

# Carpet Publications

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## Background Publications and Web Pages

1. T. Goodale, G. Allen, G. Lanfermann, J. Massó, T. Radke, E. Seidel, and J. Shalf, *The Cactus framework and toolkit: Design and applications*, in *Vector and Parallel Processing – VECPAR'2002, 5th International Conference, Lecture Notes in Computer Science* (Springer, Berlin, 2003), URL <http://edoc.mpg.de/3341>.
2. E. Schnetter, P. Diener, E. N. Dorband, and M. Tiglio, *A multi-block infrastructure for three-dimensional time-dependent numerical relativity*, *Class. Quantum Grav.* **23**, S553 (2006), arXiv:gr-qc/0602104, URL <http://arxiv.org/abs/gr-qc/0602104>.
3. E. Schnetter, S. H. Hawley, and I. Hawke, *Evolutions in 3d numerical relativity using fixed mesh refinement*, *Class. Quantum Grav.* **21**, 1465 (2004), arXiv:gr-qc/0310042, URL <http://arxiv.org/abs/gr-qc/0310042>.
4. *Mesh refinement with Carpet*, URL <http://www.carpetcode.org/>.
5. *Cactus Computational Toolkit*, URL <http://www.cactuscode.org/>.

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## Publications in Refereed Journals

1. B. Aylott, J. G. Baker, W. D. Boggs, M. Boyle, P. R. Brady, D. A. Brown, B. Brügmann, L. T. Buchman, A. Buonanno, L. Cadonati, J. Camp, M. Campanelli, J. Centrella, S. Chatterji, N. Christensen, T. Chu, P. Diener, N. Dorband, Z. B. Etienne, J. Faber, S. Fairhurst, B. Farr, S. Fischetti, G. Guidi, L. M. Goggin, M. Hannam, F. Herrmann, I. Hinder, S. Husa, V. Kalogera, D. Keppel, L. E. Kidder, B. J. Kelly, B. Krishnan, P. Laguna, C. O. Lousto, I. Mandel, P. Marronetti, R. Matzner, S. T. McWilliams, K. D. Matthews, R. A. Mercer, S. R. P. Mohapatra, A. H. Mroué, H. Nakano, E. Ochsner, Y. Pan, L. Pekowsky, H. P. Pfeiffer, D. Pollney, F. Pretorius, V. Raymond, C. Reisswig, L. Rezzolla, O. Rinne, C. Robinson, C. Röver, L. Santamaría, B. Sathyaprakash, M. A. Scheel, E. Schnetter, J. Seiler, S. L. Shapiro, D. Shoemaker, U. Sperhake, A. Stroeer, R. Sturani, W. Tichy, Y. T. Liu, M. van der Sluys, J. R. van Meter, R. Vaulin, A. Vecchio, J. Veitch, A. Viceré, J. T. Whelan, and Y. Zlochower, *Status of NINJA: the Numerical INjection Analysis project*, *Class. Quantum Grav.* **26**, 114008 (2009), arXiv:0901.4399 [gr-qc], URL <http://arxiv.org/abs/0905.4227>.
2. L. Baiotti, B. Giacomazzo, and L. Rezzolla, *Accurate evolutions of inspiralling neutron-star binaries: assessment of the truncation error*, *Class. Quantum Grav.* **26**, 114005 (2009), arXiv:0901.4955 [gr-qc], URL <http://arxiv.org/abs/0901.4955>.
3. B. Aylott, J. G. Baker, W. D. Boggs, M. Boyle, P. R. Brady, D. A. Brown, B. Brügmann, L. T. Buchman, A. Buonanno, L. Cadonati, J. Camp, M. Campanelli, J. Centrella, S. Chatterji, N. Christensen, T. Chu, P. Diener, N. Dorband, Z. B. Etienne, J. Faber, S. Fairhurst, B. Farr, S. Fischetti, G. Guidi, L. M. Goggin, M. Hannam, F. Herrmann, I. Hinder, S. Husa, V. Kalogera, D. Keppel, L. E. Kidder, B. J. Kelly, B. Krishnan, P. Laguna, C. O. Lousto, I. Mandel, P. Marronetti, R. Matzner, S. T. McWilliams, K. D. Matthews, R. A. Mercer, S. R. P. Mohapatra, A. H. Mroué, H. Nakano, E. Ochsner, Y. Pan, L. Pekowsky, H. P. Pfeiffer, D. Pollney, F. Pretorius, V. Raymond, C. Reisswig, L. Rezzolla, O. Rinne, C. Robinson, C. Röver,

- L. Santamaría, B. Sathyaprakash, M. A. Scheel, E. Schnetter, J. Seiler, S. L. Shapiro, D. Shoemaker, U. Sperhake, A. Stroeer, R. Sturani, W. Tichy, Y. T. Liu, M. van der Sluys, J. R. van Meter, R. Vaulin, A. Vecchio, J. Veitch, A. Viceré, J. T. Whelan, and Y. Zlochower, *Testing gravitational-wave searches with numerical relativity waveforms: Results from the first Numerical INjection Analysis (NINJA) project*, Class. Quantum Grav. **26**, 165008 (2009), arXiv:0901.4399 [gr-qc], URL <http://arxiv.org/abs/0901.4399>.
4. M. Hannam, S. Husa, J. G. Baker, M. Boyle, B. Brügmann, T. Chu, N. Dorband, F. Herrmann, I. Hinder, B. J. Kelly, L. E. Kidder, P. Laguna, K. D. Matthews, J. R. van Meter, H. P. Pfeiffer, D. Pollney, C. Reisswig, M. A. Scheel, and D. Shoemaker, *The Samurai project: verifying the consistency of black-hole-binary waveforms for gravitational-wave detection*, Phys. Rev. D **79**, 084025 (2009), arXiv:0901.2437 [gr-qc], URL <http://arxiv.org/abs/0901.2437>.
  5. L. Rezzolla, *Modelling the final state from binary black-hole coalescences*, Class. Quantum Grav. **26**, 094023 (2009), arXiv:0812.2325 [gr-qc], URL <http://arxiv.org/abs/0812.2325>.
  6. Z. B. Etienne, Y. T. Liu, S. L. Shapiro, , and T. W. Baumgarte, *General relativistic simulations of black-hole-neutron-star mergers: Effects of black-hole spin*, Phys. Rev. D **79**, 044024 (2009), arXiv:0812.2245 [astro-ph], URL <http://arxiv.org/abs/0812.2245>.
  7. M. Campanelli, C. O. Lousto, and Y. Zlochower, *Algebraic classification of numerical spacetimes and black-hole-binary remnants*, Phys. Rev. D **79**, 084012 (2009), arXiv:0811.3006 [gr-qc], URL <http://arxiv.org/abs/0811.3006>.
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  9. D. Brown, P. Diener, O. Sarbach, E. Schnetter, and M. Tiglio, *Turduckening black holes: an analytical and computational study*, Phys. Rev. D **79**, 044023 (2009), arXiv:0809.3533 [gr-qc], URL <http://arxiv.org/abs/0809.3533>.
  10. L. Baiotti, S. Bernuzzi, G. Corvino, R. D. Pietri, and A. Nagar, *Gravitational-wave extraction from neutron-star oscillations: Comparing linear and nonlinear techniques*, Phys. Rev. D **79**, 024002 (2009), arXiv:0808.4002 [gr-qc], URL <http://arxiv.org/abs/0808.4002>.
  11. M. Campanelli, C. O. Lousto, H. Nakano, and Y. Zlochower, *Comparison of numerical and post-Newtonian waveforms for generic precessing black-hole binaries*, Phys. Rev. D **79**, 084010 (2009), arXiv:0808.0713 [gr-qc], URL <http://arxiv.org/abs/0808.0713>.
  12. J. Healy, F. Herrmann, I. Hinder, D. M. Shoemaker, P. Laguna, , and R. A. Matzner, *Superkicks in hyperbolic encounters of binary black holes*, Phys. Rev. Lett. **102**, 041101 (2009), arXiv:0807.3292 [gr-qc], URL <http://arxiv.org/abs/0807.3292>.
  13. U. Sperhake, V. Cardoso, F. Pretorius, E. Berti, , and J. A. González, *High-energy collision of two black holes*, Phys. Rev. Lett. **101**, 161101 (2008), arXiv:0806.1738 [gr-qc], URL <http://arxiv.org/abs/0806.1738>.
  14. L. Gualtieri, E. Berti, V. Cardoso, and U. Sperhake, *Transformation of the multipolar components of gravitational radiation under rotations and boosts*, Phys. Rev. D **78**, 044024 (2008), arXiv:0805.1017 [gr-qc], URL <http://arxiv.org/abs/0805.1017>.

15. C. O. Lousto and Y. Zlochower, *Modeling gravitational recoil from precessing highly-spinning unequal-mass black-hole binaries*, Phys. Rev. D **79**, 064018 (2009), arXiv:0805.0159 [gr-qc], URL <http://arxiv.org/abs/0805.0159>.
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19. J. Seiler, B. Szilágyi, D. Pollney, and L. Rezzolla, *Constraint-preserving boundary treatment for a harmonic formulation of the einstein equations*, Class. Quantum Grav. **25**, 175020 (2008), arXiv:0802.3341 [gr-qc], URL <http://arxiv.org/abs/0802.3341>.
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