Publications
Dr. rer. nat. Frank Löffler

Publications in Refereed Journals

[1] Francesco Maione, Roberto De Pietri, Alessandra Feo, and Frank Löffler. Spectral analysis of gravitational waves from binary neutron star merger remnants. *Phys. Rev. D*, 96:063011, Sep 2017. doi:10.1103/PhysRevD.96.063011. URL `https://link.aps.org/doi/10.1103/PhysRevD.96.063011`. (arXiv:1707.03368).

[2] Alessandra Feo, Roberto De Pietri, Francesco Maione, and Frank Löffler. Modeling mergers of known galactic systems of binary neutron stars. *Classical and Quantum Gravity*, 34(3):034001, 2017. (arXiv:1608.02810).

[3] Frank Löffler, Zhoujian Cao, Steven R. Brandt, and Zhihui Du. A new parallelization scheme for adaptive mesh refinement. *Journal of Computational Science*, 16:79 – 88, 2016. ISSN 1877-7503. doi:10.1016/j.jocs.2016.05.003. (http://www.sciencedirect.com/science/article/pii/S1877750316300795).

[4] Francesco Maione, Roberto De Pietri, Alessandra Feo, and Frank Löffler. Binary neutron star merger simulations with different initial orbital frequency and equation of state. *Classical and Quantum Gravity*, 33(17):175009, 2016. doi:10.1088/0264-9381/33/17/175009. (arXiv:1605.03424).

[5] D. S. Katz, S.-C. T. Choi, K. E. Niemeyer, J. Hetherington, F. Löffler, D. Gunter, R. Idaszak, S. R. Brandt, M. A. Miller, S. Gesing, N. D. Jones, N. Weber, S. Marru, G. Allen, B. Penzenstadler, C. C. Venters, E. Davis, L. Hwang, I. Todorov, A. Patra, and M. de Val-Borro. Report on the Third Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE3). *Journal of Open Research Software*, February 2016. doi:10.5334/jors.118.

[6] Xiaoyao Ma, Randall W Hall, Frank Löffler, Karol Kowalski, Kiran Bhaskaran-Nair, Mark Jarrell, and Juana Moreno. Sign learning kink-based (SiLK) quantum Monte Carlo for molecular systems. *The Journal of Chemical Physics*, 144(1), 2016. doi:10.1063/1.4939145.

[7] R. De Pietri, A. Feo, F. Maione, and F. Löffler. Modeling Equal and Unequal Mass Binary Neutron Star Mergers Using Public Codes. *Phys. Rev. D*, 93:064047, March 2016. doi:10.1103/PhysRevD.93.064047. (arXiv:1509.08804).

[8] F. Löffler, R. De Pietri, A. Feo, L. Franci, and F. Maione. Stiffness effects on the dynamics of the bar-mode instability of Neutron Stars in full General Relativity. *Phys. Rev. D*, 91:064057, November 2014. doi:10.1103/PhysRevD.91.064057. (arXiv:1411.1963).

[9] E. Schnetter, M. Blazewicz, S. R. Brandt, D. M. Koppelman, and F. Löffler. Chemora: A PDE Solving Framework for Modern HPC Architectures. *Computing in Science & Engineering*, 17(2):53–64, 2015. doi:10.1109/MCSE.2015.2. (arXiv:1410.1764).

[10] Daniel S. Katz, Sou-Cheng T. Choi, Hilmar Lapp, Ketan Maheshwari, Frank Löffler, Matthew Turk, Marcus D. Hanwell, Nancy Wilkins-Diehr, James Hetherington, James Howison, Shel Swenson, Gabrielle Allen, Anne C. Elster, G. Bruce Berriman, and Colin C. Venters. Summary of the first workshop on sustainable software for science: Practice and experiences (WSSSPE1). *Journal of Open Research Software*, 2014. (arXiv:1404.7414).

[11] Roberto De Pietri, Alessandra Feo, Luca Franci, and Frank Löffler. Neutron Star instabilities in full General Relativity using a $\Gamma = 2.75$ ideal fluid. *Phys. Rev. D*, 90:024034, July 2014. doi:10.1103/PhysRevD.90.024034. (gr-qc/1403.8066).

[12] A. Dubey, S. Brandt, R. Brower, M. Giles, P. Hovland, D. Q. Lamb, F. Löffler, B. Norris, B. OShea, C. Rebbi, M. Snir, and R. Thakur. Software Abstractions and Methodologies for HPC Simulation Codes on Future Architectures. *Journal of Open Research Software*, 2(1), 2014. doi:10.5334/jors.aw.

[13] Frank Löffler, Steven R. Brandt, Gabrielle Allen, and Erik Schnetter. Cactus: Issues for sustainable simulation software. *Journal of Open Research Software*, 2(1), 2014. doi:10.5334/jors.au.

[14] Anshu Dubey, Ann Almgren, John Bell, Martin Berzins, Steve Brandt, Greg Bryan, Phillip Colella, Daniel Graves, Michael Lijewski, Frank Löffler, Brian O'Shea, Erik Schnetter, Brian Van Straalen, and Klaus Weide. A survey of high level frameworks in block-structured adaptive mesh refinement packages. *Journal of Parallel and Distributed Computing*, 2014. ISSN 0743-7315. doi:10.1016/j.jpdc.2014.07.001.

[15] Miguel Zilhão and Frank Löffler. An Introduction to the Einstein Toolkit. *International Journal of Modern Physics A*, 28(22n23):1340014, 2013. doi:10.1142/S0217751X13400149. (arXiv:1305.5299).

[16] Marek Blazewicz, Ian Hinder, David M. Koppelman, Steven R. Brandt, Milosz Ciznicki, Michal Kierzynka, Frank Löffler, Erik Schnetter, and Jian Tao. From physics model to results: An optimizing framework for cross-architecture code generation. *Scientific Programming*, 21(1-2):1–16, 2013. doi:10.3233/SPR-130360. (arXiv:1307.6488).

[17] Philipp Mösta, Bruno C. Mundim, Joshua A. Faber, Roland Haas, Scott C. Noble, Tanja Bode, Frank Löffler, Christian D. Ott, Christian Reisswig, and Erik Schnetter. GRHydro: A new open source general-relativistic magnetohydrodynamics code for the Einstein Toolkit. *Classical and Quantum Gravity*, 31(1):015005, 2014. doi:10.1088/0264-9381/31/1/015005. (arXiv:1304.5544).

[18] Ernazar Abdikamalov, Adam Burrows, Christian D. Ott, Frank Löffler, Evan O'Connor, et al. A New Monte Carlo Method for Time-Dependent Neutrino Radiation Transport. *Astrophys. Journal*, 755(2): 111, 2012. doi:10.1088/0004-637X/755/2/111. (arXiv:1009.1342).

[19] Frank Löffler, Joshua Faber, Eloisa Bentivegna, Tanja Bode, Peter Diener, Roland Haas, Ian Hinder, Bruno C. Mundim, Christian D. Ott, Erik Schnetter, Gabrielle Allen, Manuela Campanelli, and Pablo Laguna. The Einstein Toolkit: A Community Computational Infrastructure for Relativistic Astrophysics. *Classical and Quantum Gravity*, 29(11):115001, 2012. doi:10.1088/0264-9381/29/11/115001. (arXiv:1111.3344 [gr-qc]).

[20] C. D. Ott, C. Reisswig, E. Schnetter, E. O'Connor, U. Sperhake, F. Löffler, P. Diener, E. Abdikamalov, I. Hawke, and A. Burrows. Dynamics and Gravitational Wave Signature of Collapsar Formation. *Phys. Rev. Lett.*, April 2011. doi:10.1103/PhysRevLett.106.161103. (arXiv:1012.1853).

[21] C.D. Ott, E. O'Connor, F. Peng, C. Reisswig, U. Sperhake, E. Schnetter, E. Abdikamalov, P. Diener, F. Löffler, I. Hawke, C.A. Meakin, and A. Burrows. New open-source approaches to the modeling of stellar collapse and the formation of black holes. *Astrophysics and Space Science*, 336(1):151–156, 2011. ISSN 0004-640X. doi:10.1007/s10509-010-0553-1.

[22] Andrei Hutanu, Erik Schnetter, Werner Benger, Eloisa Bentivegna, Alex Clary, Peter Diener, Jinghua Ge, Robert Kooima, Oleg Korobkin, Kexi Liu, Frank Löffler, Ravi Paruchuri, Jian Tao, Cornelius Toole, Adam Yates, and Gabrielle Allen. Large-scale problem solving using automatic code generation and distributed visualization. *Scalable Computing, Practice and Experience. Scientific International Journal for Parallel and Distributed Computing*, 11(2):205–220, June 2010. URL `http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.170.2345`.

[23] Frank Löffler, Jian Tao, Gabrielle Allen, and Erik Schnetter. Benchmarking parallel I/O performance for a large scale scientific application on the TeraGrid. In *High Performance Computing and Applications*, pages 272–279, Berlin Heidelberg New York, 2009. Springer Verlag. ISBN 978-3-642-11841-8. URL `http://www.springer.com/computer/communication+networks/book/978-3-642-11841-8`. Second International Conference on High Performance Computing and Applications (HPCA2009), Shanghai, China.

[24] Christian D. Ott, Erik Schnetter, Adam Burrows, Eli Livne, Evan O'Connor, and Frank Löffler. Computational models of stellar collapse and core-collapse supernovae. *Journal of Physics: Conference Series*, 180(1):012022, 2009. URL `http://stacks.iop.org/1742-6596/180/i=1/a=012022`. SciDAC 2009 Proceedings (arXiv:0907.4043).

[25] Frank Löffler, Luciano Rezzolla, and Marcus Ansorg. Numerical evolutions of a black hole-neutron star system in full general relativity: Head-on collision. *Phys. Rev. D*, 74:104018, 2006. doi:10.1103/PhysRevD.74.104018. (gr-qc/0606104).

[26] I. Hawke, F. Löffler, and A. Nerozzi. Excision methods for high resolution shock capturing schemes applied to general relativistic hydrodynamics. *Phys. Rev. D*, 71:104006, 2005. doi:10.1103/PhysRevD.71.104006. (gr-qc/0501054).

[27] Luca Baiotti, Ian Hawke, Pedro J. Montero, Frank Löffler, Luciano Rezzolla, Nikolaos Stergioulas, José A. Font, and Ed Seidel. Three-dimensional relativistic simulations of rotating neutron star collapse to a Kerr black hole. *Phys. Rev. D*, 71:024035, 2005. doi:10.1103/PhysRevD.71.024035. (gr-qc/0403029).

Refereed publications in conference proceedings

[1] Dennis Castleberry, Steven R. Brandt, and Frank Löffler. Inkling: An Executable Paper System for Scientific Applications. In *Proceedings of SocialCom 2013 : International Conference on Social Computing*, SocialCom 2013. IEEE Digital Library, 2013.

[2] Dennis G. Castleberry, Frank Löffler, Steven R. Brandt, and Hari Krishnan. The prickly pear archive: a portable hypermedia for scholarly publication. In *Proceedings of the 1st Conference of the Extreme Science and Engineering Discovery Environment: Bridging from the eXtreme to the campus and beyond*, XSEDE '12, pages 43:1–43:8, New York, NY, USA, 2012. ACM. ISBN 978-1-4503-1602-6. doi:10.1145/2335755.2335840.

[3] Ashley Zebrowski, Frank Löffler, and Erik Schnetter. The BL-Octree: An Efficient Data Structure for Discretized Block-Based Adaptive Mesh Refinement. In *ParCo2011: Proceedings of the 2011 International Conference on Parallel Computing*, Prof. Dr Frans J. Peters, Poolsterlaan 6, 5632 AN Eindhoven, The Netherlands, 2011. ParCo Conferences.

[4] Marek Blazewicz, Steven R. Brandt, Peter Diener, David M. Koppelman, Krzysztof Kurowski, Frank Löffler, Erik Schnetter, and Jian Tao. A Massive Data Parallel Computational Framework for Petascale/Exascale Hybrid Computer Systems. In *ParCo2011: Proceedings of the 2011 International Conference on Parallel Computing*, Prof. Dr Frans J. Peters, Poolsterlaan 6, 5632 AN Eindhoven, The Netherlands, 2011. ParCo Conferences.

[5] Frank Löffler, Gabrielle Allen, Werner Benger, Andrei Hutanu, Shantenu Jha, and Erik Schnetter. Using the TeraGrid to teach scientific computing. In *Proceedings of the 2011 TeraGrid Conference: Extreme Digital Discovery*, TG '11, pages 55:1–55:7, New York, NY, USA, 2011. ACM. ISBN 978-1-4503-0888-5. doi:10.1145/2016741.2016800.

[6] Oleg Korobkin, Gabrielle Allen, Steven R. Brandt, Eloisa Bentivegna, Peter Diener, Jinghua Ge, Frank Löffler, Erik Schnetter, and Jian Tao. Runtime analysis tools for parallel scientific applications. In *Proceedings of the 2011 TeraGrid Conference: Extreme Digital Discovery*, TG '11, pages 22:1–22:8, New York, NY, USA, 2011. ACM. ISBN 978-1-4503-0888-5. doi:10.1145/2016741.2016765.

[7] Steven R. Brandt, Frank Löffler, Jian Tao, Erik Schnetter, Ian Hinder, Dennis Castleberry, and Michael Thomas. The prickly pear archive. In *Proceedings of the International Conference on Computer Science (ICCS)*, pages 750–758, 2011.

[8] Gabrielle Allen, Werner Benger, Andrei Hutanu, Shantenu Jha, Frank Löffler, and Erik Schnetter. A practical and comprehensive graduate course preparing students for research involving scientific computing. In *Proceedings of the International Conference on Computational Science, ICCS 2011*, pages 1927–1936. Procedia Computer Science, January 2011. doi:10.1016/j.procs.2011.04.210.

[9] Eric L. Seidel, Gabrielle Allen, Steven Brandt, Frank Löffler, and Erik Schnetter. Simplifying complex software assembly: the component retrieval language and implementation. In *Proceedings of the 2010 TeraGrid Conference*, TG '10, pages 18:1–18:8, New York, NY, USA, 2010. ACM. ISBN 978-1-60558-818-6. doi:10.1145/1838574.1838592. (arXiv:1009.1342).

[10] Gabrielle Allen, Tom Goodale, Frank Löffler, David Rideout, Erik Schnetter, and Eric L. Seidel. Component Specification in the Cactus Framework: The Cactus Configuration Language. In *Grid2010: Proceedings of the 11th IEEE/ACM International Conference on Grid Computing*, 2010. (arXiv:1009.1341).

[11] Gabrielle Allen, Frank Löffler, Thomas Radke, Erik Schnetter, and Edward Seidel. Integrating Web 2.0 technologies with scientific simulation codes for real-time collaboration. In *Cluster Computing and Workshops, 2009. Cluster '09. IEEE International Conference*, pages 1 –10, August 2009. doi:10.1109/CLUSTR.2009.5289130.

[12] Jian Tao, Gabrielle Allen, Peter Diener, Frank Löffler, Roland Haas, Ian Hinder, Erik Schnetter, and Yosef Zlochower. Towards a highly efficient and scalable infrastructure for numerical relativity codes. In *Proceedings of the TeraGrid 2009 conference*, 2009. URL `http://archive.teragrid.org/tg09/index.php?option=com_content&task=view&id=70`.

Book Chapters

[1] Frank Löffler. Numerical simulations in General Relativity. In *Virtual Worlds of Precision*, pages 153–164, Münster, 2005. LIT Verlag. ISBN 3-8258-6773-0. URL `http://www.lit-verlag.de/isbn/3-8258-6773-0`. Computer-based Simulations in the Sciences and Social Sciences.

Theses

[1] Frank Löffler. *Numerical Simulations of Neutron Star-Black Hole Mergers*. PhD thesis, Max Planck Institute for Gravitational Physics (Albert Einstein Institute), Am Mühlenberg 1, D-14476 Potsdam, Germany, 2005. URL `http://opus.kobv.de/ubp/volltexte/2006/774/`.

[2] Frank Löffler. Kollaps kosmischer Scheibenkonfigurationen. Master's thesis, Friedrich–Schiller–Universität Jena, Physikalisch-Astronomische Fakultät, Theoretisch-Physikalisches Institut, Max-Wien-Platz 1, D-07743 Jena, Germany, 2001.

Preprints, Conference Proceedings, Technical Reports

[1] Roberto De Pietri, Alessandra Feo, José A. Font, Frank Löffler, Francesco Maione, Michele Pasquali, and Nikolaos Stergioulas. Convective excitation of inertial modes in binary neutron star mergers. *submitted to Phys. Rev. Lett.*, 2018. (arXiv:1802.03288).

[2] Frank Löffler, Daniel S. Katz, Lucas A. Wilson, Sandra Gesing, Damon McDougall, Jeffrey Carver, and Steven R. Brandt. Research software training initiative: Identifying and addressing challenges in scientific software development. *Response to the "NSF Dear Colleague Letter: Request for Information on Future Needs for Advanced Cyberinfrastructure to Support Science and Engineering Research (NSF CI 2030)"*, 2017. (https://www.nsf.gov/cise/oac/ci2030/pdf/RFI-Loffler-250.pdf).

[3] Daniel S. Katz, Robert Haines, Kathryn Huff, Frank Löffler, Marlon Pierce, Michael Heroux, Kyle Niemeyer, Sandra Gesing, Jeffrey Carver, and Greg Wilson. Sustaining software as a key element of cyberinfrastructure. *Response to the "NSF Dear Colleague Letter: Request for Information on Future Needs for Advanced Cyberinfrastructure to Support Science and Engineering Research (NSF CI 2030)"*, 2017. (https://www.nsf.gov/cise/oac/ci2030/pdf/RFI-Katz-209.pdf).

[4] Fernando Alegre, Frank Löffler, Juana Moreno, Brenda C. Nixon, and Le Yan. A Summer School on parallel computing for science and enineering majors. *submitted to EduPar-17*, 2017.

[5] Steven R. Brandt, F. Löffler, Yue Hu, and David Koppelman. A Programming Framework for Physics. October 2015. doi:10.6084/m9.figshare.1570986.

[6] Baylis Josef, Ma Xiaoyao, Löffler Frank, Hall Randall, Kowalski Karol, Jarrell Mark, and Moreno Juana. Sign-learning kink-based path integral calculations of molecules H2O, N2, and F2. *Proceedings of the 2014 LaSigma symposium*, 2014.

[7] Andrei Hutanu, Erik Schnetter, Werner Benger, Eloisa Bentivegna, Alex Clary, Peter Diener, Jinghua Ge, Robert Kooima, Oleg Korobkin, Kexi Liu, Frank Löffler, Ravi Paruchuri, Jian Tao, Cornelius Toole, Adam Yates, and Gabrielle Allen. Large-scale problem solving using automatic code generation and distributed visualization. Technical Report CCT-TR-2009-11, Louisiana State University, 2009. URL http://www.cct.lsu.edu/CCT-TR/CCT-TR-2009-11.

Invited Presentations

[1] Frank Löffler. Neutron Stars on Supercomputers. Beowulf Bootcamp, Louisiana State University, Baton Rouge, USA, June 2017.

[2] Frank Löffler. Neural Networks 101. Beowulf Bootcamp, Louisiana State University, Baton Rouge, USA, June 2017.

[3] Frank Löffler. PSAMR: A new parallelization scheme for adaptive mesh refinement. Technology for Extreme Scale Computing Seminar, Louisiana State University, October 2015.

[4] Frank Löffler. Chemora: Auto-tuning of stencil computations. Seminar at Parma University, Italy, July 2015.

[5] Frank Löffler. Silk. LA-SiGMA Technical Conference, April 2015.

[6] Frank Löffler. Neutron Star instabilities in full General Relativity. International School on Numerical Relativity, Morningside Center of Mathematics, Beijing, China, August 2014.

[7] Frank Löffler. Numerical relativity: Using supercomputers to simulate black holes. Beowulf Bootcamp, Louisiana State University, Baton Rouge, USA, July 2013.

[8] Frank Löffler and Steven R. Brandt. Cactus: An open-source framework for high-performance computing. Invited lecture at State Key Laboratory of Scientific and Engineering Computing (LSEC), CAS, Beijing, China, June 2013.

[9] Frank Löffler and Steven R. Brandt. Taming relativity with high-performance computing. Invited lecture to computer science department at Tsinghua University, Beijing, China, June 2013.

[10] Frank Löffler and Steven R. Brandt. Cactus and the einstein toolkit: Symbiosis on supercomputers. Invited lecture at Institute of Applied Physics and Computational Mathematics, Beijing, China, June 2013.

[11] Frank Löffler and Steven R. Brandt. The cactus computational toolkit. Invited lecture to High-Performance-Computing class at Tsinghua University, Beijing, China, June 2013.

[12] Frank Löffler. Research Initiatives at the Louisiana State University Center for Computation and Technology (CCT). Seminar at Belmont University, Nashville, TN, USA, November 2012.

[13] Frank Löffler. The Einstein Toolkit: A community code for computational relativistic astrophysics. Conference on Computational Physics (CCP2012), Osaka, Japan, October 2012.

[14] Frank Löffler. Building communities around computational challenges. 2012 Eastern Sectional Meeting of the American Mathematical Society, Rochester, NY, USA, September 2012.

[15] Frank Löffler. Fourteen years of cactus community. Workshop "Building Community Codes for Effective Scientific Research on HPC Platforms", Chicago, IL, USA, September 2012.

[16] Frank Löffler. The Einstein Toolkit and Mixed Binary Simulations. Seminar at Parma University, Italy, July 2012.

[17] Frank Löffler. Introduction to Scientific Computing. Computer Science Intensive Orientation for Students, Louisiana State University, August 2011.

[18] Frank Löffler. Build your own simulation: The Einstein Toolkit. APCTP International School on Numerical Relativity and Gravitational Waves, Pohang, South Korea, July 2011.

[19] Frank Löffler. Introduction to the Cactus Framework. APCTP International School on Numerical Relativity and Gravitational Waves, Pohang, South Korea, July 2011.

[20] Frank Löffler. Basics of finite-difference HPC codes. APCTP International School on Numerical Relativity and Gravitational Waves, Pohang, South Korea, July 2011.

[21] Frank Löffler. How to become a numerical astrophysicist. REU seminar at Louisiana State University, July 2011.

[22] Frank Löffler. The Cactus Computational Toolkit or Computer Science Issues for Large Scale Applications. Combined Colloquium of the Center for Computational Relativity and Gravitation and the Computer Science Department at the Rochester Institute of Technology, February 2011.

Contributed Presentations

[1] Frank Löffler. Einstein Toolkit - The State of the Union. European Einstein Toolkit workshop, Trento, Italy, June 2016.

[2] Frank Löffler. Our solar system: More than the sun and the planets? Lectures given to students of K to 4rd grade level students at the Westdale Heights Academic Magnet Elementary School, Baton Rouge, March 2014.

[3] Frank Löffler. Cactus: A "thorny" problem solver. SCALA 2014: Scientific Computing Around Louisiana, Louisiana State University, Louisiana, USA, February 2014.

[4] Frank Löffler. Stiffness effects on the dynamics of bar-mode instability in full general relativity. APS April Meeting, Denver, CO, April 2013.

[5] Frank Löffler. Neutron star instabilities. Physics and Astronomy Colloquium, Louisiana State University, USA, March 2013.

[6] Frank Löffler. The Einstein Toolkit, used for research of stiffness effects on the dynamics of bar-mode instability of compact stars. SCALA 2013: Scientific Computing Around Louisiana, Tulane University, New Orleans, February 2013.

[7] Frank Löffler. The Einstein Toolkit. APS April Meeting, Atlanta, GA, USA, April 2012.

[8] Frank Löffler. Using the TeraGrid to Teach Scientific Computing. TeraGrid 2011 conference, July 2011.

[9] Frank Löffler and Oleg Korobkin. Converting a serial code to a parallel ARM code using the Cactus Computational Framework. TeraGrid11 conference, full-day tutorial, July 2011.

[10] Frank Löffler. The Einstein Toolkit. Workshop: Advances and Challenges in Computational General Relativity, Brown University, RI, May 2011.

[11] Frank Löffler. The Einstein Toolkit. APS Gulf Coast Gravity Meeting, Florida Atlantic University, May 2011.

[12] Frank Löffler. Constructing better initial data for compact binary systems containing matter. APS April Meeting, Anaheim, CA, May 2011.

[13] Frank Löffler and Michael Thomas. Introduction to the Cactus Framework. Loni/HPC tutorial series, CCT Louisiana State University), March 2011.

[14] Frank Löffler. Black hole - neutron star binary simulations - one decade ago and today. Group seminar, Department of Physics, Louisiana State University, March 2011.

[15] Frank Löffler. Stars. Lecture given to students at the Westdale Heights Academic Magnet Elementary School, Baton Rouge, LA, USA, February 2012.

[16] Frank Löffler. Stars. Lectures given to students of K to 4rd grade level students at the Westdale Heights Academic Magnet Elementary School, Baton Rouge, February 2013.

[17] Frank Löffler. Colliding and exploding stars. Lecture given to students of K and 4rd grade level students at the Westdale Heights Academic Magnet Elementary School, Baton Rouge, February 2011.

[18] Frank Löffler. The Einstein Toolkit - General Relativity in HPC. SCALA 2011: Scientific Computing Around Louisiana, Tulane University, New Orleans, January 2011.

[19] Frank Löffler. From Binary Systems and Stellar Core Collapse to Gamma-Ray Bursts. Blue Waters User Group Meeting, Supercomputing 2010 conference, New Orleans, November 2010.

[20] Frank Löffler. The Einstein Toolkit. TAPIR group seminar, CalTech, November 2010.

[21] Frank Löffler. General initial data for simulations of compact objects. 77th Annual Meeting of the Southeastern Section (SESAPS 2010), October 2010.

[22] Frank Löffler and Oleg Korobkin. Introduction to the Cactus Framework. Loni/HPC tutorial series, CCT Louisiana State University), October 2010.

[23] Frank Löffler. Neutron Star - Black Hole binaries as SGRB Engines. Group seminar, Department of Physics, Louisiana State University, June 2010.

[24] Frank Löffler and Tyler Landis. Introduction to the Cactus Framework. Loni/HPC tutorial series, CCT Louisiana State University), April 2010.

[25] Frank Löffler. XiRel: Benchmarking Parallel I/O Performance on the Teragrid. PetaScale I/O workshop, Austin, March 2010.

[26] Frank Löffler. Whisky Scaling, Optimization and OpenMP. Whisky Retreat V, Southampton, December 2009.

[27] Frank Löffler. Whisky Core and what can be split out. Whisky Retreat V, Southampton, December 2009.

[28] Frank Löffler and Tyler Landis. Introduction to the Cactus Framework. Loni/HPC tutorial series, CCT Louisiana State University), October 2009.

[29] Frank Löffler. HydroBase. XiRel Presentation, September 2009.

[30] Frank Löffler and Oleg Korobkin. Introduction to the Cactus Framework. TeraGrid09 conference, half-day tutorial, June 2009.

[31] Frank Löffler. XiRel I/O benchmarks. XiRel Presentation, May 2009.

[32] Frank Löffler and Oleg Korobkin. Introduction to the Cactus Framework. Loni/HPC tutorial series, CCT Louisiana State University), May 2009.

[33] Frank Löffler. XiRel - A status report. XiRel Presentation, May 2009.

[34] Frank Löffler. Gravitational-wave Emission from Mixed Binary Systems. GWADW-VESF meeting, Elba, May 2008.

[35] Frank Löffler. Numerical simulations of binary neutron star-black hole systems. Whisky Retreat IV, Parma/Italy, April 2008.

[36] Frank Löffler. Numerical simulations of binary neutron star-black hole systems. Gulfcoast gravity meeting, Oxford/MS, March 2008.

[37] Frank Löffler and Luciano Rezzolla. Dynamics of Mixed Binaries. 3rd VESF Council, Pisa, April 2007.

[38] Frank Löffler. Dynamics of Mixed Binaries. Whisky Retreat III, Sissa, November 2006.

[39] Frank Löffler. Dynamics of Mixed Binaries. INFN meeting, Rome, August 2006.

[40] Frank Löffler. Dynamics of Mixed Binaries. GWADW-VESF meeting, Elba, May 2006.

[41] Frank Löffler. Numerical Simulations of Black Hole - Neutron Star Mergers. Journal Club, Sissa, Italy, February 2006.

[42] Frank Löffler. BH-NS/NS-NS initial data. Whisky Retreat II, AEI, June 2005.

[43] Frank Löffler. Mass loaded flows. Astrophysics seminar, University Potsdam, June 2004.

[44] Frank Löffler. Initial data with matter and BHs. Group meeting, AEI, February 2004.

[45] Frank Löffler. Head-on/Near Head-on Collisions of Neutron Stars With a Realistic EOS (gr-qc/0301011v1). Journal Club, Albert-Einstein-Institute, Max-Planck-Institute Potsdam, Germany, February 2003.

[46] Frank Löffler. Relativistic Computerphysics. Scheinwelten der Präzision, Oxford, January 2003.

[47] Frank Löffler. A solver for initial value problems. 4th EU Network Meeting, Palma, October 2002.