

## Liste de Publications de

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### Publications dans des revues internationales avec comité de lecture

- [A1] L. Blanchet, M. Cornille, J. Dubau, P. Faucher, J. Lion and S. Volonté, *Dielectronic satellite spectra of Ca XX resonance lines in solar flares*, *Astron. Astrophys.* **152**, 417 (1985).
- [A2] L. Blanchet et T. Damour, *Méthode d'itération post-minkowskienne et structure des champs gravitationnels radiatifs*, *Comptes Rendus Acad. Sc. Paris* **298**, Série II, 431 (1984).
- [A3] L. Blanchet and T. Damour, *Multipolar radiation reaction in general relativity*, *Phys. Lett. A* **104**, 82 (1984).
- [A4] L. Blanchet and T. Damour, *Radiative gravitational fields in general relativity I. General structure of the field outside the source*, *Phil. Trans. R. Soc. London A* **320**, 379 (1986).
- [A5] L. Blanchet, *Radiative gravitational fields in general relativity II. Asymptotic behaviour at future null infinity*, *Proc. R. Soc. London A* **409**, 383 (1987).
- [A6] L. Blanchet and T. Damour, *Tail-transported temporal correlations in the dynamics of a gravitating system*, *Phys. Rev. D* **37**, 1410 (1988).
- [A7] L. Blanchet and T. Damour, *Post-Newtonian generation of gravitational waves*, *Ann. Inst. H. Poincaré (Phys. Théor.)* **50**, 377 (1989).
- [A8] L. Blanchet and G. Schäfer, *Higher-order gravitational radiation losses in binary systems*, *Month. Not. R. Astron. Soc.* **239**, 845 (1989).
- [A9] L. Blanchet, T. Damour and G. Schäfer, *Post-Newtonian hydrodynamics and post-Newtonian wave generation for numerical relativity*, *Month. Not. R. Astron. Soc.* **242**, 289 (1990).
- [A10] L. Blanchet, *A class of non-metric couplings to gravity*, *Phys. Rev. Letters* **69**, 559 (1992).
- [A11] L. Blanchet and T. Damour, *Hereditary effects in gravitational radiation*, *Phys. Rev. D* **46**, 4304 (1992).
- [A12] L. Blanchet, *Time-asymmetric structure of gravitational radiation*, *Phys. Rev. D* **47**, 4392 (1993).
- [A13] L. Blanchet and G. Schäfer, *Gravitational wave tails and binary star systems*, *Class. Quant. Grav.* **10**, 2699 (1993).
- [A14] L. Blanchet and B.S. Sathyaprakash, *Signal analysis of gravitational wave tails*, *Class. Quant. Grav.* **11**, 2807 (1994).
- [A15] L. Blanchet and B.S. Sathyaprakash, *Detecting a tail effect in gravitational-wave experiments*, *Phys. Rev. Letters* **74**, 1067 (1995).
- [A16] L. Blanchet, *Second-post-Newtonian generation of gravitational radiation*, *Phys. Rev. D* **51**, 2559 (1995).
- [A17] L. Blanchet, T. Damour and B. R. Iyer, *Gravitational waves from inspiralling compact binaries: Energy loss and waveform to second-post-Newtonian order*, *Phys. Rev. D* **51**, 5360 (1995).
- [A18] L. Blanchet, T. Damour, B. R. Iyer, C. M. Will and A. G. Wiseman, *Gravitational radiation damping of compact binary systems to second-post-Newtonian order*, *Phys. Rev. Letters* **74**, 3515 (1995).
- [A19] L. Blanchet, B. R. Iyer, C. M. Will and A. G. Wiseman, *Gravitational waveforms from inspiralling compact binaries to second-post-Newtonian order*, *Class. Quant. Grav.* **13**, 575 (1996).
- [A20] L. Blanchet, *Energy losses by gravitational radiation in inspiraling compact binaries to 5/2 post-Newtonian order*, *Phys. Rev. D* **54**, 1417 (1996).

- [A21] L. Blanchet, *Gravitational radiation reaction and balance equations to post-Newtonian order*, Phys. Rev. D **55**, 714 (1997).
- [A22] L. Blanchet, *Quadrupole-quadrupole gravitational waves*, Class. Quant. Grav. **15**, 89 (1998).
- [A23] L. Blanchet, *Gravitational-wave tails of tails*, Class. Quant. Grav. **15**, 113 (1998).
- [A24] L. Blanchet, *On the multipole expansion of the gravitational field*, Class. Quant. Grav. **15**, 1971 (1998).
- [A25] L. Blanchet, G. Faye and B. Ponsot, *Gravitational field and equations of motion of compact binaries to 5/2 post-Newtonian order*, Phys. Rev. D **58**, 124002 (1998).
- [A26] L. Blanchet and G. Faye, *On the equations of motion of point-particle binaries at the third post-Newtonian order*, Physics Letters A **271**, 58 (2000).
- [A27] L. Blanchet and G. Faye, *Hadamard regularization*, J. Math. Phys. **41**, 7675 (2000).
- [A28] L. Blanchet and G. Faye, *Lorentzian regularization and the problem of point-like particles in general relativity*, J. Math. Phys. **42**, 4391 (2001).
- [A29] L. Blanchet and G. Faye, *General relativistic dynamics of compact binaries at the third post-Newtonian order*, Phys. Rev. D **63**, 062005 (2001).
- [A30] L. Blanchet, C. Salomon, P. Teyssandier and P. Wolf, *Relativistic theory for time and frequency transfer to order  $c^{-3}$* , Astron. Astrophys. **370**, 320 (2001).
- [A31] V. de Andrade, L. Blanchet and G. Faye, *Third post-Newtonian dynamics of compact binaries: Noetherian conserved quantities and equivalence between the harmonic-coordinate and ADM-Hamiltonian formalisms*, Class. Quant. Grav. **18**, 753 (2001).
- [A32] L. Blanchet, B. R. Iyer and B. Joguet, *Gravitational waves from inspiralling compact binaries: Energy flux to third post-Newtonian order*, Phys. Rev. D **65**, 064005 (2002).
- [A33] L. Blanchet, G. Faye, B. R. Iyer and B. Joguet, *Gravitational-wave inspiral of compact binary systems to 7/2 post-Newtonian order*, Phys. Rev. D **65**, 061501R (2002).
- [A34] L. Blanchet, *Innermost circular orbit of binary black holes at the third post-Newtonian approximation*, Phys. Rev. D **65**, 124009 (2002).
- [A35] Olivier Poujade and L. Blanchet, *Post-Newtonian approximation for isolated systems calculated by matched asymptotic expansions*, Phys. Rev. D **65**, 124020 (2002).
- [A36] L. Blanchet, *Gravitational radiation from post-Newtonian sources and inspiralling compact binaries*, Living Rev. in Relativity **5**, 3 (2002).
- [A37] L. Blanchet and B. R. Iyer, *Third post-Newtonian dynamics of compact binaries: Equations of motion in the center-of-mass frame*, Class. Quant. Grav. **20**, 755 (2003).
- [A38] L. Blanchet, *Time-symmetric initial data for binary black holes in numerical relativity*, Phys. Rev. D **68**, 084002 (2003).
- [A39] L. Blanchet, T. Damour and G. Esposito-Farèse, *Dimensional regularization of the third post-Newtonian dynamics of point particles in harmonic coordinates*, Phys. Rev. D **69**, 124007 (2004).
- [A40] K. G. Arun, L. Blanchet, B. R. Iyer and M. S. Qusailah, *The 2.5PN gravitational wave polarisations from inspiralling compact binaries in circular orbits*, Class. Quant. Grav. **21**, 3771 (2004).
- [A41] L. Blanchet, T. Damour, G. Esposito-Farèse and B. R. Iyer, *Gravitational radiation from inspiralling compact binaries completed at the third post-Newtonian order*, Phys. Rev. Letters **93**, 091101 (2004).
- [A42] L. Blanchet and B. R. Iyer, *Hadamard regularization of the third post-Newtonian gravitational wave generation of two point masses*, Phys. Rev. D **71**, 024004 (2005).
- [A43] L. Blanchet, T. Damour and B. R. Iyer, *Surface-integral expressions for the multipole moments of post-Newtonian sources and the boosted Schwarzschild solution*, Class. Quant. Grav. **22**, 155 (2005).
- [A44] S. Nissanke and L. Blanchet, *Gravitational radiation reaction in the equations of motion of compact binaries to 3.5 post-Newtonian order*, Class. Quant. Grav. **22**, 1007 (2005).

- [A45] L. Blanchet, T. Damour, G. Esposito-Farèse and B. R. Iyer, *Dimensional regularization of the third post-Newtonian gravitational wave generation of two point masses*, Phys. Rev. D **71**, 124004 (2005).
- [A46] L. Blanchet, G. Faye and S. Nissanke, *Structure of the post-Newtonian expansion in general relativity*, Phys. Rev. D **72**, 044024 (2005).
- [A47] L. Blanchet, M. S. Qusailah and C. M. Will, *Gravitational recoil of inspiralling black-hole binaries to second post-Newtonian order*, AstroPhys. Journal **635**, 508 (2005).
- [A48] L. Blanchet, *Gravitational radiation from post-Newtonian sources and inspiralling compact binaries*, Living Rev. in Relativity **9**, 4 (2006).
- [A49] G. Faye, L. Blanchet and A. Buonanno, *Higher-order spin effects in the dynamics of compact binaries I. Equations of motion*, Phys. Rev. D **74**, 104033 (2006).
- [A50] L. Blanchet, A. Buonanno and G. Faye, *Higher-order spin effects in the dynamics of compact binaries II. Radiation field*, Phys. Rev. D **74**, 104034 (2006).
- [A51] L. Blanchet, *Gravitational polarization and the phenomenology of MOND*, Class. Quant. Grav. **24**, 3529 (2007).
- [A52] L. Blanchet, *Dipolar particles in general relativity*, Class. Quant. Grav. **24**, 3541 (2007).
- [A53] L. E. Kidder, L. Blanchet and B. R. Iyer, *Radiation reaction in the 2.5PN waveform from inspiralling binaries in circular orbits*, Class. Quant. Grav. **24**, 5307 (2007).
- [A54] K. G. Arun, L. Blanchet, B. R. Iyer and M. S. Qusailah, *Tail effects in the 3PN gravitational wave energy flux of compact binaries in quasi-elliptical orbits*, Phys. Rev. D **77**, 064034 (2008).
- [A55] K. G. Arun, L. Blanchet, B. R. Iyer and M. S. Qusailah, *Inspiralling compact binaries in quasi-elliptical orbits: The complete 3PN energy flux*, Phys. Rev. D **77**, 064035 (2008).
- [A56] L. Blanchet, G. Faye, B. R. Iyer and S. Sinha, *The third post-Newtonian gravitational wave polarisations and associated spherical harmonic modes for inspiralling compact binaries in quasi-circular orbits*, Class. Quant. Grav. **25**, 165003 (2008).
- [A57] L. Blanchet and A. Le Tiec, *Model of dark matter and dark energy based on gravitational polarization*, Phys. Rev. D **78**, 024031 (2008).
- [A58] L. Blanchet and A. Le Tiec, *Dipolar dark matter and dark energy*, Phys. Rev. D **80**, 023524 (2009).
- [A59] K.G. Arun, L. Blanchet, B.R. Iyer and S. Sinha, *Third post-Newtonian angular momentum flux and the evolution of orbital elements for inspiralling compact binaries in quasi-elliptical orbits*, Phys. Rev. D **80**, 124018 (2009).
- [A60] L. Blanchet, S. Detweiler, A. Le Tiec and B. Whiting, *Post-Newtonian and numerical calculations of the gravitational self-force for circular orbits in the Schwarzschild geometry*, Phys. Rev. D **81**, 064004 (2010).
- [A61] A. Le Tiec and L. Blanchet, *The close-limit approximation for black hole binaries with post-Newtonian initial conditions*, Class. Quant. Grav. **27**, 045008 (2010).
- [A62] A. Le Tiec, L. Blanchet and C.M. Will, *Gravitational-wave recoil from the ringdown phase of coalescing black hole binaries*, Class. Quant. Grav. **27**, 012001 (2010).
- [A63] L. Blanchet, S. Detweiler, A. Le Tiec and B. Whiting, *High-order post-Newtonian fit of the gravitational self-force for circular orbits in the Schwarzschild geometry*, Phys. Rev. D **81**, 084033 (2010).
- [A64] P. Wolf, L. Blanchet, C.J. Bordé, S. Reynaud, C. Salomon and C. Cohen-Tannoudji, *Atom gravimeters and gravitational redshift*, Nature **467**, E1 (2010).
- [A65] L. Blanchet and J. Novak, *External field effect of modified Newtonian dynamics in the Solar system*, Month. Not. Roy. Astronon. Soc. **412**, 2530 (2011).
- [A66] P. Wolf, L. Blanchet, C.J. Bordé, S. Reynaud, C. Salomon and C. Cohen-Tannoudji, *Does an atom interferometer test the gravitational redshift at the Compton frequency?*, Class. Quant. Grav. **28**, 145017 (2011).
- [A67] L. Blanchet, A. Buonanno and G. Faye, *Tail-induced spin-orbit effect in the*

- gravitational radiation of compact binaries*, Phys. Rev. D **84**, 064041 (2011).
- [A68] L. Blanchet and S. Marsat, *Modified gravity approach based on a preferred time foliation*, Phys. Rev. D **84**, 044056 (2011).
  - [A69] A. Le Tiec, L. Blanchet and B. Whiting, *The first law of binary black hole mechanics in general relativity and post-Newtonian theory*, Phys. Rev. D **85**, 064039 (2012).
  - [A70] P. Wolf, L. Blanchet, C.J. Bordé, S. Reynaud, C. Salomon and C. Cohen-Tannoudji, *Reply to a comment on: Does an atom interferometer test the gravitational redshift at the Compton frequency?*, Class. Quant. Grav. **29**, 048002 (2012).
  - [A71] G. Faye, S. Marsat, L. Blanchet and B. R. Iyer, *The third and a half post-Newtonian gravitational wave quadrupole mode for quasi-circular inspiralling compact binaries*, Class. Quant. Grav. **29**, 175004 (2012).
  - [A72] L. Blanchet, A. Buonanno and A. Le Tiec, *First law of mechanics for binary black holes with spins*, Phys. Rev. D **87**, 024030 (2013).
  - [A73] L. Blanchet, D. Langlois, A. Le Tiec and S. Marsat, *Non-Gaussianity in the cosmic microwave background induced by dipolar dark matter*, Journal of Cosmology and Astroparticles **02**, 022 (2013).
  - [A74] S. Marsat, A. Bohé, G. Faye and L. Blanchet, *Next-to-next-to-leading order spin-orbit effects in the equations of motion of compact binary systems*, Class. Quant. Grav. **30**, 055007 (2013).
  - [A75] A. Bohé, S. Marsat, G. Faye and L. Blanchet, *Next-to-next-to-leading order spin-orbit effects in the near-zone metric and precession equations of compact binaries*, Class. Quant. Grav. **30**, 075017 (2013).
  - [A76] A. Bohé, S. Marsat and L. Blanchet, *Next-to-next-to-leading order spin-orbit effects in the gravitational wave flux and orbital phasing of compact binaries*, Class. Quant. Grav. **30**, 135009 (2013).
  - [A77] S. Marsat, A. Bohé, L. Blanchet and A. Buonanno, *Next-to-leading tail-induced spin-orbit effects in the gravitational radiation flux of compact binaries*, Class. Quant. Grav. **31**, 025023 (2013).
  - [A78] L. Blanchet, *Gravitational radiation from post-Newtonian sources and inspiralling compact binaries*, Liv. Rev. in Relat. **17**, 2 (2014).
  - [A79] L. Blanchet, G. Faye and B.F. Whiting, *Half-integral conservative post-Newtonian approximations in the redshift factor of black hole binaries*, Phys. Rev. D **89**, 064026 (2014).
  - [A80] L. Blanchet, G. Faye and B.F. Whiting, *High-order half-integral conservative post-Newtonian coefficients in the redshift factor of black hole binaries*, Phys. Rev. D **90**, 044017 (2014).
  - [A81] B. Altschul, Q.G. Bailey, L. Blanchet, K. Bongs, P. Bouyer, L. Cacciapuoti, S. Capozziello, N. Gaaloul, D. Giulini, J. Hartwig, L. Iess, P. Jetzer, A. Landragin, E. Rasel, S. Reynaud, S. Schiller, C. Schubert, F. Sorrentino, U. Sterr, J.D. Tasson, G.M. Tino, P. Tuckey and P. Wolf, *Quantum tests of the Einstein equivalence principle with the STE-QUEST space mission*, Adv. Space Research **55**, 501 (2015).
  - [A82] G. Faye, L. Blanchet and B.R. Iyer, *Non-linear multipole interactions and gravitational-wave octupole modes for inspiralling compact binaries to third-and-a-half post-Newtonian order*, Class. Quant. Grav. **32**, 045016 (2015).
  - [A83] L. Bernard and L. Blanchet, *Phenomenology of dark matter via a bimetric extension of general relativity*, Phys. Rev. D **91**, 103536 (2015).
  - [A84] L. Blanchet and L. Heisenberg, *Dark matter via massive bigravity*, Phys. Rev. D **91**, 103518 (2015).
  - [A85] L. Blanchet and L. Heisenberg, *Dipolar dark matter with massive bigravity*, J. of Cosmo. and Astropart. **12**, 026 (2015).
  - [A86] P. Wolf and L. Blanchet, *Analysis of Sun/Moon gravitational redshift tests with the STE-QUEST space mission*, Class. Quant. Grav. **33**, 035012 (2016).



- [A87] L. Bernard, L. Blanchet, A. Bohé, G. Faye and S. Marsat, *Fokker action of non-spinning compact binaries at the fourth post-Newtonian approximation*, Phys. Rev. D **93**, 084037 (2016).
- [A88] T. Marchand, L. Blanchet and G. Faye, *Gravitational-wave tail effects to quartic non-linear order*, Class. Quant. Grav. **33**, 244003 (2016).
- [A89] L. Bernard, L. Blanchet, A. Bohé, G. Faye and S. Marsat, *Energy and periastron advance of circular compact binary systems at the fourth post-Newtonian approximation*, Phys. Rev. D **95**, 044026 (2017).
- [A90] L. Blanchet and L. Heisenberg, *Dipolar dark matter as an effective field theory*, Phys. Rev. D **96**, 083512 (2017).
- [A91] L. Blanchet and A. Le Tiec, *First law of compact binary mechanics with gravitational-wave tails*, Class. Quant. Grav. **34**, 164001 (2017).
- [A92] L. Bernard, L. Blanchet, A. Bohé, G. Faye and S. Marsat, *Dimensional regularization of the IR divergences in the Fokker action of point-particle binaries at the fourth post-Newtonian order*, Phys. Rev. D **96**, 104043 (2017).
- [A93] T. Marchand, L. Bernard, L. Blanchet and G. Faye, *Ambiguity-free completion of the equations of motion of compact binary systems at the fourth post-Newtonian order*, Phys. Rev. D **97**, 044023 (2018).
- [A94] L. Bernard, L. Blanchet, G. Faye and T. Marchand, *Center-of-mass equations of motion and conserved integrals of compact binary systems at the fourth post-Newtonian order*, Phys. Rev. D **97**, 044037 (2018).
- [A95] L. Blanchet and A. Fokas, *Equations of motion of self-gravitating N-body systems in the first post-Minkowskian approximation*, Phys. Rev. D **98**, 084005 (2018).
- [A96] L. Blanchet and G. Faye, *Flux-Balance equations for linear momentum and center-of-mass position of self-gravitating post-Newtonian systems*, Class. Quant. Grav. **36**, 085003 (2019).
- [A97] L. Blanchet, *Analyzing Gravitational Waves with General Relativity*, Comptes Rendus Phys. **20**, 507 (2019).
- [A98] L. Blanchet, G. Hébrard and F. Larrouturou, *Detecting the General Relativistic Orbital Precession of the Exoplanet HD 80606b*, Astron. and Astrophys. **628**, A80 (2019).
- [A99] Q. Henry, G. Faye and L. Blanchet, *Tidal effects in the equations of motion of compact binary systems to next-to-next-to-leading post-Newtonian order*, Phys. Rev. D **101**, 064047 (2020).
- [A100] L. Blanchet, S. Foffa, F. Larrouturou and R. Sturani, *Logarithmic tail contributions to the energy function of circular compact binaries*, Phys. Rev. D **101**, 084045 (2020).
- [A101] T. Marchand, Q. Henry, F. Larrouturou, S. Marsat, G. Faye and L. Blanchet, *The mass quadrupole moment of compact binary systems at the fourth post-Newtonian order*, Class. Quant. Grav. **37**, 215006 (2020).
- [A102] Q. Henry, G. Faye and L. Blanchet, *Tidal effects in the gravitational-wave phase evolution of compact binary systems to next-to-next-to-leading post-Newtonian order*, submitted to Phys. Rev. D **102**, 044033 (2020).
- [A103] Q. Henry, G. Faye and L. Blanchet, *Hamiltonian for tidal interactions in compact binary systems to next-to-next-to-leading post-Newtonian order*, Phys. Rev. D **102**, 124074 (2020).
- [A104] L. Blanchet, G. Compère, G. Faye, R. Oliveri and A. Seraj, *Multipole expansion of gravitational waves: from harmonic to Bondi coordinates*, J. High Energy Phys. **02**, 029 (2021).
- [A105] Q. Henry, G. Faye and L. Blanchet, *The current-type quadrupole moment and gravitational-wave mode  $(l,m) = (2,1)$  of compact binary systems at the third post-Newtonian order*, Class. Quant. Grav. **38**, 185004 (2021).
- [A106] B. Battelier, J. Bergé, A. Bertoldi, L. Blanchet, K. Bongs, P. Bouyer, C. Braxmaier, D. Calonico, P. Fayet, N. Gaaloul et al., *Exploring the foundations of the physical universe*

with space tests of the equivalence principle, *Exp. Astron.* **51**, 1695 (2021).

- [A107] F. Larrouturou, Q. Henry, L. Blanchet and G. Faye, *The quadrupole moment of compact binaries to the fourth post-Newtonian order: I. Non-Locality in time and infra-red divergencies*, *Class. Quant. Grav.* **39**, 115007 (2022).
- [A108] F. Larrouturou, L. Blanchet, Q. Henry and G. Faye, *The quadrupole moment of compact binaries to the fourth post-Newtonian order: II. Dimensional regularization and renormalization*, *Class. Quant. Grav.* **39**, 115008 (2022).
- [A109] L. Bernard, L. Blanchet and D. Trestini, *Gravitational waves in scalar-tensor theory to one-and-a-half post-Newtonian order*, *J. of Cosmo. and Astropart.* **08**, 008 (2022).
- [A110] L. Blanchet, G. Faye and F. Larrouturou, *The quadrupole moment of compact binaries to the fourth post-Newtonian order: From source to canonical moment*, *Class. Quant. Grav.* **39**, 195003 (2022).
- [A111] D. Trestini, F. Larrouturou and L. Blanchet, *The quadrupole moment of compact binaries to the fourth post-Newtonian order: Relating the harmonic and radiative metrics*, *Class. Quant. Grav.* **40**, 055006 (2023).
- [A112] D. Trestini and L. Blanchet, *Gravitational-wave tails of memory*, *Phys. Rev. D* **107**, 104048 (2023).
- [A113] L. Blanchet, L. Heisenberg and F. Larrouturou, *Absence of gravitational polarization mechanism in the canonical bimetric theory*, *Phys. Rev. D* **107**, 124021 (2023).
- [A114] L. Blanchet, G. Compère, G. Faye, R. Oliveri and A. Seraj, *Multipole expansion of gravitational waves: memory effects and Bondi aspects*, to appear in *J. High Energy Phys.* (2023).
- [A115] L. Blanchet, G. Faye, Q. Henry, F. Larrouturou and D. Trestini, *Gravitational-wave phasing of compact binary systems to the fourth-and-a-half post-Newtonian order*, submitted to *Phys. Rev. Lett.* (2023).
- [A116] L. Blanchet, G. Faye, Q. Henry, F. Larrouturou and D. Trestini, *Gravitational wave flux and quadrupole modes from quasi-circular non-spinning compact binaries to the fourth post-Newtonian order*, submitted to *Phys. Rev. D* (2023).

### Contributions à des livres

- [B1] L. Blanchet, *L'astronomie gravitationnelle*, dans “Les Sciences du Ciel”, P. Léna (ed.), Flammarion, p. 108 (1995).
- [B2] L. Blanchet, *Gravitational radiation from relativistic sources*, in “Relativistic gravitation and gravitational radiation”, J.-P. Lasota and J.-A. Marck (eds.), Cambridge U. Press, p. 33 (1997).
- [B3] L. Blanchet, *Post-Newtonian gravitational radiation*, in “Einstein's field equations and their physical implications”, Selected essays in honour of J. Ehlers, B. Schmidt (ed.), Lecture Notes in Physics, Springer, p. 225 (2000).
- [B4] L. Blanchet, *On the two-body problem in general relativity*, in “Missions Spatiales en Physique Fondamentale”, C. Bordé and P. Touboul (eds.), Comptes Rendus de l'Académie des Sciences de Paris, t. 2, Série IV, 1343 (2001).
- [B5] L. Blanchet, *General relativistic dynamics of compact binary systems*, in “Observations of black holes and extreme gravitational events”, D. Rouan (ed.), Comptes Rendus de Physique **8**, 57 (2007).
- [B6] L. Blanchet, *Post-Newtonian theory and the two-body problem*, in “Mass and motion in general relativity”, L. Blanchet, A. Spallicci and B.F. Whiting (eds.), Springer (2010).
- [B7] L. Blanchet, S. Detweiler, A. Le Tiec and B.F. Whiting, *High-accuracy comparison between the post-Newtonian and self-force dynamics of black-hole binaries*, in “Mass and motion in general relativity”, L. Blanchet, A. Spallicci and B.F. Whiting (eds.), Springer (2010).
- [B8] L. Blanchet, *L'astronomie des ondes gravitationnelles*, dans “La Gravitation”, P. Brax,

E. Klein et P. Vanhove (eds.), Dunod (2018).

- [B9] L. Blanchet, *150 ans de Relativité et Gravitation*, dans “150 ans de la Société Française de Physique (SFP)”, EDP Sciences (2023).

### Publications dans des actes de colloques

- [C1] L. Blanchet, *Radiative gravitational fields and radiation reaction forces*, in “Gravitation, geometry and relativistic physics”, Lecture Notes in Physics **212**, 18 (1984).
- [C2] L. Blanchet, *Asymptotic simplicity for post-Minkowskian space-times*, in the Proc. of the 4<sup>th</sup> Marcel Grossmann meeting on general relativity, R. Ruffini (ed.), p. 895 (1986).
- [C3] L. Blanchet, *Beyond the quadrupole moment formalism*, in the Proc. of the 5<sup>th</sup> Marcel Grossmann meeting on general relativity, D. Blair, M.J. Buckingham and R. Ruffini (eds.), p. 1355 (1988).
- [C4] L. Blanchet, *Mixed post-Newtonian and multipolar-post-Minkowskian approximation methods*, in the Proc. of the 5<sup>th</sup> Marcel Grossmann meeting on general relativity, D. Blair, M.J. Buckingham and R. Ruffini (eds.), p. 461 (1988).
- [C5] L. Blanchet, *Gravitational radiation reaction*, in “Perspectives in Neutrinos, Atomic Physics and Gravitation”, Proc. of the XIII<sup>th</sup> Moriond workshop, J. Tran Thanh Van, T. Damour, E. Hinds and J. Wilkerson (eds.), éditions Frontières, p. 519 (1994).
- [C6] A. Bernard, L. Blanchet, R. Bonneville, A. Brillet, P. Fayet, C. Salomon et C. Veillet, *La Physique Fondamentale*, dans “Prospectives en Sciences de l'Univers”, Compte-rendu du séminaire de prospective scientifique du C.N.E.S., St-Malo (1993).
- [C7] L. Blanchet, *Coalescing compact binaries and general relativity tests*, in “Relativity in General”, Proc. of the Spanish Relativity Meeting 93, M. Lorente and J. Diaz-Alonso (eds.), Editions Frontières, p. 37 (1993).
- [C8] L. Blanchet, *Gravitational radiation to 2PN order*, in the Proc. of the 7<sup>th</sup> Marcel Grossmann meeting on general relativity, R. Ruffini (ed.), (1994).
- [C9] L. Blanchet, *Cosmologies newtoniennes*, dans les comptes-rendus du colloque “Histoire et Actualité de la Cosmologie”, F. de Gandt et C. Vilain (eds.), p. 51 (1994).
- [C10] L. Blanchet, *Coalescing compact binaries to second-post-Newtonian order*, in the Proc. of the 17<sup>th</sup> Texas Symposium on Relativistic Astrophysics, H. Böhringer *et al.* (eds.), Annals of the New York Academy of Sciences, p. 507 (1994).
- [C11] L. Blanchet, *Analytic approximation and perturbation methods*, in the Proc. of the 14<sup>th</sup> International Conference on General Relativity and Gravitation (GR14), M. Francaviglia *et al.* (eds.), World Scientific, p. 445 (1997).
- [C12] L. Blanchet, *Inspiraling compact binaries*, in the Proc. of the third International Conference on Gravitation and Cosmology, S. Dhurandhar and T. Padmanabhan (eds.), Kluwer, p. 75 (1997).
- [C13] L. Blanchet, *Gravitational-wave sources*, in the Proc. of the 8<sup>th</sup> Marcel Grossmann meeting on general relativity, T. Piran and R. Ruffini (eds.), World Scientific, p. 1078 (1999).
- [C14] L. Blanchet, *Binary signal modelling*, in the Proc. of the second Gravitational-Wave Data Analysis Workshop, M. Davier and P. Hello (eds.), Editions Frontières, p. 67 (1997).
- [C15] L. Blanchet and B.R. Iyer, *Analytic approximation and perturbation methods*, in the Proc. of the 15<sup>th</sup> International Conference on General Relativity and Gravitation, N. Dadlich and J. Narlikar (eds.), IUCAA publishing, p. 403 (1998).
- [C16] C. Audouin, A. Bernard, L. Blanchet, C. Bordé, A. Brillet, A. Clairon, P. Fayet, M. Granveaud, F. Jamin-Changeart, S. Jullian, S. Léon, F. Mignard, S. Reynaud, C. Salomon, E. Samain, P. Touboul, P. Tournenc et J.-Y. Vinet, *L'expérimentation spatiale en physique fondamentale*, dans “Prospectives en Sciences de l'Univers”, Compte-rendu du séminaire de prospective scientifique du C.N.E.S., Arcachon (1998).
- [C17] L. Blanchet, *Post-Newtonian expansion of gravitational radiation*, in “Black holes

- and gravitational waves”, Proc. of the 9<sup>th</sup> Yukawa International Seminar, T. Nakamura and H. Kodama (eds.), Progress in Theoretical Physics supplement **136**, 146 (1999).
- [C18] L. Blanchet, *Post-Newtonian computation of binary inspiral waveforms*, in “Gravitational waves”, Proc. of the Como School, V. Gorini *et al.* (eds.), Institute of Physics Publ., p. 338 (2001).
  - [C19] L. Blanchet, S. Kopeikin and G. Schäfer, *Gravitational radiation theory and light propagation*, in “Gyros, clocks, interferometers ... : testing relativistic gravity in space”, Proc. of the International school on Gravity experiments in Space and Gravitational Waves, C. Laemmerzhals, F. Everitt and F. Hehl (eds.), Springer, p. 141 (2001).
  - [C20] L. Blanchet, *Gravitational waves and dynamics of compact binary systems*, in “General relativity and gravitation”, Proc. of the 16<sup>th</sup> International Conference on General Relativity and Gravitation, N.T. Bishop and S.D. Maharaj (eds.), World Scientific, p. 54 (2002).
  - [C21] L. Blanchet, *On the accuracy of the post-Newtonian approximation*, in “2001: a relativistic spacetime odyssey”, Proc. of the 25<sup>th</sup> John Hopkins Workshop, Ignacio Ciufolini and L.a Lusanna (eds.), World Scientific, p. 411 (2002).
  - [C22] L. Blanchet, *Post-Newtonian theory and its application*, Proc. of the 12<sup>th</sup> Workshop on General Relativity and Gravitation, M. Shibata, Y. Eriguchi and K. Taniguchi (eds.), p. 8 (2003).
  - [C23] L. Blanchet, Equations of motion of compact binaries at the third post-Newtonian order, in “Gravitation and Cosmology”, Proc. of the International Conference on Gravitation and Cosmology (ICGC-2004), B.R. Iyer, V. Kuriakose and C.V. Vishveshwara (eds.), Pramana, The Indian Journal of Physics, p. 685 (2004).
  - [C24] L. Blanchet, *Gravitational radiation from two-body systems*, in the Proc. of the Spanish Relativity “A century of relativity physics” (ERE05), L. Mornas and J. Diaz-Alonso (eds.), AIP conference Proc., p. 10 (2006).
  - [C25] L. Blanchet, *Post-Newtonian theory and dimensional regularization*, in the Proc. of the “Albert Einstein Century International Conference”, J.-M. Alimi (ed.), AIP conference Proc., vol. 861, p. 145 (2006).
  - [C26] L. Blanchet, L. Grishchuk and G. Schäfer, *Post-Newtonian approximations, compact binaries, and strong-field tests of gravity*, in the Proc. of the 11<sup>th</sup> Marcel Grossmann meeting on general relativity, Berlin (2007).
  - [C27] P. Jaranowski, K.G. Arun, L. Barack, L. Blanchet, A. Buonanno, M.F. De Laurentis, S. Detweiler, H. Dittus, M. Favata, G. Faye, J.L. Friedman *et al.*, *Analytic approximations, perturbation methods, and their applications*, in the Proc. of the 18<sup>th</sup> international conference on general relativity (GR18), Sydney (2007).
  - [C28] L. Blanchet and A. Le Tiec, *Phenomenology of the modified Newtonian dynamics and the concordance cosmological scenario*, in the Proc. of the 43<sup>th</sup> rencontres de Moriond, J. Dumarchez, Y. Giraud-Heraud and J. Tran Thanh Van (eds.), La Thuile, Italy (2008).
  - [C29] L. Blanchet and J. Novak, *Testing MOND in the Solar system*, in the Proc. of the 46<sup>th</sup> rencontres de Moriond “Gravitational Waves and Experimental Gravity”, J. Dumarchez and J. Tran Thanh Van (eds.), La Thuile, Italy (2011).
  - [C30] P. Wolf, L. Blanchet, C.J. Bordé, S. Reynaud, C. Salomon and C. Cohen-Tannoudji, *Testing the gravitational redshift with atomic gravimeters?*, in the Proc. of the joint European Time and Frequency Forum and IEEE Frequency Control Symposium (2011).
  - [C31] P. Wolf, L. Blanchet, C.J. Bordé, S. Reynaud, C. Salomon and C. Cohen-Tannoudji, *Atom interferometry and the Einstein equivalence principle*, in the Proc. of the 46<sup>th</sup> rencontres de Moriond “Gravitational Waves and Experimental Gravity”, J. Dumarchez and J. Tran Thanh Van (eds.), La Thuile, Italy (2011).
  - [C32] L. Blanchet and S. Marsat, *Relativistic MOND theory based on the Khronon scalar field*, in the Proc. of the X<sup>th</sup> International Conference on Gravitation, Astrophysics and Cosmology (ICGAC10), R. Triay and L. Celnikier (eds.), Vietnam (2011).



- [C33] L. Blanchet, A. Buonanno and G. Faye, *Third post-Newtonian spin-orbit effect in the gravitational radiation flux of compact binaries*, in the Proc. of the LISA symposium 2012, G. Auger and E. Plagnol (eds.), Paris (2012).
- [C34] G. Faye, S. Marsat, L. Blanchet and B.R. Iyer, *Post-Newtonian prediction for the (2,2) mode of the gravitational wave emitted by compact binaries*, in the Proc. of the LISA symposium 2012, G. Auger and E. Plagnol (eds.), Paris (2012).
- [C35] S. Marsat, L. Blanchet, A. Bohé and G. Faye, *Gravitational waves from spinning compact object binaries: New post-Newtonian results*, in the Proc. of the conference Hot Topics in General Relativity and Gravitation, J. Dumarchez and R. Triay (eds.), Quy Nhon, Vietnam (2013).
- [C36] L. Blanchet, D. Langlois, A. Le Tiec and S. Marsat, *Dipolar dark matter and cosmology*, in the Proc. of the conference Hot Topics in General Relativity and Gravitation, J. Dumarchez and R. Triay (eds.), Quy Nhon, Vietnam (2013).
- [C37] L. Blanchet and L. Bernard, *Phenomenology of MOND and gravitational polarization*, in the Proc. of the second Workshop on “Antimatter and Gravity” (WAG2), C. Amsler and P. Scampoli (eds.), Berne (2013).
- [C38] L. Blanchet, G. Faye and B. Whiting, *High-order comparisons between post-Newtonian and perturbative self forces*, in the Proc. of the 50<sup>th</sup> rencontres de Moriond “Gravitational Waves and Experimental Gravity”, J. Dumarchez and J. Tran Thanh Van (eds.), La Thuile, Italy (2015).
- [C39] L. Bernard, L. Blanchet and L. Heisenberg, *Bimetric gravity and dark matter*, in the Proc. of the 50<sup>th</sup> rencontres de Moriond “Gravitational Waves and Experimental Gravity”, J. Dumarchez and J. Tran Thanh Van (eds.), La Thuile, Italy (2015).
- [C40] L. Bernard, L. Blanchet, A. Bohé, G. Faye and S. Marsat, *Conservative dynamics of binary systems of compact objects at the fourth post-Newtonian order*, in the Proc. of the 52<sup>th</sup> rencontres de Moriond “Gravitational Waves and Experimental Gravity”, J. Dumarchez and J. Tran Thanh Van (eds.), La Thuile, Italy (2017).
- [C41] L. Blanchet, *Analytic Approximations in GR and Gravitational Waves*, in the Proc. of the 15<sup>th</sup> Marcel Grossmann meeting on general relativity, R. Ruffini (ed.), (2019).
- [C42] L. Blanchet, G. Faye, Q. Henry, F. Larrouturou and D. Trestini, *Gravitational waves from compact binaries to the fourth post-Newtonian order*, in the Proc. of the 57<sup>th</sup> rencontres de Moriond “Gravitational Waves and Experimental Gravity”, J. Dumarchez and J. Tran Thanh Van (eds.), La Thuile, Italy (2023).
- [C43] D. Trestini and L. Blanchet, *Gravitational-wave tails of memory at 4PN order*, in the Proc. of the 57<sup>th</sup> rencontres de Moriond “Gravitational Waves and Experimental Gravity”, J. Dumarchez and J. Tran Thanh Van (eds.), La Thuile, Italy (2023).

### Articles grand public

- [D1] L. Blanchet, *La relativité générale et la spirale infernale des systèmes binaires d'étoiles compactes*, Images de la Physique, éditions du C.N.R.S., p. 51 (2005).
- [D2] L. Blanchet, *Gravité modifiée ou matière modifiée?*, L'Astronomie, n° 14, p. 19 (2009).
- [D3] L. Blanchet et F. Combes, *MOND avec ou sans matière noire*, La Recherche, n° 435, p. 44 (2009).
- [D4] L. Blanchet et B. Famaey, *Matière noire et énergie noire: la gravitation à l'épreuve des grandes échelles*, La Recherche, n° 16, p. 70 (2015).
- [D5] L. Blanchet, *Les ondes gravitationnelles 100 ans après Einstein*, Reflets de la Physique, éditions du C.N.R.S., n° 52, p. 6 (2017).
- [D6] L. Blanchet, F. Daigne, M. Dennefeld et R. Mochkovitch, *Les débuts de l'astronomie multi-messagers: détection conjointe de l'onde gravitationnelle, d'un sursaut gamma et d'une kilonova, provenant de la fusion de deux étoiles à neutrons*, L'Astronomie, n° 111, p. 3 (2017).