/2009 - 08/31/2011. Award amount: \$25,553

NASA/Chandra: (CoI) Unveiling the nature of cyclic behavior in the period evolution of the Anomalous X-ray Pulsar XTE J1810-197. Dates: 11/02/2009 - 01/25/2012. Award amount: \$21,362

NASA/XMM: (CoI) Prompt study of magnetar outbursts with XMM-Newton. Dates: 05/21/2010 - 05/20/2012. Award amount: \$15,616

NASA/Chandra (DDT): (CoI) Unveiling the nature of cyclic behavior in the period evolution of the Anomalous X-ray Pulsar XTE J1810-197. Dates: 06/08/2010 - 06/07/2011. Award amount: \$6,000

NSF-AST: (PI) Studies of Gamma-Ray Bursts in the Swift Era. Dates: 08/15/2010 - 07/31/2015. Award amount: \$383,071

NASA/Chandra (archive): (PI) Constraining the magnetic field topology of magnetars through spectral-timing analysis of the quiescent emission of XTE J1810-197. Dates: 01/01/2011 - 02/28/2013. Award amount: \$45,000

NASA/Chandra (DDT): (CoI) Unveiling the nature of cyclic behavior in the period evolution of the Anomalous X-ray Pulsar XTE J1810-197. Dates: 10/26/2010 - 10/25/2012. Award amount: \$7,500

NASA/Chandra (DDT): (PI) Unveiling the nature of cyclic behavior in the period evolution of the Anomalous X-ray Pulsar XTE J1810-197. Dates: 02/10/2011 - 02/09/2013. Award amount: \$12,000

NASA/Chandra: (CoI) Prompt study of magnetar outbursts with Chandra. Dates: 09/06/2011 - 06/23/2015. Award amount: \$21,712

NASA/Chandra: (CoI) Unveiling the Nature of the Cyclic Behavior in the Period Evolution of the Anomalous X-ray Pulsar XTE J1810-197. Dates: 02/21/2012 - 02/20/2015. Award amount: \$18,910

NASA/Fermi (theory): (CoI) General Relativistic Magnetohydrodynamic Simulations of Neutron Star Binaries. Dates: 08/07/2012 - 08/18/2015. Award amount: \$80,000

NASA/Chandra: (CoI) Prompt Study of Magnetar Outbursts with Chandra. Dates: 04/30/2013 - 04/29/2016. Award amount: \$23,212

NASA/Chandra: (CoI) Prompt Study of Magnetar Outbursts with Chandra. Dates: 07/16/2014 - 07/15/2016. Award amount: \$26,595

NASA/Hubble: (CoI) GRB hosts and the search for missing star formation at high redshift. Dates: 01/01/2015 - 12/31/2017. Award amount: \$5,000

NASA/Chandra (archive): (PI) Spectral and timing analysis of the low magnetic field magnetar SWIFT J1822.3-1606: testing our understanding of the magnetar behaviour. Dates: 01/01/2015 - 02/29/2017. Award amount: \$45,000

NASA/Swift (theory): (PI) X-ray Flares in long and short GRBs: A numerical investigation of disk fragmentation in hyperaccreting disks. Dates: 08/01/2015 - 07/29/2017. Award amount: \$40,000

NASA/Swift (theory): (PI) Swift precursors to long GRBs: hidden signs of a newly-born, hyper accreting magnetar? Dates: 08/01/2016 - 07/31/2017. Award amount: \$40,000

NSF-AST: (PI) Gamma-Ray Bursts and Magnetars: Astrophysical Connections and Probes of Fundamental Physics. Dates: 08/01/2016 - 07/31/2020. Award amount: \$405,000

NASA/Chandra: (CoI) Prompt Study of Magnetar Outbursts with Chandra and NuStar. Dates: 05/25/2017 - 05/24/2018. Award amount: \$25,100

NSF-AST: (PI) Compact Object Binaries in the Gravitational Wave Era. Dates: 08/01/2020-07/31/2023. Award amount: \$450,000

NASA-Fermi (theory): (PI) Connecting the properties of binary compact merger ejecta with the prompt emission of their jet-cocoon systems Dates: 01/01/2021- 12/31/2021. Award amount: \$60,000

Selected Approved Computational and Observing Proposals (as Co-I)

PRACE computer time grant: (PI: Giacomazzo) General Relativistic Simulations of Binary Neutron Star Mergers, 16 million core hours, 2015-2016

CINECA computer time grant: (PI: Giacomazzo) General Relativistic Magnetohydrodynamic Simulations of Neutron Stars on FERMI, 1 million core hours, 2014-2015

NSF XSEDE computer time grant: (PI: Giacomazzo) General Relativistic Magnetohydrodynamic Simulations of Merging Compact Objects, 4 million core hours, 2013-2014

NSF XSEDE computer time grant: (PI: Giacomazzo) General Relativistic Magnetohydrodynamic Simulations of Merging Compact Objects, 8 million core hours, 2012-2013

Chandra: Hot Accretion Flows in Quiescent Dwarf Novae

Hubble: Searching for light echoes after the SGR 1806-20- hyperflare

Spitzer: Gamma-Ray Bursts in the Spitzer/Swift Era

NOAO: Searching for Gamma-Ray Bursts in Nearby Galaxies

VLT: Probing Interstellar and Intergalactic matter through *UVES ToO* observations of GRB afterglows

Parkes: Searching for radio pulsations from the transient AXP in Westerlund 1

ALMA: Disentangling the nature of the ring-like structure around the magnetar SGR 1900+14

Professional Service - National and International

Referee for *The Astrophysical Journal*, *The Astrophysical Journal Letters*, *Astronomy & Astrophysics*, *Monthly Notices of the Royal Astronomical Society*, *Publications of the Astronomical Society of Japan*, *Publications of the Astronomical Society of Australia*, *International Journal of Modern Physics D*, *Physical Review Letters*, *Physical Review D*, *Physics of Fluids*, *Science*, *Nature*, *Nature Astronomy*.

Hubble Cycle 12 (2003), Cycle 13 (2004), member of panel review

Swift Cycle 1 (2004), member of panel review

Columbia University (2004), external committee member for PhD thesis defense

Chandra Cycle 7 (2005), Cycle 9 (2007), Cycle 11 (2009), member of panel review, Cycle 17 (2015), Chair and member of panel review

National Science Foundation (2006, 2011, 2014, 2022), member of panel review

NASA-ATP (2006) and (2010), member of panel review

France-Israel joint astrophysics projects (2007), external reviewer

Niels Bohr Institute (2009), external committee member for PhD thesis defense

Fermi Cycle 2 (2009), member of panel review

NASA Postdoctoral Program (2010, 2012, 2013, 2014), reviewer

University of Stockholm (2011), member of international board for selection of new faculty member

Natural Sciences and Engineering Research Council of Canada (2012), reviewer of Major Resources Support Grants

Suzaku Cycle 7 (2012), member of panel review and Deputy Chair

National Science Center of Poland (2012), reviewer of grant proposals

Canada Research Chairs, member of the College of Reviewers for Senior Faculty Chair positions

University of Iceland (2013), external reviewer of postdoctoral grants

Einstein Postdoctoral Fellowships, member of the selection committee

University of Texas, San Antonio (2014-2018), external member of research committee panel for Physics PhD student

NASA Earth and Space Science Fellowships (2014), reviewer of proposals

La Scuola Normale di Pisa, reviewer of research proposals by their faculty

NSF EPSCoR Research Infrastructure Improvement (RII) Track-1 program, external reviewer of proposals

Netherlands Organization for Scientific Research (NWO), reviewer of Vidi grant application

Canadian Institute of Theoretical Astrophysics (CITA) (2015), member of the external Expert Review Committee in charge of evaluating the NSERC grant proposal of the Institute.

European Research Council (ERC) (2016), external reviewer of Consolidator Grant Proposal.

Chilean National Science and Technology Commission (CONICYT) (2016), Reviewer of proposal for the FONDECYT grant competition.

Natural Sciences and Engineering Research Council of Canada (NSERC) (2016-2019), External reviewer of CITA yearly progress.

Advanced Theory and Simulations, Wiley (2017 –), member of the Editorial Board.

Universita' di Milano Bicocca (2018), reviewer of PhD thesis in Physics and Astronomy

NuSTAR Cycle 4 (2018), Chair and member of panel review

German Research Foundation, reviewer of grant proposal (2018)

Frontiers in Astronomy and Space Sciences, Associate Editor, 2018 –

Kavli Institute for Theoretical Physics (KITP), Santa Barbara, Member of the Advisory Board, 2018 – 2022

NASA Multimessenger Astronomy, Member of the Science Advisory Group, 2018 –

Italian Ministry for Education, University and Research, referee for PRIN, to fund fundamental research projects.

Universita' La Sapienza, Rome, referee of PhD Thesis (2018)

NASA Hubble Fellowship program, Chair and panel member of the selection committee (2018).

CCA Summer School, “Multiscale Modeling of Astrophysical and Space Plasmas”, member of the organization and selection committee (2019)

International Conference on General Relativity and Gravitation (GR22), organizer and chair of the “Relativistic Astrophysics” session, Valencia, Spain, July 2019

F1000Prime, member of the section in High Energy Astrophysics, 2019 -

Universita' di Padova, Italy, referee of PhD Thesis (2019)

Blavatnik Regional Awards, member of the jury (2020)

National Academies of Sciences, Engineering, and Medicine (NASEM), Review Coordinator for the Astronomy and Astrophysics 2020 Decadal Survey (2020)

CCA, Flatiron Institute, co-leader of the Compact Object group (Fall 2020-Spring 2021)

CCA, Flatiron Institute, member of the selection committee for the Flatiron Research Fellows (2020)

Center for Astro Particle and Planetary Physics, NYU Abu Dhabi, member and Chair of the Center External Advisory Board (2021-2024)

Journal of High Energy Astrophysics (JHEAp), Associate Editor, 2021 –

Organization of Conferences and Schools

Member of the Scientific Organizing Committee for the parallel session on Gamma-Ray Bursts for the conference “New Views of the Universe”, Chicago, Dec. 2005.

Member of the Scientific Organizing Committee for the conference “Probing Stellar Populations Out to the Distant Universe”, Cefalu’ (Italy), Sept. 2008.

Member of the Scientific Organizing Committee for the conference “Gravitational Wave Bursts: Astrophysics, Data Analysis & Numerical Relativity”, Chichen-Itza (Mexico), Dec. 2009.

Member of the Scientific Organizing Committee for the School in Cargese on “Radiation Processes, Jets and Relativistic Objects”, Summer 2016

Member of the Scientific Organizing Committee for the session “X-ray Polarimetry: experiments and science prospects” at the 41st COSPAR Scientific Assembly, Istanbul, Turkey, July 2016

Member of the Scientific Organizing Committee for the session “The Magnetar Link in Neutron Stars, Gamma Ray Bursts and Supernovae” at the 41st COSPAR Scientific Assembly, Istanbul, Turkey, July 2016

Member of the Scientific Organizing Committee for the conference “FOE2017”, Corvallis, OR, June 2017

Member of the Scientific Organizing Committee for the mini-workshop on “Gravitational Waves and binary Neutron star Mergers”, Simons Center for Geometry and Physics, Stony Brook, November 2017

Member of the Scientific Organizing Committee for the mini-workshop on “The Plasma Physics of Neutron Stars Mergers”, Center for Computational Astrophysics, Flatiron Institute, October 2018

Member of the Scientific Organizing Committee of the session on “Neutron Star Astrophysics at the Crossroads: Magnetars and the Multimessenger Revolution” at IAU symposium 363, November 2021

Member of the Scientific Organizing Committee “Time Scales in Astrophysics”, Center for Astroparticle and Planetary Physics, New York University Abu Dhabi, January 2023

Departmental and University service

Stony Brook University:

Chair and member of the Advisory Committee to the Chair, 2021-

Member of the Department Webpage Committee, 2021

Member of the Long Range Planning Committee, 2020-2021

Member of promotion to full professor committee for colleagues in the department, 2018 –

Member of PhD thesis committees, 2014 –

Member of Master thesis committees, 2014 –

Member of Colloquium committee, 2014, 2015, 2016, 2017, 2018

Organizer of the astro seminars, Fall 2014, Spring 2015, Fall 2015, Spring 2016

Member of the Qualifying Exam committee, 2014, 2015

Member of Tenure committee for colleagues in the department, 2014 –

Chair of committee for 4th year review of colleague in the department, 2015

Member of the search committee for the Assistant Graduate Program Director, 2015

Chair of the search committee for a faculty position in experimental high energy physics, 2015-2016

Member of the search committee for a faculty position in Theoretical/Computational Astrophysics, 2016-2017

Member of the search committee for a faculty position in Astrophysics/Large Data, 2016-2017

Member of University committee for Diversity Plan, 2016, 2017, 2018
Graduate Student Mentor, 2017-
Member of the Chair search committee, 2017-2018
Member of the Award committee, 2018-2020
Member of the Search committee for Executive Director of the Stony Brook Simons STEM Scholars Program, 2022
Member of the Advisory committee of the Stony Brook Simons STEM Scholars Program, 2022 on

University of Colorado:

“Diversity and graduate students concerns” committee, 2004, 2005, 2006
“Public relations and Newsletter” committee, 2004, 2005, 2006, 2007
Colloquium organizer (chair), 2005, 2006
Undergraduate advisor, 2006, 2007, 2009, 2010, 2012, 2013
Graduate admission committee, 2006, 2007, 2008
Comprehensive examination I committee, 2009, 2011, 2012, 2013
Curriculum and undergraduate majors committee, 2009, 2012, 2013
Course scheduling committee, 2010, 2011
Committee member for Comprehensive Examination II (both Astrophysics and Physics Dept.), 2004-2013
Committee member for PhD thesis defenses (both Astrophysics and Physics Dept.), 2004-2013
JILA Executive committee member, 2013

Consortia and Professional Memberships

Invited Member of IAXO (International AXion Observatory)
Invited Member of XIPE (X-ray Imaging Polarimetry Explorer); selected for ESA’s next medium-class science mission. Leader of the working group “Quantum electrodynamical effects and X-ray polarimetry”.
Invited Member of the Advisory Board of the Collaborative Research Network on Neutron Stars, consisting of three Universities (Frankfurt, Jena, Frankfurt) and the Max-Planck Institute for Radioastronomy in Bonn.
Scialog Fellow: Time Domain Astrophysics, selected participant
Member of the American Physical Society

Outreach and Volunteering

Piano teacher for low-income students, Salerno, Italy, 1991-1992
Reader for blind music student (music and text), Cambridge, MA, 1998-2001
Italian-English translator for Emergency USA, 2009
Panel member for discussion with undergraduate students at U. of Colorado on “Careers in Academia” (2009) and on “Women in Physics and Astronomy” (2013)
Faculty host at the Fiske Observatory night for the general public, Boulder (2010, 2012)
Volunteer for the “Earth Explorers” program for underrepresented youth (7th and 8th graders), Longmont, CO (2012)
Speaker in the “Open Night” series at Stony Brook University, Fall 2014
Guest expert on “Exoplanets” at the BNL astro journal club, Fall 2014
Volunteer for Achilles Int., for athletes (runners) with disabilities, Brooklyn, NY, 2018
Faculty member participant at the event “Wonder Women in Science and Engineering”, to inspire undergraduate women to a career in STEM, Stony Brook, October 2019, November 2020
Public Speaker at the Vanderbilt Planetarium for the Astronomical Society of Long Island, January 2020

Society of Physics Students talk, for undergraduate students interested in Physics, November 2020
WISE 105: Women in Science and Engineering seminar course, speaker, March 2021
WISE 102: Women in Science and Engineering research presentation, March 2021

Personal

Citizenship: Italian citizen. US permanent resident.

Hobbies: dance (argentine tango, salsa, swing, modern, jazz, aerial), piano playing, travel, photography, bicycle touring, shaolin kung fu (reached 3rd degree brown belt), running (1/2 marathons and marathons - 3 times Boston qualifier).

Spoken languages: Italian (native), English (fluent), Spanish (proficient), French (basic).

Publications

h-index = 68 (google scholar)

Articles in refereed Journals

203. Ryu, T., **Perna, R.**, Wang, Y.-H. *Close Encounters of Stars with Stellar-mass Black Hole Binaries*, MNRAS in press (2022)
202. Wang, Y.-H., Lazzati, D., **Perna, R.** *The emergence of diffused Gamma-Ray Burst afterglows from the disks of Active Galactic Nuclei*, MNRAS in press (2022)
201. Du, P., Egana-Ugrinovic, D., Essig, R., Fragione, G., **Perna, R.** *Searching for Ultra-light Bosons and Constraining Black Hole Spin Distributions with Stellar Tidal Disruption Events*, Nature Comm. in press (2022)
200. Yang, Y., Bartos, I., Fragione, G., Haiman, Z., Kowalski, M., Marka, S., **Perna, R.**, Tagawa, H. *Micro Tidal Disruption Events in Active Galactic Nuclei*, Astrophys. J. Lett., 933, 28 (2022)
199. **Perna, R.**, Artale, M. C., Wang, Y.-H., Mapelli, M., Lazzati, D., Sgalletta, C., Santoliquido, F. *Host galaxies and electromagnetic counterparts to binary neutron star mergers across the cosmic time: Detectability of GW170817-like events*, MNRAS, 512, 2654 (2022)
198. Alford, J. A. J., Gotthelf, E. V., **Perna, R.**, Halpern, J. P. *Measuring the Non-Axially-Symmetric Surface Temperature Distribution of the Central Compact Object in Puppis A*, Astrophys. J., 927, 233 (2022)
197. Tagawa, H., Kimura, S. S., Haiman, Z., **Perna, R.**, Tanaka, H., Bartos, I. *Can stellar-mass black hole growth disrupt disks of active galactic nuclei? The role of mechanical feedback*, Astrophys. J., 927, 41 (2022)
196. Wang, Y.-H., **Perna, R.**, Leigh, N. W. C., Shara, M. M. *Hot Jupiter formation in dense clusters: secular chaos in multiplanetary systems*, MNRAS, 509, 5253 (2022)
195. Wang, Y.-H., McKernan, B., Ford, S., **Perna, R.**, Leigh, N. W. C., MacLow, M. M. *Symmetry Breaking in Dynamical Encounters in the Disks of Active Galactic Nuclei*, Astrophys. J. Lett., 923, 23 (2021)
194. Lazzati, D., **Perna, R.**, Ciolfi, R., Giacomazzo, B., Lopez-Camara, D., Morsony, B. *Two steps forward and one step sideways: the propagation of relativistic jets in realistic binary neutron star merger ejecta*, Astrophys. J. Lett., 918, 6 (2021)
193. **Perna, R.**, Tagawa, H., Haiman, Z., Bartos, I. *Accretion-Induced Collapse of Neutron Stars in the Disks of Active Galactic Nuclei*, Astrophys. J., 915, 10 (2021)
192. Wang, Y.-H. Leigh, N., Liu, B., **Perna, R.** *SpaceHub: A high-performance gravity integration toolkit for few-body problems in astrophysics*, MNRAS, 505, 1053 (2021)
191. Borghese, A. et al. (includ. **Perna, R.**) *The X-ray evolution and geometry of the 2018 outburst of XTE J1810–197*, MNRAS, 504, 5244 (2021)

190. Jermyn, A. S., Dittmann, A. J., Cantiello, M., **Perna, R.** *Stellar Evolution in the Disks of Active Galactic Nuclei Produces Rapidly Rotating Massive Stars*, *Astrophys. J.* , 914, 105 (2021)
189. Wang, Y.-H., **Perna, R.**, Armitage, P. J. *Partial tidal disruption events by stellar mass black holes: Gravitational instability of stream and impact from remnant core*, *MNRAS*, 503, 6005 (2021)
188. Campana, S., Lazzati, D., **Perna, R.**, Bernardini, M. G., Nava, L. *The variable absorption in the X-ray spectrum of GRB 190114C*, *A&A*, 649, 135 (2021)
187. **Perna, R.**, Lazzati, D., Cantiello, M. *Electromagnetic Signatures of Relativistic Explosions in the Disks of Active Galactic Nuclei*, *Astrophys. J. Lett.*, 906, 7 (2021) [Featured in AASNOVA Highlights]
186. Fragione, G., **Perna, R.**, Loeb, A. *Calibrating the binary black hole population in nuclear star clusters through tidal disruption events*, *MNRAS*, 500, 4307 (2021)
185. Wang, Y.-H., Leigh, N. W. C., **Perna, R.**, Shara, M. M. *Hot Jupiter and ultra-cold Saturn formation in dense star clusters*, *Astrophys. J.*, 905, 536 (2020)
184. Dehman, C., Viganó, D., Rea, N., Pons, J. A., **Perna, R.**, Garcia-Garcia, A. *On the Rate of Crustal Failures in Young Magnetars*, *Astrophys. J. Lett.*, 902, 32 (2020)
183. Leigh, N. W. C., Toonen, S., Portegies Zwart, S. F., **Perna, R.** *Mergers of Equal-Mass Binaries with Compact Object Companions from Mass Transfer in Triple Star Systems*, *MNRAS*, 496, 1819 (2020)
182. Lazzati, D., Ciolfi, R., **Perna, R.** *Intrinsic properties of the engine and jet that powered the short gamma-ray burst associated with GW170817*, *Astrophys. J.*, 898, 59 (2020)
181. Wang, Y.-H., **Perna, R.**, Leigh, N. *Planetary Architectures in Interacting Stellar Environments*, *MNRAS*, 496, 1453 (2020)
180. Fragione, G. Metzger, B. D., **Perna, R.**, Leigh, N. W. C., Kocsis, B. *Electromagnetic transients and gravitational waves from white dwarf disruptions by stellar black holes in triple systems*, *MNRAS*, 495, 1061 (2020)
179. Esposito, P. et al. (includ. **Perna, R.**) *A very young radio-loud magnetar*, *Astrophys. J. Lett.* , 896, 30 (2020)
178. Rea, N. et al. (includ. **Perna, R.**) *The X-ray outburst of the Galactic Center magnetar over six years of Chandra observations*, *Astrophys. J.*, 894, 159 (2020)
177. Wang, Y.-H., **Perna, R.**, Leigh, N. *Giant Planet Swaps during Close Stellar Encounters*, *Astrophys. J. Lett.*, 891, 14 (2020)
176. Wang, Y.-H, Leigh, N., Sesana, A., **Perna, R.**, *The cosmological distribution of compact object mergers from dynamical interactions with SMBH binaries*, *MNRAS*, 490, 262 (2019)

175. Artkop, K., Smith, R., Corsi, A., Giacintucci, S., Peters, W. M., **Perna, R.**, Cenko, S. B., Clarke, T. E., *Radio follow-up of a candidate gamma-ray transient in the sky localization area of GW170608*, *Astrophys. J.*, 489, 727 (2019)
174. Fragione, G., Leigh, N., **Perna, R.**, Kocsis, B. *Tidal disruption events onto stellar black holes in triples*, *MNRAS*, 489, 727 (2019)
173. Lazzati, D., **Perna, R.**, *Jet-cocoon outflows from neutron star mergers: structure, light curves, and fundamental physics*, *Astrophys. J.*, 881, 89 (2019)
172. Fragione, G., Leigh, N. W. C., **Perna, R.** *Black hole and neutron star mergers in galactic nuclei: The role of triples*, *MNRAS*, 488, 2825 (2019)
171. Fragione, G., Grishin, E., Leigh, N. W. C., Perets, H. B., **Perna, R.** *Black hole and neutron star mergers in galactic nuclei*, *MNRAS*, 488, 47 (2019)
170. **Perna, R.**, Wang, Y.-H., Farr, W. M., Leigh, N., Cantiello, M., *Constraining the Black Hole Initial Mass Function with LIGO/VIRGO Observations*, *Astrophys. J. Letters*, 878, 1 (2019) [Featured in AASNOVA Highlights]
169. Scibelli, S., **Perna, R.**, Keeton, C. *Biases in inferring dark matter profiles from dynamical and lensing measurements*, *MNRAS*, 485, 5880 (2019)
168. **Perna, R.**, Lazzati, D., Farr, W. M., *Limits on electromagnetic counterparts of gravitational wave-detected binary black hole mergers*, *Astrophys. J.*, 875, 49 (2019)
167. Borghese, A. et al. (includ. **Perna, R.**), *The multi-outburst activity of the magnetar in Westerlund I*, *MNRAS*, 484, 2931 (2019)
166. Wang, Y.-H., Leigh, N., Sesana, A., **Perna, R.**, *Hypervelocity binaries from close encounters with a SMBH-IMBH binary: orbital properties and diagnostics*, *MNRAS*, 482, 3206 (2019)
165. Ryu, T., Zingale, M., **Perna, R.**, *Turbulence-driven thermal and kinetic energy flux in the atmospheres of hot Jupiters*, *MNRAS*, 481, 5517 (2018)
164. Lazzati, D., **Perna, R.**, Morsony, B. J., Lopez-Camara, D., Cantiello, M., Ciolfi, R., Giacomazzo, B., Workman, J. C., *Late time afterglow observations reveal a collimated relativistic jet in the ejecta of the binary neutron star merger GW170817*, *Phys. Rev. Lett.*, 120, 241103 (2018) [Chosen as Editors' Suggestion and featured in APS highlights]
163. Borghese, A., Coti Zelati, F., Esposito, P., Rea, N., De Luca, A., Bachetti, M., Israel, G. L., **Perna, R.**, Pons, J. A., *Gazing at the ultra-slow magnetar in RCW 103 with NuSTAR and Swift*, *MNRAS*, 478, 471 (2018)
162. **Perna, R.**, Chruslinska, M., Corsi, A., Belczynski, K., *Binary Black Hole Mergers within the LIGO Horizon: Statistical Properties and prospects for detecting Electromagnetic Counterparts*, *MNRAS*, 477, 4228 (2018)
161. Ibragimov, T., Leigh, N. W. C., Ryu, T., Panurach, T., **Perna, R.**, *When do star clusters become multiple star systems? II. Toward a half-life formalism with four bodies*, *MNRAS*, 477, 4213 (2018)

160. **Perna, R.**, Lazzati, D., Cantiello, M., *Ultra Long Gamma-Ray Bursts from the collapse of Blue Super Giant stars: an end-to-end simulation*, *Astrophys. J.*, 859, 48 (2018)
159. Esposito, P., Rea, N., Lazzati, D., Matsuura, M., **Perna, R.**, Pons, J. A. *Can a bright and energetic X-ray pulsar be hiding amid the debris of SN 1987A?*, *Astrophys. J.*, 857, 58 (2018)
158. Wang, Y.-H., Leigh, N., Yuan, Y.-F., **Perna, R.** *The fate of close encounters between binary stars and binary supermassive black holes*, *MNRAS*, 476, 4595 (2018)
157. Ryu, T., **Perna, R.**, Haiman, Z., Ostriker, J. P., Stone, N. C. *Interactions between multiple supermassive black holes in galactic nuclei: a solution to the final parsec problem*, *MNRAS*, 473, 3410 (2018)
156. Lazzati, D., Lopez-Camara, D., Cantiello, M., Morsony, B. J., **Perna, R.**, Workman, J. C. *Off-axis prompt X-ray transients from the cocoon of short gamma-ray bursts*, *Astrophys. J. Letters*, 848, 6 (2017)
155. Dall’Osso, S., **Perna, R.**, *The distribution of tilt angles in newly born NSs: role of interior viscosity and magnetic field*, *MNRAS*, 472, 2142 (2017)
154. Belczynski, K., Ryu, T., **Perna, R.**, Berti, E., Tanaka, T. L., Bulik, T. *On the likelihood of detecting gravitational waves from Population III compact object binaries*, *MNRAS*, 471, 4702 (2017)
153. Ryu, T., Leigh, N., W. C., **Perna, R.** *Formation of runaway stars in a star-cluster potential*, *MNRAS*, 470, 3049 (2017)
152. Ryu, T., Leigh, N., W. C., **Perna, R.** *An analytic method for identifying dynamically-formed runaway stars*, *MNRAS*, 470, 2 (2017)
151. Piro, A. L., Giacomazzo, B. **Perna, R.** *The Fate of Neutron Star Binary Mergers*, *Astrophys. J. Letters*, 844, 19 (2017)
150. Ryu, T., Leigh, N. W. C., **Perna, R.** *Numerical study of the $N = 4$ binary-binary scatterings in a background potential*, *MNRAS*, 467, 4447 (2017)
149. Ciolfi, R., Kastaun, W., Giacomazzo, B., Endrizzi, A., Siegel, D. M., **Perna, R.** *General relativistic magnetohydrodynamic simulations of binary neutron star mergers forming a long-lived neutron star*, *Phys. Rev. D*, 95, 3016 (2017)
148. Natale, G., Rea, N., Lazzati, D., **Perna, R.**, Torres, D. F., Girart, J. M. *Dust radiative transfer modelling of the infrared ring around the magnetar SGR 1900+14*, *Astrophys. J.*, 837, 9 (2017)
147. Dall’Osso, S., **Perna, R.**, Tanaka, T. L., Margutti, R. *Flares in Gamma-Ray Bursts: Disc Fragmentation and Evolution*, *MNRAS*, 464, 4399 (2017)
146. Margutti, R. et al. (includ. **Perna, R.**) *X-rays from the location of the Bactrian Transient ASASSN-15lh*, *Astrophys. J.*, 836, 25 (2017)

145. Kawamura, T., Giacomazzo, B., Kastaun, W., Ciolfi, R., Endrizzi, A., Baiotti, L., **Perna, R.** *Binary Neutron Star Mergers and Short Gamma-Ray Bursts: Effects of Magnetic Field Orientation, Equation of State, and Mass Ratio*, Phys. Rev. D, 94f4012 (2016)
144. Ryu, T., Tanaka, T. L., **Perna, R.**, Haiman, Z. *Intermediate-mass black holes from Population III remnants in the first galactic nuclei*, MNRAS, 460, 4122 (2016)
143. **Perna, R.**, Lazzati, D., Giacomazzo, B. *Short Gamma-Ray Bursts from the Merger of Two Black Holes*, Astrophys. J. Lett., 821, 18 (2016)
142. Israel, G. L., et al. (includ. **Perna, R.**) *The discovery, monitoring and environment of SGR J1935+2154*, MNRAS, 457, 3448 (2016)
141. Dall’Osso, S., **Perna, R.**, Papitto, A., Bozzo, E., Stella, L. *The accretion regimes of a highly magnetised NS: the unique case of NuSTAR J095551+6940.8*, MNRAS, 457, 3076 (2016)
140. Rodriguez Castillo, G. A. et al. (includ. **Perna, R.**) *The Outburst Decay of the Low Magnetic Field Magnetar SWIFT J1822.3-1606: Phase-resolved Analysis and Evidence for a Variable Cyclotron Feature*, MNRAS, 456, 414 (2016)
139. Ryu, T., Tanaka, T. L., **Perna, R.** *Formation, disruption and energy output of Population III X-ray binaries*, MNRAS, 456, 223 (2016)
138. Tanaka, T. L., O’Leary, R. M., **Perna, R.** *The imprint of the cosmic supermassive black hole growth history on the 21 cm background radiation*, MNRAS, 455, 2619 (2016)
137. Rea, N., Gullon, M., Pons, J. A., **Perna, R.**, Dainotti, M. G., Miralles, J. A., Torres, D. F. *Constraining the GRB-magnetar model by means of the Galactic pulsar population*, Astrophys. J., 813, 92 (2015)
136. Gullón, M., Pons, J. A., Miralles, J. A., Viganó, D., Rea, N., **Perna, R.** *Population Synthesis of Isolated Neutron Stars with magneto-rotational evolution II: from radio-pulsars to magnetars*, MNRAS, 454, 615 (2015)
135. Guillot, S., **Perna, R.**, Rea, N., Viganó, D., Pons, J. A. *Modeling of the Surface Emission of the Low-Magnetic Field Magnetar SGR 0418+5729*, MNRAS, 452, 3357 (2015)
134. Greiner, J. et al. (includ. **Perna, R.**) *Gamma-Ray Bursts Trace UV Metrics of Star Formation over $3 < z < 5$* , Astrophys. J., 809, 76 (2015)
133. Giacomazzo, B., Zrake, J., Duffell, P., MacFadyen, A. I., **Perna, R.** *Producing Magnetar Magnetic Fields in the Merger of Binary Neutron Stars*, Astrophys. J., 809, 39 (2015)
132. Coti Zelati, F. et al. (includ. **Perna, R.**) *The X-ray outburst of the Galactic Centre magnetar SGR J1745-2900 during the first 1.5 year*, MNRAS, 449, 2685 (2015)
131. Dall’Osso, S., **Perna, R.**, Stella, L. *NuSTAR J095551+6940.8: a highly magnetised neutron star with super-Eddington mass accretion*, MNRAS, 449, 2144 (2015)

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129. Dall’Osso, S., Giacomazzo, B., **Perna, R.**, Stella, L. *Gravitational Waves from Massive Magnetars formed in Binary Neutron Star Mergers*, *Astrophys. J.*, 798, 25 (2015)
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127. Viganò, D., **Perna, R.**, Rea, N., Pons, J. A. *Spectral features in isolated neutron stars induced by inhomogeneous surface temperatures*, *MNRAS*, 443, 31 (2014)
126. **Perna, R.**, Duffell, P., Cantiello, M., MacFadyen, A. I. *The fate of fallback matter around newly born compact objects*, *Astrophys. J.*, 781, 119 (2014)
125. Lazzati, D., Villeneuve, M., Lopez-Camara, D., Morsony, B., **Perna, R.** *On the observed duration distribution of gamma-ray bursts from collapsars*, *MNRAS*, 436, 1867 (2013)
124. Rea, N. et al. (includ. **Perna, R.**) *A strongly magnetized pulsar within grasp of the Milky Way’s supermassive black hole*, *Astrophys. J. Lett.*, 775, 34 (2013)
123. **Perna, R.**, Viganò, D., Pons, J. A., Rea, N. *The imprint of the crustal magnetic field on the thermal spectra and pulse profiles of isolated neutron stars*, *MNRAS*, 434, 2362 (2013)
122. Viganò, D., Rea, N., Pons, J. A., **Perna, R.**, Aguilera, D. N., Miralles, J. A. *Unifying the observational diversity of isolated neutron stars via magneto-thermal evolution models*, *MNRAS*, 434, 123 (2013)
121. Trenti, M., **Perna, R.**, Tacchella, S. *Gamma-Ray Burst and Star Formation Rates: The Physical Origin for the Redshift Evolution of Their Ratio*, *Astrophys. J. Lett.* 773, 22 (2013)
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119. De Souza, R. S., Mesinger, A., Ferrara, A., Haiman, Z., **Perna, R.**, Yoshida, N. *Constraints on Warm Dark Matter models from high-redshift long gamma-ray bursts*, *MNRAS* (2013)
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117. Esposito, P. et al. (includ. **Perna, R.**) *X-ray and radio observations of the magnetar Swift J1834.9-0846 and its dust-scattering halo*, *MNRAS*, 429, 3123 (2013)
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113. Giacomazzo, B., **Perna, R.** *General Relativistic Simulations of Accretion Induced Collapse of Neutron Stars to Black Holes*, *Astrophys. J. Lett.*, 785, 8 (2012)
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8. Gotthelf, Eric V., Halpern, J. P., **Perna, R.** *The Anatomy Of A Magnetar: XMM Monitoring Of Transient AXP XTE J1810-197* American Astronomical Society, HEAD meeting #9, #7.64, Bulletin of the American Astronomical Society, Vol. 38, p.360 (2006)
7. Garnavich, P., Pahre, M., Noriega-Crespo, A., Stanek, K. Z., Holland, S. T., Bersier, D., Matheson, T., **Perna, R.**, Krisciunas, K. *GRB 050525a, Mid-Infrared Observations*, GCN 3532 (2005)
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5. Petrovic, N., Di Stefano, R., **Perna, R.** *Binary Sources and Binary Lenses in Microlensing Surveys of MACHOs* American Astronomical Society Meeting 203, #120.02 (2003)
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2. **Perna, R.**, Raymond, J., Narayan, R. *Thermal X-ray line emission from Hot Accretion Flows around Black Holes* American Astronomical Society, HEAD meeting #32, #31.20 (2000)
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