

Frederic A. Rasio — Publication List

March 23, 2012

PUBLICATIONS

Publications in refereed journals are marked with a * following the number; invited conference papers are marked with a +; invited reviews are marked with a #.

The fifty most cited papers are highlighted with their title in boldface. The number of citations reported by the NASA Astrophysics Data System is given in square brackets following the title.

An online version of this list, including links to electronic copies of all papers in PDF format, is available at <http://faculty.wcas.northwestern.edu/rasio/>.

1. Solving the Collisionless Boltzmann Equation in General Relativity. Rasio, F.A., Shapiro, S.L., & Teukolsky, S.A. 1989, in *Dynamics of Dense Stellar Systems*, ed. D. Merritt (Cambridge: Cambridge Univ. Press), 121–130.
2. * On the Existence of Stable Relativistic Star Clusters with Arbitrarily Large Central Redshifts. Rasio, F.A., Shapiro, S.L., & Teukolsky, S.A. 1989, *Astrophysical Journal Letters*, **336**, L63–L66.
3. * What is Causing the Eclipse in the Millisecond Binary Pulsar? Rasio, F.A., Shapiro, S.L., & Teukolsky, S.A. 1989, *Astrophysical Journal*, **342**, 934–939.
4. * Solving the Vlasov Equation in General Relativity. Rasio, F.A., Shapiro, S.L., & Teukolsky, S.A. 1989, *Astrophysical Journal*, **344**, 146–157.
5. * Encounters between Compact Stars and Red Giants in Dense Stellar Systems. Rasio, F.A., & Shapiro, S.L. 1990, *Astrophysical Journal*, **354**, 201–210.
6. * Eclipse Mechanisms for Binary Pulsars. Rasio, F.A., Shapiro, S.L., & Teukolsky, S.A. 1991, *Astronomy & Astrophysics*, **241**, L25–L28.
7. * **Collisions of Giant Stars with Compact Objects: Hydrodynamical Calculations** [117]. Rasio, F.A., & Shapiro, S.L. 1991, *Astrophysical Journal*, **377**, 559–580.
8. * **An Observational Test for the Existence of a Planetary System** Orbiting PSR 1257+12. Rasio, F.A., Nicholson, P.D., Shapiro, S.L., & Teukolsky, S.A. 1992, *Nature*, **355**, 325–326.
9. * Formation of a ‘Planet’ by Rapid Evaporation of a Pulsar’s Companion. Rasio, F.A., Shapiro, S.L., & Teukolsky, S.A. 1992, *Astronomy & Astrophysics*, **256**, L35–L37.
10. * **Hydrodynamical Evolution of Coalescing Neutron Star Binaries** [121]. Rasio, F.A., & Shapiro, S.L. 1992, *Astrophysical Journal*, **401**, 226–245.
11. * **Hydrodynamic Instability and Coalescence of Close Binary Systems** [69]. Lai, D., Rasio, F.A., & Shapiro, S.L. 1993, *Astrophysical Journal Letters*, **406**, L63–L66.
12. * Collisions and Close Encounters between Massive Main-Sequence Stars. Lai, D., Rasio, F.A., & Shapiro, S.L. 1993, *Astrophysical Journal*, **412**, 593–611.
13. Orbital Evolution of the PSR 1257+12 Planetary System. Rasio, F.A., Nicholson, P.D., Shapiro, S.L., & Teukolsky, S.A. 1993, in *Planets around Pulsars*, ed. A. Philips, S. Thorsett, & S. Kulkarni (ASP Conference Series Vol. 36), 107–120.
14. * **Ellipsoidal Figures of Equilibrium: Compressible Models** [160]. Lai, D., Rasio, F.A., & Shapiro, S.L. 1993, *Astrophysical Journal Supplements*, **88**, 205–252.
15. * Hydrodynamic Stellar Interactions in Dense Star Clusters. Rasio, F.A. 1993, *Publications of the Astronomical Society of the Pacific*, **105**, 973–976.

16. Hydrodynamic Instabilities in Close Binary Systems and the Formation of Blue Stragglers. Rasio, F.A. 1993, in *Blue Stragglers*, ed. R.A. Saffer (ASP Conference Series Vol. 53), 196–200.
17. * **Hydrodynamic Instability and Coalescence of Binary Neutron Stars** [100]. Lai, D., Rasio, F.A., & Shapiro, S.L. 1994, *Astrophysical Journal*, **420**, 811–829.
18. * **Equilibrium, Stability, and Orbital Evolution of Close Binary Systems**. Lai, D., Rasio, F.A., & Shapiro, S.L. 1994, *Astrophysical Journal*, **423**, 344–370.
19. * Is there a Planet in the PSR 1620–26 Triple System? Rasio, F.A. 1994, *Astrophysical Journal Letters*, **427**, L107–L110.
20. * **Collapse of Primordial Gas Clouds and the Formation of Quasar Black Holes** [92]. Loeb, A., & Rasio, F.A. 1994, *Astrophysical Journal*, **432**, 52–61.
21. * **Hydrodynamics of Binary Coalescence. I. Polytropes with Stiff Equations of State** [119]. Rasio, F.A., & Shapiro, S.L. 1994, *Astrophysical Journal*, **432**, 242–261.
22. * A Possible Optical Counterpart for the Triple Pulsar System PSR B1620–26. Bailyn, C.D., Rubenstein, E.P., Girard, T.M., Dinescu, D.I., Rasio, F.A., & Yanny, B. 1994, *Astrophysical Journal Letters*, **433**, L89–L92.
23. # Hydrodynamics of Binary Coalescence. Rasio, F.A. 1994, in *Evolutionary Links in the Zoo of Interacting Binaries*, ed. F. D’Antona et al. (Memorie della Società Astronomica Italiana, Vol. 65), 37–48.
24. Explosions of Neutron Star Fragments Ejected during Binary Coalescence. Colpi, M., & Rasio, F.A. 1994, in *Evolutionary Links in the Zoo of Interacting Binaries*, ed. F. D’Antona et al. (Memorie della Società Astronomica Italiana, Vol. 65), 379–382.
25. * **Hydrodynamics of Rotating Stars and Close Binary Interactions: Compressible Ellipsoid Models**. Lai, D., Rasio, F.A., & Shapiro, S.L. 1994, *Astrophysical Journal*, **437**, 742–769.
26. Hydrodynamical Instability and Orbital Evolution of Close Binary Systems. Lai, D., Rasio, F.A., & Shapiro, S.L. 1994, in *The Evolution of X-ray Binaries*, ed. S. Holt (AIP Conference Series Vol. 308), 303–306.
27. * Binary–Binary Interactions and the Formation of the PSR B1620–26 Triple System in M4. Rasio, F.A., McMillan, S., & Hut, P. 1995, *Astrophysical Journal Letters*, **438**, L33–L36.
28. * **Hydrodynamics of Binary Coalescence. II. Polytropes with $\Gamma=5/3$** [109]. Rasio, F.A., & Shapiro, S.L. 1995, *Astrophysical Journal*, **438**, 887–903.
29. Secular Evolution of the Eccentricity in the PSR1620–26 Triple System. Rasio, F.A. 1995, in *Millisecond Pulsars: A Decade of Surprise*, ed. D. Backer et al. (ASP Conference Series Vol. 72), 424–428.
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32. * The Orbital Eccentricities of Binary Millisecond Pulsars in Globular Clusters. Rasio, F.A., & Heggie, D. 1995, *Astrophysical Journal Letters*, **445**, L133–L135.
33. # Hydrodynamic Evolution of Coalescing Compact Binaries. Rasio, F.A., & Shapiro, S.L. 1996, in *Compact Stars in Binaries*, Proceedings of IAU Symposium 165, ed. J. van Paradijs et al. (Dordrecht: Kluwer), 17–28.
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36. # Hydrodynamics of Stellar Mergers and the Formation of Blue Stragglers. Rasio, F.A. 1996, in *The Origins, Evolution, and Destinies of Binary Stars in Clusters*, ed. E.F. Milone & J.-C. Mermilliod (ASP Conference Series Vol. 90), 368–377.
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58. # Particle Methods in Astrophysical Fluid Dynamics. Rasio, F.A. 2000, in *Proceedings of the 5th International Conference on Computational Physics (ICCP5)*, ed. Y. Hiwatari et al. (Progress of Theoretical Physics Supplement No. 138), 609–621.
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63. # Hydrodynamics of Neutron Star Mergers. Faber, J.A., & Rasio, F.A. 2001, in *Astrophysical Sources for Ground-Based Gravitational Wave Detectors*, ed. J.M. Centrella (AIP Conference Proceedings Vol. 575), 130–142.
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75. * **Dynamical Instabilities in Extrasolar Planetary Systems Containing Two Giant Planets** [82]. Ford, E.B., Havlickova, M., & Rasio, F.A. 2001, *Icarus*, **150**, 303–313.
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