

TIM DIETRICH – CURRICULUM VITAE [DATE: 29TH OF MARCH 2023]

PERSONAL DETAILS

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14476, Potsdam
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Telephone +49/331977230160
Marital Status Married; 1 child



EDUCATION

2016 PhD ("summa cum laude"—excellent 1.0)
Faculty of Physics and Astronomy, Friedrich-Schiller-University Jena, Germany
2012 Master of Science in Physics (1.0)
Faculty of Physics and Astronomy, Friedrich-Schiller-University Jena, Germany
2010 Bachelor of Science in Physics (1.0)
Institute of Physics, Martin-Luther-University Halle-Wittenberg, Germany
2007 High school diploma (1.0) – Gymnasium Philanthropinum Dessau

PROFESSIONAL EXPERIENCE

since 2021 Max Planck Fellow – Independent Research Group leader at AEI
since 2020 Adjunct Researcher at AEI
since 2020 Professor for Theoretical Astrophysics (W1) at the University of Potsdam
2018-2020 Marie Skłodowska-Curie Fellow at Nikhef, Amsterdam
2015-2018 Postdoc at the Max Planck Institute for Gravitational Physics Potsdam (AEI)
2015 Research assistant at the Friedrich-Schiller-University Jena
2011-2014 Research assistant for the CRC/TR-7 "Gravitational Wave Astronomy"
2008-2010 Research assistant at the Martin-Luther-University Halle-Wittenberg

Fellowships and Awards

Scholarships:

2013-2015 Scholarship of the Landesgraduiertenstipendium Thuringia
2010 Gustav-Mie Scholarship of Martin-Luther-University [declined]
2009-2012 Scholarship of the German National Academic Foundation

Grants:

2023 Scholarship from the Daimler & Benz Foundation (0.04 Mio. Euro)
2022 Major Instrumentation; German Research Foundation (1.05 Mio. Euro)
2022 Starting Grant of the European Research Council (1.5 Mio. Euro)
2022 Individual Grant of the German Research Foundation (0.22 Mio. Euro)
2021 Max Planck Fellow (0.56 Mio. Euro)
2017 Individual Marie-Curie Fellowship (0.17 Mio. Euro)

Awards/Prizes:

2023 IUPAP Early Career Scientist Prize in General Relativity and Gravitation
2021 Heinz Maier-Leibnitz Prize from the German Research Foundation
2019 Heinz Billing Prize for the Advancement of Computational Science
2017 PhD thesis prize of the German Physical Society of the sections
"Gravitation and Relativity", "Hadrons and Nucleons", and "Particle physics"
2017 PhD thesis prize of the Friedrich Schiller University Jena
2010 Gustav-Mie-Bachelor-Prize

others:

2019 nominated for W1-Professorship for 'Theoretical Gravitational Wave Physics'
at Goethe University Frankfurt (1st list position; declined)

Host for Fellowships/ Co-PI (selected)

2021 Host for the Humboldt Fellowship of Dr. Samajdar
2021 Co-PI for CERN PhD Grants (Scholar E. Giangrandi, PI C. Providência)
2021 Co-I for FCT Grant DMINBNS - EXPL/FIS-AST/0735/2021 (PI V. Sagun)
2021 Host for the CAPES/PRINT Grant for Prof. Ujevic
2020 Co-advisor for the FAPESP Fellowship of Henrique Leonhard Gieg

PI/Co-PI of computer time allocations (selected)

2021-2023	Lise&Emmy of HLRN – project bp00049 (50 Mio CPUhs)
2021-2023	SuperMUC_NG at LRZ – project pn29ba (44.1 Mio CPUhs)
2020-2022	HAWK at HLRN – 44189 (152.3 Mio CPUhs)
2018-2021	Gauss project at SuperMUC – project pn56zo (132.5 Mio CPUhs)
2015-2018	Gauss project at SuperMUC – project pr48pu (139.2 Mio CPUhs)

SUMMARY OF SCIENTIFIC OUTPUT

Track record

Short authorlist articles	112
Peer reviewed articles:	91
Non-peer reviewed articles:	10
Preprints/journal submissions:	11
Collaboration articles	96
LIGO/Virgo/Kagra publications:	84
GRANDMA collaboration publication:	6
White Paper:	6
Additional measures:	
Number of first author articles:	22
h-index (HEP-SPIRES) all/short-author:	65 / 41
Number of invited conference talks:	23
Number of invited seminar/colloquia:	39
Number of contributed talks:	17
Total external acquired funding (in Mio. Euro):	~ 3.6
Total acquired computational resources as PI/Co-PI (in Mio. CPUhs):	~500

Top 5 publications

- T. Dietrich, M. W. Coughlin, P. T. H. Pang, M. Bulla, J. Heinzl, L. Issa, I. Tews, S. Antier, Multi-messenger constraints on the neutron-star equation of state and the Hubble constant, **Science** **370**, 1450 (2020);
- T. Dietrich, S. Bernuzzi, W. Tichy, Closed-form tidal approximants for binary neutron star gravitational waveforms constructed from high-resolution numerical relativity simulations, **Phys. Rev. D** **96**, 121501 **Rap. Com.** (2017);
- T. Dietrich, D. Radice, S. Bernuzzi, F. Zappa, A. Perego, B. Brügmann, S. V. Chaurasia, R. Dudi, W. Tichy, M. Ujevic, CoRe database of binary neutron star merger waveforms and its application in waveform development, **Class.Quant.Grav.** **35** (2018) no.24, 24LT01.
- S. Huth, P. T. H. Pang, I. Tews, T. Dietrich, A. Le Fèvre, A. Schwenk, W. Trautmann, K. Agarwal, M. Bulla, M. W. Coughlin, C. Van Den Broeck, Constraining Neutron-Star Matter with Microscopic and Macroscopic Collisions, **Nature** **606** (2022) 276-280;
- LIGO Scientific and Virgo Collaborations (*member of the paper writing team*), Properties of the binary neutron star merger GW170817, **Phys.Rev.** **X9** (2019) no.1, 011001.

Supervision

currently

primary supervisor:

2 postdocs (Vsevolod Nedora, Anuradha Samajdar),
7 PhD students (Adrian Abac, Ludovica Crosato [direct supervision by Masaru Shibata], Nina Kunert, Anna Neuweiler, Tsz Lok Lam [direct supervision by Masaru Shibata], Zeyd Sam, Federico Schianchi),
5 Master students (Ivan Markin, Ranjith Mudimadugula, Sahil Jhavar, Pouyan Salehi, Ashwin Shirke)

secondary supervisor: Harry Dawson (Uni. Potsdam), Alexey Gunya (Uni. Potsdam), Nikolas Wittek (AEI Potsdam), Henrique Gieg (ABC University Sao Paulo)

mentor: Marcus Haberland (AEI), Mohammed Khalil (AEI), Lorenzo Speri (AEI), Parth Pavaskar (DESY), Sabela Reyero Serantes (Uni. Potsdam), Guglielmo Faggioli (AEI)

previously

primary supervisor: 6 Master students and 1 Bachelor student

Teaching activities

University of Potsdam (since 2020)

- *Lectures:* ‘Multi-Messenger Astronomy’, ‘Multi-messenger Astronomy: Neutron Stars and their Mergers’, ‘Multi-Messenger Astronomy: Overview and Basics’, ‘Numerical Relativity’, ‘Numerical Relativity: Simulating Black Holes’, ‘Numerical Relativity: Hydrodynamics’, ‘Computational Astrophysics’ as part of the International Max Planck Research School on Gravitational Waves
- *Seminars and others:* ‘Research Seminar Theoretical Astrophysics’, ‘Seminar zur Theoretischen Physik’, ‘Introductory Project Astrophysics’, ‘Research Training Astrophysics’

One-day lectures

- Gravitational Waves & Numerical Relativity (Amsterdam); Parallel Programming: Numerical Relativity: Numerical Methods and Implementation (Potsdam); Teacher Training Gravitational Waves: Simulations of colliding black holes (Munich)

Seminars/Tutorials

- *University of Jena:* Seminar ‘Theoretical Electrodynamics’; Seminar ‘Mathematical Methods II’
- *University of Halle:* ‘Tutorial Mathematical Physics’; ‘Tutorial Mathematical Basics for Quantum Physics’; ‘Tutorial Theoretical Mechanics’; ‘Online Tutorial for Theoretical Physics’; ‘Tutorial Introduction to Theoretical Mechanics’

Institutional Responsibilities

since 2022 Deputy Ombudsperson of the Max Planck Institute for Gravitational Physics
2012-2015 cluster administrator of the *quadler* cluster of the University of Jena (880 cores)
2011-2013 organizer/coordinator of the videoseminar “CRC/TR7 – Gravitational Wave Astronomy”

Reviewing Activities

Reviewer for Journals:	Physical Review Letters/D/C, Astrophysical Journal Letters, Astrophysical Journal, Astronomy & Astrophysics, Annalen der Physik, Monthly Notices of the Royal Astronomical Society (Letters), Particles, Galaxies, Symmetry, General Relativity and Gravitation, European Physics Journal
Reviewer for HPC center:	Leibniz Supercomputing Centre
Reviewer for Funding Agencies:	National Science Foundation, The Velux Foundations (Denmark), ERC Advanced Grants, German Research Foundation, Swiss National Science Foundation, Israel Science Foundation, Science and Technology Facilities Council [UK], Natural Sciences and Engineering Research Council of Canada, German Academic Exchange Service (DAAD), Research Council of KU Leuven

Leadership Roles in Scientific Societies and Major Collaborations

since 2021 elected for German Physical Society Advisory Board for ‘Gravitation and Relativity’
since 2021 coordinator for the division ‘nuclear physics’ for the Einstein Telescope science case
since 2020 co-chair of the ‘extreme matter’ group of the LVC

Membership of Scientific Societies and Major Collaborations

since May 2020 Senior Member of the LIGO Scientific Collaboration
since July 2019 Member of the GRANDMA collaboration
since May 2018 Member of the Collaboration for Computational Relativity (CoRe)
Jan. 2018-May 2020 Member of the Virgo Collaboration
since October. 2017 Member of the GWIC [Gravitational Wave International Committee]-3G
Dec. 2015-Jan. 2018 Member of the LIGO Scientific Collaboration
Oct. 2015- Jan. 2018 Member of the Simulating Extreme Spacetime (SXS) Collaboration
since 2007 Member of German Physical Society

Invited planary talks/colloquia [selected]

- 26.7.2022 - Frontiers in Numerical Relativity 2022: *Neutron star merger simulations to enable multi-messenger astronomy studies*
- 17.06.2021- (Keynote talk of the 9th Belgium - Dutch Relativity Meeting- online): *Nuclear physics and multi-messenger astrophysics studies of neutron stars*
- 24.10.2019 - (Symposium of the Chemical-Physical-Technical division of the Max Planck Society, Berlin - Germany) Heinz-Billing Award talk: *Numerical Relativity Simulations of Binary Neutron Star Mergers: Applications in the Multi-Messenger Astronomy Era*
- 20.08.2019 - (University of Oxford- United Kingdom) Astrophysics Seminar: *The multi-messenger picture of merging neutron stars*
- 20.03.2019 - (Munich - Germany) DPG-Spring Meeting: Symposium Extreme matter meets extreme gravity – review talk: *Modelling and analyzing a binary neutron-star merger: Interpreting a multi-messenger picture*

Important Outreach Activities

- Visualizations of the neutron star mergers GW170817 and GW190425 used by more than 50 newspapers, the German Federal Ministry for Research, and German television shows and watched about 100,000 times on youtube
- Binary black hole visualizations for GW151226, GW170104, GW170814 used by *The New York Times*, *The Guardian*, *Frankfurter Allgemeine Zeitung* and a few hundred other newspapers, watched about 100,000 times on youtube
- Binary neutron star visualizations used in the *Warped Spacetime* performance of K. Thorne and the academy award winners P. Franklin and H. Zimmer
- Interviews and animations for the Advanced LIGO Documentary Project and the Japanese NHK documentary about GW170817
- Outreach material for the black hole - neutron star detection; (several online articles, e.g. New York Times, NASA) and more than 100,000 youtube views, as well as a radio interview on MDR
- Press Release focussing on our article Science 370, 1450 (2020) (~ 50 journals; e.g. Scientific American/ Welt der Physik)
- Press Release focussing on my scientific achievements, in particular, the Heinz-Maier-Leibnitz Prize; which led to the assignment as Potsdam’s person of the day on 17th March 2021
- Podcast episode for the University of Potsdam about my work in the field of multi-messenger astrophysics
- 7 highlighted papers by PRD Kaleidoscope and Cover image for Phys.Rev.Lett.119, issue 16 [i.e., the PRL volume for the GW170817 detection paper]

FULL PRESENTATION/TALK LIST

INVITED CONFERENCE TALKS

- 01.12.2022 - (Bad Honnef- Germany) 774. WE-Heraeus-Seminar; Kilonova: Multimessenger and Multiphysics: *Multi-messenger astrophysics studies of merging neutron star*
- 16.11.2022 - (Cascina- Italy) 1st ET Annual meeting: *Nuclear physics with ET: a comparison between configurations*
- 26.7.2022 - (Jena- Germany) Frontiers in Numerical Relativity 2022: *Neutron star merger simulations to enable multi-messenger astronomy studies*
- 22.6.2022 - (Trento- Italy) ECT* hybrid workshop: Neutron stars as multi-messenger laboratories for dense matter: *Interpreting the multi-messenger picture drawn by merging neutron stars* (online)
- 05.5.2022 - (Heidelberg- Germany) Computational Astrophysics Symposium: *Interpreting the nuclear physics - multimessenger astrophysics picture drawn by neutron star mergers*
- 25.4.2022 - (Bad Honnef- Germanu) 765. WE-Heraeus-Seminar; Gravitational Wave and Multimessenger Astronomy: *Interpreting the nuclear physics - multimessenger astrophysics picture drawn by neutron star mergers*
- 18.11.2021 - (Santiago de Compostela- Spain) Course on Neutron Star Physics – Instituto Galego de Altas Enerxias: *Multi-Messenger Studies of Binary Neutron Star Systems* (online);
- 11.11.2021 - (Berlin- Germany) Helmholtz Weizmann Research School for Multimessenger Astronomy: *Interpreting the nuclear physics – multi-messenger astrophysics picture drawn by neutron star mergers*
- 17.06.2021 - Neutron Stars as multi-messenger laboratories for dense matter; Invited panelist; *Gravitational Waves and Numerical Relativity Simulations*
- 17.06.2021- Keynote talk of the 9th Belgium - Dutch Relativity Meeting (online): *Nuclear physics and multi-messenger astrophysics studies of neutron stars*
- 26.02.2020 - (Tiblis, Georgia) GRANDMA workshop (online presentation): *Constraining binary properties from kilonova observations*
- 12.11.2019 - (Amsterdam, EuCAPT workshop: Gravitational Waves for Fundamental Physics) Invited panelist for Numerical Relativity: *Challenges in Numerical relativity: GRHD, GRMHD, and ECOs*
- 24.10.2019 - (Berlin- Germany), Symposium of the Chemical-Physical-Technical division of the Max Planck Society, Heinz-Billing Award talk: *Numerical Relativity Simulations of Binary Neutron Star Mergers: Applications in the Multi-Messenger Astronomy Era*
- 26.06.2019 - (University Park campus of Penn State- US) IGC25: Multimessenger Universe: Invited panelist for Theory and Simulations of Binary Neutron Stars: *The status of General Relativistic Hydrodynamics Simulations*
- 20.03.2019 - (Munich- Germany) DPG-Spring Meeting: Symposium Extreme matter meets extreme gravity: *Modelling and analyzing a binary neutron-star merger: Interpreting a multi-messenger picture*
- 29.08.2018 - (Berlin- Germany) 2018 TeV Particle Astrophysics conference: *A Multimessenger Picture of Binary Neutron Star Mergers*
- 09.05.2018 - (Palma de Mallorca- Spain) 8th Iberian Gravitational Waves Meeting: *Modeling the GW signal of Binary Neutron Star Systems*
- 19.02.2018 - (Bremen - Germany) Workshop of the Research Training Group “Models of Gravity: *The Multimessenger Picture of Binary Neutron Star Mergers*
- 12.12.2017 - (Bonn - Germany) 11th Bonn workshop on Formation and Evolution of Neutron Stars: *The Multimessenger Picture of Binary Neutron Star Mergers*
- 17.07.2017 - (Lansing - US) MICRA 2017 [Microphysics in Computational Relativistic Astrophysics]: *Gravitational Waves and Electromagnetic Signals of Generic Binary Neutron Star Mergers*

- 27.06.2017 - (Lugano - Switzerland) PASC 2017: *Simulating Generic Binary Neutron Star Mergers*
- 27.03.2017 - (Münster - Germany) DPG-Spring Meeting (PhD thesis finalists' talk): *Simulating Binary Neutron Star Mergers*
- 23.09.2016 - (Erlangen - Germany) HAP Workshop, The Non-Thermal Universe: *Gravitational waves and the prospects for multi-messenger astronomy*

INVITED SEMINARS/COLLOQUIA

- 08.03.2023 - (Astronomical Observatory of Trieste – Institute Seminar) *Nuclear physics and multi-messenger astrophysics studies of neutron stars*
- 15.12.2022 - (Università di Milano Bicocca – Colloquium of the Gravitational and Subatomic Physics) *Nuclear physics and multi-messenger astrophysics studies of neutron stars*
- 24.11.2022 - (Utrecht University – Colloquium of the Gravitational and Subatomic Physics) *Nuclear physics and multi-messenger astrophysics studies of neutron stars*
- 11.11.2022 - (Heidelberg University – Physics Colloquium) *Revealing Cosmic Mysteries with the Help of Compact Binary Mergers*
- 07.06.2022 - (University of Leipzig – Physics Colloquium) *Revealing Cosmic Mysteries with the Help of Compact Binary Mergers*
- 19.05.2022 - (University of Southampton, UK – Gravity Seminars – online): *Interpreting the nuclear physics - multi-messenger astrophysics picture drawn by neutron star mergers*
- 08.03.2022 - (University of Austin, Texas – Theory Group Seminar - online): *Constraining supranuclear-dense matter with nuclear physics and multi-messenger astrophysics*
- 17.12.2021 - (SFB 1294 online Colloquium – University of Potsdam - online): *Analyzing Multi-Messenger Astronomy Data to reveal fundamental Properties of the Cosmos*
- 01.07.2021 - LVK Webinar- Gravitational waves from neutron star-black hole coalescences, *A nuclear physics — multi-messenger astronomy analysis of binary neutron star mergers*
- 23.06.2021 - (La Sapienza - Rome (Italy) Gravity Seminar [online]: *A nuclear physics — multi-messenger astronomy analysis of binary neutron star mergers*
- 27.05.2021 - (Perimeter Institute (Canada) Strong Gravity Seminar [online]: *A nuclear physics — multi-messenger astronomy analysis of binary neutron star mergers*
- 30.04.2021 - (Universitat de les Illes Balears (Spain) Seminar [online]: *A nuclear physics — multi-messenger astronomy analysis of binary neutron star mergers*
- 20.04.2021 - (Los Alamos National Laboratory - US) Nuclear Physics Seminar [online]: *A multi-messenger interpretation of merging neutron stars*
- 14.12.2020 - (Potsdam - Germany) Astroparticle Physics Seminar [online]: *A multi-messenger interpretation of merging neutron stars*
- 28.09.2020 - (US, University of Minnesota) Cosmology Seminar [online]: *A multi-messenger interpretation of merging neutron stars*
- 18.03.2020 - (Potsdam - Germany) Seminar at Max Planck Institute for Gravitational Physics [online]: *A multi-messenger interpretation of merging neutron stars*
- 05.11.2019 - (Heidelberg - Germany) Colliding Pizza Seminar: *Modeling, Detecting, Analyzing, and Interpreting Gravitational Waves*
- 04.10.2019 - (Stockholm - Sweden) Astrophysics Seminar: *The multi-messenger picture of merging neutron stars*
- 20.08.2019 - (Oxford - United Kingdom) Astrophysics Seminar: *The multi-messenger picture of merging neutron stars*
- 24.05.2019 - (Berlin Zeuthen - Germany) Astroparticle Seminar of DESY: *Merging Neutron Stars: Interpreting the multi-messenger picture*

- 25.03.2019 - (Jena - Germany) Seminar of the Institute: *Constraining supranuclear baryonic and ultra-light axionic matter in the multi-messenger astronomy era*
- 06.02.2019 - (Urbana/Champaign- US) Astrophysics, Gravitation and Cosmology Seminar: *Binary neutron stars and their mimickers: Interpreting the multi-messenger picture*
- 30.01.2019 - (Frankfurt- Germany) Mini-Symposium on the connections of Gravitational Wave Physics and QCD: *Binary neutron stars and their mimickers: Interpreting the multi-messenger picture*
- 18.01.2019 - (Potsdam- Germany) Seminar at University of Potsdam: *Binary neutron stars and their mimickers: Interpreting the multi-messenger picture*
- 22.11.2018 - (Hanover - Germany) Seminar at Albert Einstein Institute: *When neutron star (mimicker) merge: a multi-messenger picture*
- 01.10.2018 - (Amsterdam - Netherlands) Cosmology Seminar: *When neutron star (mimicker) merge: a multi-messenger picture*
- 15.05.2018 - (Frankfurt - Germany) Astro Coffee Seminar: *Gravitational Waves and Electromagnetic Counterparts for Generic Binary Neutron Star Systems*
- 05.04.2018 - (Göttingen - Germany) Colloquium of Astrophysical Department: *A Multimessenger Picture of GW170817*
- 16.03.2018 - (Cambridge - United Kingdom) Relativity Seminar: *Simulating Binary Neutron Stars*
- 23.02.2018 - (Amsterdam - Netherlands) Seminar of Gravitational Wave Data-analysis Group: *Gravitational Waves and Electromagnetic Counterparts for Generic Binary Neutron Star Systems*
- 25.04.2017 - (Jena - Germany) Seminar for Research Training Group "Quantum and Gravitational Fields": *Simulating Neutron Star Mergers*
- 08.03.2017 - (Potsdam - Germany) Seminar at Albert Einstein Institute: *Simulating Generic Binary Neutron Star Mergers*
- 09.02.2017 - (Trento - Italy) INFN Seminar: *Simulating generic binary neutron star mergers*
- 31.01.2017 - (Parma - Italy) INFN Seminar : *Simulating generic binary neutron star mergers*
- 25.11.2016 - (Berlin - Germany) Public Talk at Bruno H.-Bürgel Observatory Berlin: *Gravitational Wave Astronomy (in German)*
- 21.06.2016 - (Magdeburg - Germany) Colloquium of Physics Department: *Gravitational Waves*
- 19.01.2015 - (Potsdam - Germany) Seminar at Albert Einstein Institute: *Recent progress in numerical relativity simulations of neutron star spacetimes*
- 28.10.2014 - (Frankfurt - Germany) Astro Coffee Seminar: *Realistic spins and quasiuniversal relations in binary neutron star mergers*
- 20.01.2014 - (Jena - Germany) SFB/TR7-Videoseminar: *Can spin be ignored in binary neutron star mergers?*

CONTRIBUTED TALKS

- 24.03.2022 - DPG-Spring Meeting [online]: *Constraining supranuclear-dense matter with nuclear physics and multi-messenger astrophysics*
- 22.07.2021 - Amaldi [online]: *A nuclear physics — multi-messenger astronomy analysis of binary neutron star mergers*
- 10.07.2019 - (Valencia - Spain) GR22/Amaldi: *A Multi-Messenger Analysis of Neutron Star Mergers with Numerical Relativity Simulations*
- 29.05.2018 - (Groningen - Netherlands) 7th Belgian-Dutch Gravitational Waves Meeting: *A multi-messenger picture of binary neutron star mergers*
- 22.03.2018 - (Cambridge - UK) 26th Euromicro International Conference on Parallel, Distributed and Network-based Processing: *High-resolution numerical relativity simulations of spinning binary neutron star mergers*

- 14.03.2017 - (Bremen - Germany) DPG-Spring Meeting: *Simulating Generic Binary Neutron Star Mergers*
- 14.12.2016 - (Valencia - Spain) CoCoNut meeting: *Simulating Generic Binary Neutron Star Mergers*
- 11.07.2016 - (New York - US) GR21: *Generic Binary Neutron Star Systems*
- 03.03.2016 - (Hamburg - Germany) DPG-Spring Meeting: *Binary Neutron Stars with Generic Spin and Mass ratio*
- 19.03.2015 - (Berlin - Germany) DPG-Spring Meeting: *Dynamical simulations of neutron star spacetimes with conservative mesh refinement*
- 05.12.2014 - (Jena - Germany) Conclusion Workshop of SFB/TR7: *Gravitational Wave Astronomy: Quasiuniversal properties of binary neutron star mergers*
- 20.03.2014 - (Berlin - Germany) DPG-Spring Meeting: *Mergers of binary neutron stars with realistic spin*
- 27.02.2014 - (Tübingen - Germany) SFB/TR7 semiannual meeting: *Mergers of binary neutron stars with realistic spin*
- 04.09.2013 - (Prague - Czech Republic) International Conference on Mathematical Modeling in Physical Sciences: *Spinning black hole in the puncture method*
- 12.07.2013 - (Warsaw - Poland) GR20/Amaldi 10: *Black Hole Spin within the moving puncture method*
- 27.02.2013 - (Jena - Germany) DPG-Spring Meeting: *1+log-Trumpet Initial Data in Numerical Relativity*
- 16.10.2012 - (Munich - Germany) SFB/TR7 semiannual meeting: *1+log puncture data*

FULL PUBLICATION LIST

REGULAR ARTICLES, LETTERS, RAPID COMMUNICATIONS

- (1) Alejandra Gonzalez, Francesco Zappa, Matteo Breschi, Sebastiano Bernuzzi, David Radice, Ananya Adhikari, Alessandro Camilletti, Swami Vivekanandji Chaurasia, Georgios Doulis, Surendra Padamata, Alireza Rashti, Maximiliano Ujevic, Bernd Brügmann, William Cook, Tim Dietrich, Albino Perego, Amit Poudel, Wolfgang Tichy, *Second release of the CoRe database of binary neutron star merger waveforms*, accepted in CQG, 2210.16366 [gr-qc].
- (2) Vsevolod Nedora, Tim Dietrich, Masaru Shibata, Martin Pohl, Ludovica Crosato Menegazzi, *Modelling kilonova afterglows: Effects of the thermal electron population and interaction with GRB outflows*, arXiv: 2208.01558 [astro-ph.HE], accepted in MNRAS
- (3) Maximiliano Ujevic, Henrique Gieg, Federico Schianchi, Swami Vivekanandji Chaurasia, Ingo Tews, Tim Dietrich, *Reverse phase transitions in binary neutron-star systems with exotic-matter cores*, arXiv: 2211.04662 [gr-qc], accepted in PRD.
- (4) Anna Neuweiler, Tim Dietrich, Mattia Bulla, Swami Vivekanandji Chaurasia, Stephan Rosswog, Maximiliano Ujevic, *Long-Term Simulations of Dynamical Ejecta: Homologous Expansion and Kilonova Properties*, arXiv: 2208.13460 [astro-ph.HE], Phys. Rev. D 107, 023016.
- (5) Reetika Dudi, Ananya Adhikari, Bernd Brügmann, Tim Dietrich, Kota Hayashi, Kyohei Kawaguchi, Kenta Kiuchi, Koutarou Kyutoku, Masaru Shibata, Wolfgang Tichy, *Investigating GW190425 with numerical-relativity simulations*, Phys.Rev.D 106 (2022) 8, 084039; arXiv: 2109.04063 [astro-ph.HE].
- (6) Maximiliano Ujevic, Alireza Rashti, Henrique Gieg, Wolfgang Tichy, Tim Dietrich, *High-accuracy high-mass ratio simulations for binary neutron stars and their comparison to existing waveform models*, Phys.Rev.D 106 (2022) 2, 023029, arXiv: 2202.09343 [gr-qc].
- (7) Maximilian Kölsch, Tim Dietrich, Maximiliano Ujevic, Bernd Bruegmann, *Investigating the mass-ratio dependence of the prompt-collapse threshold with numerical-relativity simulations*, Phys.Rev.D 106 (2022) 4, 044026, arXiv: 2112.11851 [gr-qc].
- (8) Alireza Rashti, Francesco Maria Fabbri, Bernd Brügmann, Swami Vivekanandji Chaurasia, Tim Dietrich, Maximiliano Ujevic, Wolfgang Tichy, *Elliptica: a new pseudo-spectral code for the construction of initial data*, Phys.Rev.D 105 (2022) 10, 104027, arXiv: 2109.14511 [gr-qc].
- (9) Mattia Emma, Federico Schianchi, Francesco Pannarale, Violetta Sagun, Tim Dietrich, *Numerical Simulations of Dark Matter Admixed Neutron Star Binaries*, Particles 5 (2022) 3, 273-286 arXiv: 2206.10887 [gr-qc].
- (10) Henrique Gieg, Federico Schianchi, Tim Dietrich, Maximiliano Ujevic, *Incorporating a radiative hydrodynamics scheme in the numerical-relativity code BAM*, Universe 2022, 8(7), 370, arXiv: 2206.01337 [gr-qc].
- (11) Mattia Bulla, Michael W. Coughlin, Suhail Dhawan, Tim Dietrich, *Multi-messenger constraints on the Hubble constant through combination of gravitational waves, gamma-ray bursts and kilonovae from neutron star mergers*, Universe 8 (2022) 5, 289, arXiv: 2205.09145 [astro-ph.HE].
- (12) Gregory Ashton and Tim Dietrich, *The use of hypermodels to understand binary neutron star collisions*, Nature Astron. 6 (2022) 8, 961-967, arXiv: 2111.09214 [gr-qc].
- (13) Reetika Dudi, Tim Dietrich, Alireza Rashti, Bernd Bruegmann, Jan Steinhoff, Wolfgang Tichy, *High-accuracy simulations of highly spinning binary neutron star systems*, Phys.Rev.D 105 (2022) 6, 064050, arXiv: 2108.10429 [gr-qc].
- (14) S. Huth, P. T. H. Pang, I. Tews, T. Dietrich, A. Le Fèvre, A. Schwenk, W. Trautmann, K. Agarwal, M. Bulla, M. W. Coughlin, C. Van Den Broeck, *Constraining Neutron-Star*

Matter with Microscopic and Macroscopic Collisions, Nature 606 (2022) 276-280, arXiv: 2107.06229 [nucl-th].

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