

Bahram Mashhoon  
LIST OF PUBLICATIONS

1. "Particles with Spin in a Gravitational Field," (B. Mashhoon),  
*JOURNAL OF MATHEMATICAL PHYSICS* **12**, 1075-1077 (1971).
2. "Scattering of Electromagnetic Radiation from a Black Hole," (B. Mashhoon),  
*PHYSICAL REVIEW D* **7**, 2807-2814 (1973).
3. "Black Holes and Absorption Redshifts in Quasi-Stellar Objects," (B. Mashhoon),  
*ASTROPHYSICAL JOURNAL (LETTERS)* **181**, L65-L69 (1973).
4. "Tidal Gravitational Radiation," (B. Mashhoon)  
*ASTROPHYSICAL JOURNAL* **185**, 83-86 (1973).
5. "Electromagnetic Waves in an Expanding Universe," (B. Mashhoon),  
*PHYSICAL REVIEW D* **8**, 4297-4302 (1973).
6. "Electromagnetic Scattering from a Black Hole and the Glory Effect," (B. Mashhoon),  
*PHYSICAL REVIEW D* **10**, 1059-1063 (1974).
7. "Can Einstein's Theory of Gravitation be Tested Beyond the Geometrical Optics Limit?"  
(B. Mashhoon),  
*NATURE* **250**, 316 (1974).
8. "Massless Spinning Test Particles in a Gravitational Field," (B. Mashhoon),  
*ANNALS OF PHYSICS (N.Y.)* **89**, 254-257 (1975).
9. "On Tidal Phenomena in a Strong Gravitational Field," (B. Mashhoon),  
*ASTROPHYSICAL JOURNAL* **197**, 705-716 (1975).
10. "Influence of Gravitation on the Propagation of Electromagnetic Radiation,"  
(B. Mashhoon),  
*PHYSICAL REVIEW D* **11**, 2679-2684 (1975).
11. "On a Spherical Star System with a Collapsed Core," (E. N. Glass and B. Mashhoon),  
*ASTROPHYSICAL JOURNAL* **205**, 570-577 (1976).
12. "Tidal Radiation," (B. Mashhoon),  
*ASTROPHYSICAL JOURNAL* **216**, 591-609 (1977).
13. "On Tidal Resonance," (B. Mashhoon),  
*ASTROPHYSICAL JOURNAL* **223**, 285-298 (1978).

14. "On the Detection of Gravitational Radiation by the Doppler Tracking of Spacecraft," (B. Mashhoon),  
*ASTROPHYSICAL JOURNAL* **227**, 1019-1036 (1979).
15. "On the Gravitational Collapse of a Charged Fluid Sphere," (B. Mashhoon and M. H. Partovi),  
*PHYSICAL REVIEW D* **20**, 2455-2468 (1979).
16. "On the Detection of a Stochastic Background of Gravitational Radiation by the Doppler Tracking of Spacecraft," (B. Mashhoon and L. P. Grishchuk),  
*ASTROPHYSICAL JOURNAL* **236**, 990-999 (1980).
17. "On the Gravitational Motion of a Fluid Obeying an Equation of State," (B. Mashhoon and M. H. Partovi),  
*ANNALS OF PHYSICS (N.Y.)* **130**, 99-138 (1980).
18. "The Influence of Cosmological Gravitational Waves on a Newtonian Binary System," (B. Mashhoon, B. J. Carr and B. L. Hu),  
*ASTROPHYSICAL JOURNAL* **246**, 569-591 (1981).
19. "On Massive Black Holes," (B. Mashhoon), in: "Proceedings of the Second Marcel Grossmann Meeting on Recent Developments of General Relativity", edited by R. Ruffini (North-Holland, New York, 1982), pp. 647-672.
20. "On the Contribution of a Stochastic Background of Gravitational Radiation to the Timing Noise of Pulsars," (B. Mashhoon),  
*MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY* **199**, 659-666 (1982).
21. "Relativistic Tidal Forces and the Possibility of Measuring Them," (B. Mashhoon and D. S. Theiss),  
*PHYSICAL REVIEW LETTERS* **49**, 1542-1545 (1982).
22. "Quasi-Normal Modes of a Black Hole," (B. Mashhoon), in: "Proceedings of the Third Marcel Grossmann Meeting on Recent Developments of General Relativity", edited by Hu Ning (North-Holland, New York, 1983), pp. 599-608.
23. "A New Gravitational Effect of a Rotating Mass," (B. Mashhoon), in: "Proc. Third Marcel Grossmann Meeting on General Relativity", edited by Hu Ning (Science Press and North-Holland, 1983), pp. 1505-1507.
24. "Toward Verification of Large-Scale Homogeneity in Cosmology," (M. H. Partovi and B. Mashhoon),  
*ASTROPHYSICAL JOURNAL* **276**, 4-12 (1984).
25. "Quasi-Normal Oscillations of a Schwarzschild Black Hole," (H. J. Blome and B. Mashhoon),  
*PHYSICS LETTERS A* **100**, 231-234 (1984).

26. "Oscillations of a Black Hole," (V. Ferrari and B. Mashhoon), *PHYSICAL REVIEW LETTERS* **52**, 1361-1364 (1984).
27. "On the Gravitational Effects of Rotating Masses: The Thirring-Lense Papers," (B. Mashhoon, F. W. Hehl and D. S. Theiss), *GENERAL RELATIVITY AND GRAVITATION* **16**, 711-750 (1984).  
Reprinted in: "*NONLINEAR GRAVITODYNAMICS*", edited by R. J. Ruffini and C. Sigismondi (World Scientific, Singapore, 2003), pp. 349 - 388.
28. "On a New Gravitational Effect of a Rotating Mass," (B. Mashhoon), *GENERAL RELATIVITY AND GRAVITATION* **16**, 311-316 (1984).
29. "A New Approach to the Quasinormal Modes of a Black Hole," (V. Ferrari and B. Mashhoon), *PHYSICAL REVIEW D* **30**, 295-304 (1984).
30. "Uniqueness of the Friedmann-Lemaitre-Robertson-Walker Universes," (B. Mashhoon and M. H. Partovi), *PHYSICAL REVIEW D* **30**, 1839-1842 (1984).
31. "Is the Universe Homogeneous on a Large Scale?" (B. Mashhoon), in: "The Big Bang and Georges Lemaitre," edited by A. Berger (Reidel, Dordrecht, 1984), pp. 75-81.
32. "Stability of Charged Rotating Black Holes in the Eikonal Approximation", (B. Mashhoon), *PHYSICAL REVIEW D* **31**, 290-293 (1985).
33. "Pioneer 10 Search for Gravitational Waves--Limits on a Possible Isotropic Cosmic Background of Radiation in the Microhertz Region," (J. D. Anderson and B. Mashhoon), *ASTROPHYSICAL JOURNAL* **290**, 445-448 (1985).
34. "Gravitational Effects of Rotating Masses," (B. Mashhoon), *FOUNDATIONS OF PHYSICS* **15**, 497-515 (1985).
35. "Exterior Gravitational Field of a Rotating Deformed Mass," (H. Quevedo and B. Mashhoon), *PHYSICS LETTERS A* **109**, 13-18 (1985).
36. "Influence of a Stochastic Background of Gravitational Waves on the Timing of Pulsars," (B. Mashhoon), *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY* **217**, 265-279 (1985).
37. "New Relativistic Effects in the Motion of the Moon," (B. Mashhoon), in : "*RELATIVITY IN CELESTIAL MECHANICS AND ASTROMETRY*" (IAU Symposium 114), edited by J. Kovalevsky and V. A. Brumberg (Reidel, Dordrecht, 1986), pp. 407-410.
38. "General Covariance and Quantum Theory," (B. Mashhoon), *FOUNDATIONS OF PHYSICS* **16**, 619-635 (1986).

Reprinted in: “*BETWEEN QUANTUM AND COSMOS*,” edited by W. H. Zurek, A. van der Merwe and W. A. Miller (Princeton University Press, Princeton, 1988).

39. “Gravitational Influence of the Rotation of the Sun on the Earth-Moon System,” (B. Mashhoon and D. S. Theiss), *PHYSICS LETTERS A* **115**, 333-337 (1986).
40. “Electrodynamics in a Linearly Accelerated System,” (B. Mashhoon), *PHYSICS LETTERS A* **122**, 67-72 (1987).
41. “Wave Propagation in a Gravitational Field,” (B. Mashhoon), *PHYSICS LETTERS A* **122**, 299-304 (1987).
42. “Complementarity of Absolute and Relative Motion,” (B. Mashhoon), *PHYSICS LETTERS A* **126**, 393-399 (1988).
43. “Detection of Gravitomagnetic Field Using an Orbiting Superconducting Gravity Gradiometer,” (H. J. Paik, B. Mashhoon and C. M. Will), in: “*EXPERIMENTAL GRAVITATIONAL PHYSICS*,” edited by P. F. Michelson, Hu En-ke and G. Pizzella (World Scientific, Singapore, 1988), pp. 229-244.
44. “Neutron Interferometry in a Rotating Frame of Reference,” (B. Mashhoon), *PHYSICAL REVIEW LETTERS* **61**, 2639-2642 (1988).
45. “Detection of the Gravitomagnetic Field Using an Orbiting Superconducting Gravity Gradiometer. I. Theoretical Principles,” (B. Mashhoon, H. J. Paik and C. M. Will), *PHYSICAL REVIEW D* **39**, 2825-2838 (1989).
46. “Gradiometry and Gravitomagnetic Field Detection,” (B. Mashhoon), in: “*RELATIVISTIC GRAVITATIONAL EXPERIMENTS IN SPACE*,” edited by R. W. Hellings (NASA Conference Publications 3046, 1989), pp. 132-136.
47. “Electrodynamics in a Rotating Frame of Reference,” (B. Mashhoon), *PHYSICS LETTERS A* **139**, 103-108 (1989).
48. “Limitations of Spacetime Measurements,” (B. Mashhoon), *PHYSICS LETTERS A* **143**, 176-182 (1990).
49. “The Hypothesis of Locality in Relativistic Physics,” (B. Mashhoon), *PHYSICS LETTERS A* **145**, 147-153 (1990).
50. “Exterior Gravitational Field of a Charged Rotating Mass with Arbitrary Quadrupole Moment,” (H. Quevedo and B. Mashhoon), *PHYSICS LETTERS A* **148**, 149-153 (1990).
51. “Rotating Gravitational Waves,” (B. Mashhoon and H. Quevedo),

- PHYSICS LETTERS A* **151**, 464-468 (1990).
52. "Pulsar Timing and Upper Limits on a Cosmic Background of Gravitational Waves," (B. Mashhoon and M. Seitz), *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY* **249**, 84-90 (1991).
53. "Cylindrically Symmetric Gravitational Waves with Rotational Properties," (H. Quevedo and B. Mashhoon), in: "*RELATIVITY AND GRAVITATION: CLASSICAL AND QUANTUM*" [Proc. SILARG VII] (World Scientific, Singapore, 1991), pp. 287-293.
54. "Relativistic Lunar Theory," (B. Mashhoon and D. S. Theiss), *NUOVO CIMENTO B* **106**, 545-571 (1991).
55. "A Generalization of Kerr Spacetime," (H. Quevedo and B. Mashhoon), *PHYSICAL REVIEW D* **43**, 3902-3906 (1991).
56. "On the Strength of a Gravitational Field," (B. Mashhoon), *PHYSICS LETTERS A* **163**, 7-14 (1992).
57. "Reply to Comment on Spin-Rotation-Gravity Coupling," (B. Mashhoon), *PHYSICAL REVIEW LETTERS* **68**, 3812 (1992).
58. "Quantum Theory and the Origin of Inertia," (B. Mashhoon), *FOUNDATIONS OF PHYSICS LETTERS* **6**, 545-560 (1993).
59. "On the Gravitational Analogue of Larmor's Theorem," (B. Mashhoon), *PHYSICS LETTERS A* **173**, 347-354 (1993).
60. "Accelerated Observers and Conformal Invariance," (B. Mashhoon), in: "*QUANTUM GRAVITY AND BEYOND: Essays in Honor of Louis Witten on His Retirement*," eds. F. Mansouri and J. Scanio (World Scientific, Singapore, 1993), pp. 257-271.
61. "Relativistic Tidal Impulse," (B. Mashhoon and J. C. McClune), *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY* **262**, 881-888 (1993).
62. "A Nonlocal Theory of Accelerated Observers," (B. Mashhoon), *PHYSICAL REVIEW A* **47**, 4498-4501 (1993).
63. "On the Relativity of Rotation," (B. Mashhoon), in: "*DIRECTIONS IN GENERAL RELATIVITY: Papers in Honor of Dieter Brill*," edited by B. L. Hu and T. A. Jacobson (Cambridge University Press, Cambridge, 1993), pp. 182-194.
64. "Standard Clocks, Interferometry, and Gravitomagnetism," (J. M. Cohen and B. Mashhoon), *PHYSICS LETTERS A* **181**, 353-358 (1993).
65. "On the Origin of Inertial Accelerations," (B. Mashhoon),

- NUOVO CIMENTO B* **109**, 187-199 (1994).
66. “Particle Masses and the Cosmological Constant in Kaluza-Klein Theory,” (B. Mashhoon, H. Liu and P. S. Wesson), *PHYSICS LETTERS B* **331**, 305-312 (1994).
67. “Nonlocal Electrodynamics,” (B. Mashhoon), in: “*COSMOLOGY AND GRAVITATION*,” [Proc. VII Brazilian School of Cosmology and Gravitation (Rio de Janeiro, August, 1993)], edited by M. Novello (Editions Frontières, Gif-sur-Yvette, 1994), pp. 245-295. E-print: <http://www.cosmologia.cbpf.br>
68. “On the Coupling of Intrinsic Spin with the Rotation of the Earth,” (B. Mashhoon), *PHYSICS LETTERS A* **198**, 9-13 (1995).
69. “A Machian Interpretation of the Cosmological Constant,” (H. Liu and B. Mashhoon), *ANNALEN DER PHYSIK* **4**, 565-582 (1995).
70. “Persistent Current in a Rotating Mesoscopic Ring,” (G. Vignale and B. Mashhoon), *PHYSICS LETTERS A* **197**, 444-448 (1995).
71. “Relativistic Tidal Accelerations,” (B. Mashhoon and H. Quevedo), *NUOVO CIMENTO B* **110**, 291-305 (1995).
72. “On the Spectrum of Oscillations of a Schwarzschild Black Hole,” (H. Liu and B. Mashhoon), *CLASSICAL AND QUANTUM GRAVITY* **13**, 233-251 (1996).
73. “Gravitational Ionization: Periodic Orbits of Binary Systems Perturbed by Gravitational Radiation,” (C. Chicone, B. Mashhoon and D. G. Retzloff), E-print: gr-qc/9508065, *ANNALES DE L’INSTITUT HENRI POINCARÉ – PHYSIQUE THEORIQUE* **64**, 87-125 (1996).
74. “On the Ionization of a Keplerian Binary System by Periodic Gravitational Radiation,” (C. Chicone, B. Mashhoon and D. G. Retzloff), E-print: gr-qc/9605031, *JOURNAL OF MATHEMATICAL PHYSICS* **37**, 3997-4016 (1996).  
“Addendum,” (C. Chicone, B. Mashhoon and D. G. Retzloff), *JOURNAL OF MATHEMATICAL PHYSICS* **38**, 544 (1997).
75. “A Theory of Space, Time and Matter,” (P. S. Wesson, J. Ponce de Leon, H. Liu, B. Mashhoon, D. Kalligas, C. W. F. Everitt, A. Billyard, P. Lim and J. Overduin), *INTERNATIONAL JOURNAL OF MODERN PHYSICS A* **11**, 3247-3255 (1996).
76. “Space-Time-Matter,” (B. Mashhoon, H. Liu and P. S. Wesson), in: “Proc. Seventh Marcel Grossmann Meeting on General Relativity” (Stanford, July 24-30, 1994), edited by R. T. Jantzen and G. Mac Keiser (World Scientific, Singapore, 1996), pp. 333-335.

77. "Foundations of General Relativity," (B. Mashhoon), in: "Proc. Seventh Regional Conference on Mathematical Physics" [International (UNESCO) Caspian Conference (October, 1995)], edited by F. Ardalan, H. Arfaei and S. Rouhani (IPM Publications, 1997), pp. 163-172.
78. "Gravitational Ionization: A Chaotic Net in the Kepler System," (C. Chicone, B. Mashhoon and D. G. Retzloff), E-print: gr-qc/9608054, *CLASSICAL AND QUANTUM GRAVITY* **14**, 699-723 (1997).
79. "Gravitational Superenergy Tensor," (B. Mashhoon, J. C. McClune and H. Quevedo), E-print: gr-qc/9609018, *PHYSICS LETTERS A* **231**, 47-51 (1997).
80. "Evolutionary Dynamics While Trapped in Resonance: A Keplerian Binary System Perturbed by Gravitational Radiation," (C. Chicone, B. Mashhoon and D. G. Retzloff), E-print: grqc/9612040, *CLASSICAL AND QUANTUM GRAVITY* **14**, 1831-1850 (1997).
81. "Clocks and General Relativity," (B. Mashhoon), in: "Proc. Workshop on the Scientific Applications of Clocks in Space," (Pasadena, November 7-8, 1996), edited by L. Maleki (JPL Publication 97-15, NASA, 1997), pp. 41-48.
82. "The (Im)possibility of Detecting a Fifth Dimension", (P.S. Wesson, B. Mashhoon and H.Liu), *MODERN PHYSICS LETTERS A* **12**, 2309-2316 (1997).
83. "Measurement Theory and General Relativity", (B. Mashhoon), in: "*BLACK HOLES: THEORY AND OBSERVATION*", edited by F.W. Hehl, C. Kiefer and R. Metzler (Springer, Berlin, 1998), pp. 269-284; E-print: gr-qc/0003014, *LECTURE NOTES IN PHYSICS* **514**, 269-284 (2003).
84. "Observable Frequency Shifts via Spin-Rotation Coupling," (B. Mashhoon, R. Neutze, M. Hannam and G.E. Stedman), E-print: gr-qc/9808077, *PHYSICS LETTER A* **249**, 161-166 (1998).
85. "Dynamics in Kaluza-Klein Gravity and a Fifth Force," (B. Mashhoon, P. S. Wesson and H. Liu), *GENERAL RELATIVITY AND GRAVITATION* **30**, 555-572 (1998).
86. "On Measuring Gravitomagnetism via Spaceborne Clocks: A Gravitomagnetic Clock Effect," (B. Mashhoon, F. Gronwald and D. S. Theiss), E-print: gr-qc/9804008, *ANNALEN DER PHYSIK* **8**, 135-152 (1999).
87. "Chaos in the Kepler System," (C. Chicone, B. Mashhoon and D. G. Retzloff), E-print: gr-qc/9806107, *CLASSICAL AND QUANTUM GRAVITY* **16**, 507-527 (1999).

88. “On the Gravitoelectromagnetic Stress-Energy Tensor,” (B. Mashhoon, J. C. McClune, and H. Quevedo), E-print: gr-qc/9805093,  
*CLASSICAL AND QUANTUM GRAVITY* **16**, 1137-1148 (1999).
89. “On the Spin-Rotation-Gravity Coupling,” (B. Mashhoon), in: Proceedings of the Mexican Meeting on Gauge Theories of Gravity, E-print: gr-qc/9803017,  
*GENERAL RELATIVITY AND GRAVITATION* **31**, 681-691 (1999).
90. “Chaos in the Hill System,” (C. Chicone, B. Mashhoon and D. G. Retzlöff), E-print: grqc/9912015,  
*HELVETICA PHYSICA ACTA* **72**, 123-157 (1999).
91. “Fifth Force from Fifth Dimension,” (P.S. Wesson, B. Mashhoon, H. Liu and W. N. Sajko),  
*PHYSICS LETTERS B* **456**, 34-37 (1999).
92. “On Detecting the Gravitomagnetic Field of the Earth by Means of Orbiting Clocks,” (H.I.M. Lichtenegger, F. Gronwald and B. Mashhoon), E-print: gr-qc/980017,  
*ADVANCES IN SPACE RESEARCH* **25**, 1255-1258 (2000).
93. “Rotating Cylindrical Systems and Gravitomagnetism,” (B. Mashhoon and N. O. Santos),  
E-print: gr-qc/9807063,  
*ANNALEN DER PHYSIK* **9**, 49-63 (2000).
94. “On a Class of Rotating Gravitational Waves,” (B. Mashhoon, J. C. McClune, and H. Quevedo), E-print: gr-qc/9609017,  
*CLASSICAL AND QUANTUM GRAVITY* **17**, 533-549 (2000).
95. “Sustained Resonance: A Binary System Perturbed by Gravitational Radiation,” (C. Chicone, B. Mashhoon and D. G. Retzlöff), E-print: gr-qc/9911123,  
*JOURNAL OF PHYSICS A: MATHEMATICAL AND GENERAL* **33**, 513-530 (2000).
96. “Spacetime Measurements in Kaluza-Klein Gravity,” (H. Liu and B. Mashhoon),  
E-print: gr-qc/0005079,  
*PHYSICS LETTERS A* **272**, 26-31 (2000).
97. “Gravitational Couplings of Intrinsic Spin,” (B. Mashhoon), E-print: gr-qc/0003022,  
*CLASSICAL AND QUANTUM GRAVITY* **17**, 2399-2409 (2000).
98. “Acceleration-Induced Nonlocal Electrodynamics in Minkowski Spacetime,” (U. Muench, F. W. Hehl and B. Mashhoon), E-print: gr-qc/0003093,  
*PHYSICS LETTERS A* **271**, 8-15 (2000).
99. “Relativistic Effects in the Motion of the Moon,” (B. Mashhoon and D.S. Theiss), in: “*GYROS, CLOCKS, INTERFEROMETERS...: TESTING RELATIVISTIC GRAVITY IN SPACE*,” edited by C. Lämmerzahl, C.W.F. Everitt and F.W. Hehl (Springer, Berlin, 2001), pp. 310-316;  
E-print: gr-qc/0003077,



*LECTURE NOTES IN PHYSICS* **562**, 310-316 (2001).

100. “Gravitomagnetism and the Clock Effect,” (B. Mashhoon, F. Gronwald and H.I.M. Lichtenegger), in: “*GYROS, CLOCKS, INTERFEROMETERS...: TESTING RELATIVISTIC GRAVITY IN SPACE*,” edited by C. Lämmerzahl, C.W.F. Everitt and F.W. Hehl (Springer, Berlin, 2001), pp. 83-108; E-print: gr-qc/9912027, *LECTURE NOTES IN PHYSICS* **562**, 83-108 (2001).
101. “Relativity and Nonlocality,” (B. Mashhoon), E-print: gr-qc/0011013, in: “*REFERENCE FRAMES AND GRAVITOMAGNETISM*,” edited by J.-F. Pascual-Sanchez, L. Floria, A. San Miguel and F. Vicente (World Scientific, Singapore, 2001), pp. 133-144.
102. “Gravitoelectromagnetism,” (B. Mashhoon), E-print: gr-qc/0011014, in: “*REFERENCE FRAMES AND GRAVITOMAGNETISM*,” edited by J.-F. Pascual-Sanchez, L. Floria, A. San Miguel and F. Vicente (World Scientific, Singapore, 2001), pp. 121-132.
103. “Gravitomagnetism and Relative Observer Clock Effects,” (D. Bini, R.T. Jantzen and B. Mashhoon), E-print: gr-qc/0012065, *CLASSICAL AND QUANTUM GRAVITY* **18**, 653-670 (2001).
104. “Delay Equations and Radiation Damping,” (C. Chicone, S. M. Kopeikin, B. Mashhoon and D. G. Retzliff), E-print: gr-qc/0101122, *PHYSICS LETTERS A* **285**, 17-26 (2001).
105. “On the Gravitomagnetic Clock Effect,” (B. Mashhoon, L. Iorio and H. Lichtenegger), Eprint: gr-qc/0220055, *PHYSICS LETTERS A* **292**, 49-57 (2001).
106. “Cosmological Perturbations: A New Gauge-Invariant Approach,” (S.M. Kopeikin, J. Ramirez, B. Mashhoon and M. V. Sazhin), E-print: gr-qc/0106064, *PHYSICS LETTERS A* **292**, 173-180 (2001).
107. “Holonomy and Gravitomagnetism,” (R. Maartens, B. Mashhoon and D. Matravers), E-print: gr-qc/0104049, *CLASSICAL AND QUANTUM GRAVITY* **19**, 195-201 (2002).
108. “Spin and Rotation in General Relativity,” (L. H. Ryder and B. Mashhoon), E-print: gr-qc/102101, in: Proc. Ninth Marcel Grossmann Meeting (Rome, 2000), edited by V.G. Gurzadyan, R.T. Jantzen and R. Ruffini (World Scientific, Singapore, 2002), pp. 486-497.
109. “An Alternative Derivation of the Gravitomagnetic Clock Effect,” (L. Iorio, H.I.M. Lichtenegger and B. Mashhoon), E-print: gr-qc/0107002, *CLASSICAL AND QUANTUM GRAVITY* **19**, 39-49 (2002).

110. “Circular Holonomy and Clock Effects in Stationary Axisymmetric Spacetimes,” (D. Bini, R.T. Jantzen and B. Mashhoon), E-print: gr-qc/0111028, *CLASSICAL AND QUANTUM GRAVITY* **19**, 17-37 (2002).
111. “Acceleration –Induced Nonlocality: Kinetic Memory Versus Dynamic Memory,” (C. Chicone and B. Mashhoon), E-print: gr-qc/0110109, *ANNALEN DER PHYSIK* **11**, 309-332 (2002).
112. “Gravitomagnetic Effects in the Propagation of Electromagnetic Waves in Variable Gravitational Fields of Arbitrary-Moving and Spinning Bodies,” (Sergei Kopeikin and Bahram Mashhoon), E-print: gr-qc/0110101, *PHYSICAL REVIEW D* **65**, 064025- 20 pages (2002).
113. “Acceleration-Induced Nonlocality: Uniqueness of the Kernel,” (C. Chicone and B. Mashhoon), E-print: gr-qc/0202054, *PHYSICS LETTERS A* **298**, 229-235 (2002).
114. “The Generalized Jacobi Equation,” (C. Chicone and B. Mashhoon), E-print: gr-qc/0203073, *CLASSICAL AND QUANTUM GRAVITY* **19**, 4231-4248 (2002).
115. “Length Measurement in Accelerated Systems,” (B. Mashhoon and Uwe Muench), E-print: gr-qc/0206082, *ANNALEN DER PHYSIK* **11**, 532-547 (2002).
116. “Modification of the Doppler Effect due to the Helicity-Rotation Coupling,” (B. Mashhoon), E-print: gr-qc/0209079, *PHYSICS LETTERS A* **306**, 66-72 (2002).
117. “Gravitomagnetism in the Kerr-Newman-Taub-NUT spacetime,” (D. Bini, C. Cherubini, R.T. Jantzen and B. Mashhoon), E-print: gr-qc/0301055, *CLASSICAL AND QUANTUM GRAVITY* **20**, 457-468 (2003).
118. “Gravitation and Nonlocality,” (B. Mashhoon), E-print: gr-qc/0112058, in: Proc. 25<sup>th</sup> Johns Hopkins Workshop on Current Problems in Particle Theory: “2001: A Relativistic Spacetime Odyssey” (Florence, Italy, 2001), edited by I. Ciufolini, D. Dominici and L. Lusanna (World Scientific, Singapore, 2003), pp. 35-46.
119. “On the Gravitomagnetic Time Delay,” (I. Ciufolini, s. Kopeikin, B. Mashhoon, and F. Ricci), E-print: gr-qc/0210015, *PHYSICS LETTERS A* **308**, 101-109 (2003).
120. “Acceleration-Induced Nonlocality,” (B. Mashhoon), E-print: gr-qc/0301065, in: “Advances in General Relativity and Cosmology,” edited by G. Ferrarese (Pitagora, Bologna, 2003), pp. 323-334.
121. “Massless Field Perturbations and Gravitomagnetism in the Kerr-Taub-NUT Spacetime,”

- (D. Bini, C. Cherubini, R.T. Jantzen and B. Mashhoon), E-print: gr-qc/0301080,  
*PHYSICAL REVIEW D* **67**, 084013 --- 8 pages (2003).
122. “Standard Clocks, Orbital Precession and the Cosmological Constant,” (A. W. Kerr,  
J. C. Hauck and B. Mashhoon), E-print: gr-qc/0301057,  
*CLASSICAL AND QUANTUM GRAVITY* **20**, 2727-2736 (2003).
123. “Electromagnetic Waves in a Rotating Reference Frame,” (J. C. Hauck and B. Mashhoon),  
Eprint: gr-qc/0304069,  
*ANNALEN DER PHYSIK* **12**, 275-288 (2003).
124. “Pioneer Anomaly and the Helicity-Rotation Coupling,” (J.D. Anderson and B. Mashhoon),  
Eprint: gr-qc/0306024,  
*PHYSICS LETTERS A* **315**, 199-202 (2003).
125. “Vacuum Electrodynamics of Accelerated Systems : Nonlocal Maxwell’s Equations,” (B.  
Mashhoon), E-print: hep-th/0309124,  
*ANNALEN DER PHYSIK* **12**, 586-598 (2003).
126. “The Hypothesis of Locality and its Limitations,” (B. Mashhoon), E-print: gr-qc/0303029, in:  
“Relativity in Rotating Frames,” edited by G. Rizzi and M. L. Ruggiero (Kluwer Academic  
Publishers, Dordrecht, 2004), pp. 43-55.
127. “Dynamics of Relativistic Flows”, (C. Chicone, B. Mashhoon and B. Punsly),  
E-print: astro-ph/0308421,  
*INTERNATIONAL JOURNAL OF MODERN PHYSICS D* **13**, 945-959 (2004).
128. “Gauge-Dependent Cosmological “Constant”,” (B. Mashhoon and P. S. Wesson),  
E-print: gr-qc/0401002,  
*CLASSICAL AND QUANTUM GRAVITY* **21**, 3611-3620 (2004).
129. “Vacuum C Metric and the Gravitational Stark Effect”, (D. Bini, C. Cherubini and B.  
Mashhoon), E-print: gr-qc/0401071,  
*PHYSICAL REVIEW D* **70**, 044020 --- 7 pages (2004).
130. “Spin, Acceleration and Gravity”, (D. Bini, C. Cherubini and B. Mashhoon),  
E-print: gr- qc/0406061,  
*CLASSICAL AND QUANTUM GRAVITY* **21**, 3893-3908 (2004).
131. “Nonlocal Electrodynamics of Linearly Accelerated Systems”, (B. Mashhoon),  
E-print: hep-th/0407278,  
*PHYSICAL REVIEW A* **70**, 062103---7 pages (2004).
132. “Significance of  $c/\sqrt{2}$  in Relativistic Physics”, (C. Chicone and B. Mashhoon),  
E-print: gr-qc/0406118,  
*CLASSICAL AND QUANTUM GRAVITY* **21**, L139 - L144 (2004).

133. “Nonlocality of Accelerated Systems”, (B. Mashhoon), E-print: gr-qc/0305040,  
*INTERNATIONAL JOURNAL OF MODERN PHYSICS D* **14**, 171-179 (2005).
134. “Nonlocal Electrodynamics of Rotating Systems”, (B. Mashhoon), E-print: hep-th/0503205,  
*PHYSICAL REVIEW A* **72**, 052105---10 pages (2005).
135. “Beyond Gravitoelectromagnetism: Critical Speed in Gravitational Motion”  
(B. Mashhoon), E-print: astro-ph/0510002,  
*INTERNATIONAL JOURNAL OF MODERN PHYSICS D* **14**, 2025-2037 (2005).
136. “Tidal Dynamics of Relativistic Flows Near Black Holes”,  
(C. Chicone and B. Mashhoon), E-print: astro-ph/0404170,  
*ANNALEN DER PHYSIK* **14**, 290-308 (2005).
137. “Ultrarelativistic Motion: Inertial and Tidal Effects in Fermi Coordinates”,  
(C. Chicone and B. Mashhoon), E-print: gr-qc/0409017,  
*CLASSICAL AND QUANTUM GRAVITY* **22**, 195-205 (2005).
138. “Tidal Acceleration of Ultrarelativistic Particles”, (C. Chicone and B. Mashhoon),  
E-print: astro-ph/0406005,  
*ASTRONOMY & ASTROPHYSICS LETTERS* **437**, L39-L42 (2005).
139. “A Gravitational Mechanism for the Acceleration of Ultrarelativistic Particles”,  
(C. Chicone and B. Mashhoon), E-print: astro-ph/0502560.  
*ANNALEN DER PHYSIK* **14**, 751-763 (2005).
140. “Spinning Particles in the Vacuum C Metric”,  
(D. Bini, C. Cherubini, A. Geralico and B. Mashhoon), E-print: gr-qc/0411098,  
*CLASSICAL AND QUANTUM GRAVITY* **22**, 709-722 (2005).
141. “Inertial Effects of an Accelerating Black Hole”,  
(D. Bini, C. Cherubini and B. Mashhoon), E-print: gr-qc/0410098,  
*AIP CONFERENCE PROCEEDINGS* **751**, 37-45 (2005).
142. “Limitations of Radar Coordinates”, (D. Bini, L. Lusanna and B. Mashhoon),  
E-print: gr-qc/0409052,  
*INTERNATIONAL JOURNAL OF MODERN PHYSICS D* **14**, 1413-1429 (2005).
143. “Relativistic Motion of Spinning Particles in a Gravitational Field”,  
(C. Chicone, B. Mashhoon and B. Punsly), E-print: gr-qc/0504146,  
*PHYSICS LETTERS A* **343**, 1-7 (2005).
144. “A Mission to Explore the Pioneer Anomaly”,  
(The Pioneer Explorer Collaboration: H. Dittus, S.G. Turyshev, C. Lämmerzahl, S. Theil,  
R. Foerstner, U. Johann, W. Ertmer, E. Rasel, B. Dachwald, W. Seboldt, F.W. Hehl,

- C. Kiefer, H.-J. Blome, J. Kunz, D. Giulini, R. Bingham, B. Kent, T.J. Sumner, O. Bertolami, J. Páramos, J.L. Rosales, B. Christophe, B. Foulon, P. Touboul, P. Bouyer, S. Reynaud, A. Brillet, F. Bondu, E. Samain, C.J. de Matos, C. Erd, J.C. Grenouilleau, D. Izzo, A. Rathke, J.D. Anderson, S.W. Asmar, E.L. Lau, M.M. Nieto, B. Mashhoon), E-print: gr-qc/0506139, *ESA SPECIAL PUBLICATIONS* **588**, 3 - 10 (2005).
145. “Helicity-Rotation-Gravity Coupling for Gravitational Waves”, (Jairzinho Ramos and Bahram Mashhoon), E-print: gr-qc/0601054, *PHYSICAL REVIEW D* **73**, 084003---11 pages (2006).
146. “Tidal Dynamics in Kerr Spacetime”, (C. Chicone and B. Mashhoon), E-print: gr-qc/0602071, *CLASSICAL AND QUANTUM GRAVITY* **23**, 4021 - 4033 (2006).
147. “Inertia of Intrinsic Spin”, (Bahram Mashhoon and Helmut Kaiser), E-print: quantum-ph/0508182, *PHYSICA B* **385-386**, 1381-1383 (2006).
148. “Quantum Theory in Accelerated Frames of Reference”, (Bahram Mashhoon), E-print: hep-th/0507157, *LECTURE NOTES IN PHYSICS* **702**, 112-132 (2006).
149. “The Gravitomagnetic Clock Effect and its Possible Observation”, (H.I.M. Lichtenegger, L. Iorio and B. Mashhoon), E-print: gr-qc/0211108, *ANNALEN DER PHYSIK* **15**, 868-876 (2006).
150. “Explicit Fermi Coordinates and Tidal Dynamics in de Sitter and Goedel Spacetimes”, (C. Chicone and B. Mashhoon), E-print: gr-qc/0511129, *PHYSICAL REVIEW D* **74**, 064019---13 pages (2006).
151. “Dynamics of Extended Spinning Masses in a Gravitational Field”, (Bahram Mashhoon and Dinesh Singh), E-print: astro-ph/0608278, *PHYSICAL REVIEW D* **74**, 124006---12 pages (2006).
152. “Mach’s Principle”, (H. Lichtenegger and B. Mashhoon), E-print: physics/0407078, in: *THE MEASUREMENT OF GRAVITOMAGNETISM: A CHALLENGING ENTERPRISE*, edited by L. Iorio (NOVA Science, Hauppauge, New York, 2007), ch. 2.
153. “Gravitoelectromagnetism: A Brief Review”, (B. Mashhoon), E-print: gr-qc/0311030, in: *THE MEASUREMENT OF GRAVITOMAGNETISM: A CHALLENGING ENTERPRISE*, edited by L. Iorio (NOVA Science, Hauppauge, New York, 2007), ch. 3.

154. “Toward a Nonlocal Theory of Gravitation”, (Bahram Mashhoon),  
E-print: hep-th/0608010,  
*ANNALEN DER PHYSIK* **16**, 57-66 (2007).
155. “Nonlocal Dirac Equation for Accelerated Observers”, (Bahram Mashhoon),  
E-print: hep-th/0611319,  
*PHYSICAL REVIEW A* **75**, 042112---7 pages (2007).
156. “An Embedding for General Relativity and its Implications for New Physics”,  
(Bahram Mashhoon and Paul Wesson), E-print: arXiv:0705.0067 [gr-qc],  
*GENERAL RELATIVITY AND GRAVITATION* **39**, 1403-1412 (2007).
157. “Decaying Dark Energy in Higher-Dimensional Gravity”,  
(J.M. Overduin, P.S. Wesson and B. Mashhoon), E-print: arXiv:0707.3148[astro-ph],  
*ASTRONOMY & ASTROPHYSICS* **473**, 727 - 731 (2007).
158. “Nonlocal Electrodynamics of Accelerated Systems”,  
(Bahram Mashhoon), E-print: hep-th/0702074,  
*PHYSICS LETTERS A* **366**, 545-549 (2007).
159. “Tidal dynamics in Cosmological Spacetimes”, (Bahram Mashhoon, Nader Mobed  
and Dinesh Singh), E-print: arXiv:0705.1312 [gr-qc],  
*CLASSICAL AND QUANTUM GRAVITY* **24**, 5031- 5046 (2007).
160. “Nonlocal Lagrangians for Accelerated Systems”, (C. Chicone and B. Mashhoon),  
E-print: arXiv:0708.2744 [hep-th],  
*ANNALEN DER PHYSIK* **16**, 811-823 (2007).
161. “Spin-Gravity Coupling”, (B. Mashhoon), E-print: arXiv:0801.2134 [gr-qc],  
*ACTA PHYSICA POLONICA B, PROCEEDINGS SUPPLEMENT* **1**, 113-122 (2008).
162. “Time-Varying Gravitomagnetism”, (B. Mashhoon), E-print: arXiv:0802.1356 [gr-qc],  
*CLASSICAL AND QUANTUM GRAVITY* **25**, 085014---8 pages (2008).
163. “Gravitational Induction”, (D. Bini, C. Cherubini, C. Chicone and B. Mashhoon),  
E-print: arXiv:0803.0390 [gr-qc],  
*CLASSICAL AND QUANTUM GRAVITY* **25**, 225014---14 pages (2008).
164. “Nonlocal Special Relativity”, (Bahram Mashhoon), E-print: arXiv: 0805.2926 [gr-qc],  
*ANNALEN DER PHYSIK* **17**, 705-727 (2008).
165. “Time-Varying Lense-Thirring System”, (C. Chicone and B. Mashhoon),  
E-print: arXiv:0806.2857 [gr-qc],  
*CLASSICAL AND QUANTUM GRAVITY* **25**, 225003---11 pages (2008).

166. "Cosmology with Decaying Dark Energy and Cosmological "Constant"", (P.S. Wesson, B. Mashhoon and J.M. Overduin), submitted.

#### CONTRIBUTED PAPERS AND ABSTRACTS

1. "Kerr Black Holes and the Problem of Jet Formation in Radio Galaxies," (B. Mashhoon), *Bull. Am. Phys. Soc.* **16**, 34 (1971).
2. "Scattering of Electromagnetic Radiation by a Schwarzschild Black Hole," (B. Mashhoon), *Bull. Am. Phys. Soc.* **17**, 450 (1972).
3. "Electromagnetic Scattering from a Black Hole," (Philip Marcus and Bahram Mashhoon), *Bull. Am. Phys. Soc.* **19**, 507 (1974).
4. "On Using the Solar System to Detect a Stochastic and Isotropic Background of Gravitational Waves," (B. Mashhoon, J. D. Anderson, D. L. Cain and M. S. W. Keeseey), Tenth Texas Symposium on Relativistic Astrophysics (1980).
5. "Absorption of Gravitational Radiation," (B. Mashhoon), *GRG Abstracts*, Jena Meeting (1980), pp. 188-189.
6. "Oscillations of a Black Hole," (B. Mashhoon), *Mitt. Astron. Ges.* **58**, 164-165 (1983).
7. "Spacetime Curvature Generated by Electromagnetic Waves," (B. Mashhoon), Am. Math. Soc. Meeting, Columbia, Missouri (1985).
8. "The Gravitational "Magnetic" Field of the Earth and the Possibility of Measuring it Using an

- Orbiting Gravity Gradiometer,” (B. Mashhoon), in: “Proc. Fifteenth Annual Gravity Gradiometry Conference”, Colorado Springs (1987).
9. “Gravitational Singularities,” (B. Mashhoon), Am. Math. Soc. Meeting, Lawrence, Kansas (1988).
  10. “Detection of the Gravitomagnetic Field Using an Orbiting Superconducting Gravity Gradiometer: Sources of Error,” (C. M. Will, H. J. Paik and B. Mashhoon), *Bull. Am. Phys. Soc.* **34**, 1142 (1989).
  11. “Gravitation,” (J. M. A. Danby and B. Mashhoon), McGraw-Hill Encyclopedia of Science and Technology, 7th edition (McGraw-Hill, New York, 1992), vol. 8, pp. 206-213; revised in 9th edition (2000).
  12. “Gravity Gradiometry,” (B. Mashhoon), 1991 Yearbook of Science and Technology (McGraw-Hill, New York, 1990), pp. 173-176.
  13. “Spectrum of Black-Hole Resonances,” (H. Liu and B. Mashhoon), 7th Pacific Coast Gravity Meeting (March 8-9, 1991).
  14. “Strength of a Gravitational Field,” (B. Mashhoon), First Midwest Geometry Conference (University of Kansas, May 3-4, 1991).
  15. “Nonlocal Theory of Accelerated Systems,” (B. Mashhoon), Third Midwest Geometry Conference (University of Missouri-Columbia, April 30-May 2, 1993).
  16. “Perturbation Theory in General Relativity,” (B. Mashhoon), in: First International Symposium on Mathematical and Physical Foundations of Geodesy (Stuttgart, September 7-9, 1993).
  17. “Proceedings of the Mexican Meeting on Gauge Theories of Gravity (Mexico City, October 6-10, 1997),” edited by C. Lämmerzahl, B. Mashhoon, E.W. Mielke, and Y. Ne’eman, *Gen. Rel. Grav.* **31**, 579 - 814 (1999).
  18. “Special Issue : Mexican Meeting on Gauge Theories of Gravity - Preface,” (C. Lämmerzahl, B. Mashhoon, E.W. Mielke, and Y. Ne’eman), *Gen. Rel. Grav.* **31**, 579 - 580 (1999).
  19. “Friedrich W. Hehl: Brief Biography,” (C. Lämmerzahl, B. Mashhoon, E.W. Mielke, and Y. Ne’eman), *Gen. Rel. Grav.* **31**, 581-592 (1999).
  20. “Some Aspects on the Observation of the Gravitomagnetic Clock Effect,” (H. Lichtenegger, W. Hausleitner, F. Gronwald and B. Mashhoon), E-print: gr-qc/0101089, in : COSPAR Meeting in Warsaw (2000).
  21. “In Memoriam-Abraham H. Taub ,” (B. Mashhoon),



*SIAM News* **34** (7), 2 - 3 (2001).

22. “Book Review --- Relativity: Special, General, and Cosmological. By Wolfgang Rindler. 448 pages, Oxford University Press, Oxford 2001” (B. Mashhoon), *Found. Phys.* **33**, 541 - 542 (2003).
23. “Brief Biography: Abraham H. Taub”, (B. Mashhoon), *Gen. Rel. Grav.* **36**, 2695 - 2696 (2004).
24. “Perturbations and Gravitomagnetism in the Kerr-Taub-NUT Spacetime”, (D. Bini, C. Cherubini, R.T. Jantzen, and B. Mashhoon), in: Proc. Tenth Marcel Grossmann Meeting on General Relativity (Rio de Janeiro, July 20-26, 2003), edited by M. Novello, S.P. Bergliaffa and R. Ruffini (World Scientific, Hackensack, 2005), pp. 1543 – 1545.