

## List of Publications of R. R. Puri

### Books

*Mathematical Methods of Quantum Optics*-Ravinder R. Puri  
Springer-Verlag, Heidelberg, Germany, 2001.

*Mathematical Methods of Quantum Mechanics*-Ravinder R. Puri  
(to be published)

### Ph.D. Thesis

*Stochastic Behaviour of Driven Atomic Systems-Some Exact Results* -University  
of Bombay, 1981.

### Refereed Papers and Reviews

1. *On exact master equation for an open system*-R.R.Puri and S.V.Lawande, Phys. Lett. **62A**, 143-145 (1977).
2. *A master equation for spontaneous emission from a system of harmonic oscillators*-R.R.Puri and S.V.Lawande, Phys. Lett. **69A**, 161-163 (1978).
3. *Time-dependent invariants and stable coherent states* -R.R.Puri and S. V. Lawande, Phys. Lett. **70A**, 69-70 (1979).
4. *Exact steady state density operator for a collective atomic system in an external field*-R.R.Puri and S.V.Lawande, Phys. Lett. **72A**, 200-202 (1979).
5. *Exact thermodynamic behaviour of a collective atomic system in an external field*-R.R.Puri and S.V.Lawande, Physica **101A**, 599-612 (1980).
6. *Intensity fluctuations in a driven Dicke model* -S.S.Hassan,R.K.Bullough, R. R. Puri and S.V.Lawande, Physica **103A**, 213-225 (1980).
7. *Dispersion in the driven Dicke model*-R.R.Puri, S.V.Lawande and S. S. Hassan, Opt. Comm. **35**, 179-184 (1980).
8. *Non-resonant effects in the fluorescent Dicke model: I-Exact steady state results*-S.V.Lawande,R.R.Puri and S.S.Hassan, J.Phys. **B14**, 4171-4189 (1981),.
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10. *Incoherently driven Dicke model*-S.S.Hassan, G.P.Hildred, R.R.Puri and R.K.Bullough, J.Phys. **B15**, 2635-2655 (1982).
11. *Non-trivial quantum model of optical bistability* -R.R.Puri, R.K.Bullough and S. S. Hassan, Appl.Phys. **B29**, 174-174 (1982).
12. *Thermal reservoir effects in resonance fluorescence* -G.P.Hildred, S. S. Hassan, R. R. Puri and R. K. Bullough, J.Phys. **B16**, 1703-1719 (1983).

13. *Effects of laser fluctuations on the driven Dicke model* -R.R.Puri and S.V.Lawande, Physica **120A** 43-54 (1983).
14. *Laser phase and amplitude fluctuations in the fluorescent Dicke model* -R.R.Puri and S.S.Hassan, Physica **120A** 55-67 (1983).
15. *Exact quantum theory for  $N$  Rydberg atoms in a cavity* -R.R.Puri, G. P. Hildred, S.S.Hassan and R.K.Bullough, in Coherence and Quantum Optics V, 527-535 eds. L. Mandel, and E.Wolf (Plenum Press,1984).
16. *The driven Dicke model*-S.S.Hassan, G.P.Hildred, R.R.Puri and R. K. Bullough,in Coherence and Quantum Optics V, p491-496 eds. L.Mandel, and E.Wolf (Plenum Press,1984).
17. *Strictly quantum theory of optical bistability* -R.R.Puri, G.P.Hildred, S.S.Hassan and R.K.Bullough, in Optical Bistability II, 471-478 eds. C. M. Bowden, H.M.Gibbs and S.McCall (Plenum Press,1984).
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19. *Quantum theory of recent observations on Rydberg atoms in low- $Q$  cavities* -G. P. Hildred, R.R.Puri, S.S.Hassan and R.K.Bullough, J.Phys.**B17** L535-L539 (1984).
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22. *Spontaneous emission: vacuum fluctuations or radiation reaction?*-R. R. Puri, J. Opt. Soc. Amer. **B2** 447-450 (1985).
23. Exact QED results for scattering,emission and absorption from a Rydberg atom in a cavity with arbitrary  $Q$ -G.S.Agarwal and R.R.Puri, Phys. Rev. **A33** 1757-1764 (1986).
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25. Quantum intensity-intensity correlations: statistics of radiation from coherently and incoherently driven systems -G.S.Agarwal, R.K.Bullough, S.S.Hassan, G.P.Hildred and R.R.Puri in Coherence, cooperation and fluctuations, eds., F.Haake, L.M.Narducci and D.F.Walls (Cambridge University, Press, London, 1986).

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30. *Effects of detuning and fluctuations on fluorescent radiation from a strongly driven three-level atom: some analytic results*-S. V. Lawande, R. D'souza and R.R.Puri, *Phys. Rev.* **A36** 3228-3244 (1987),
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32. *Monitoring quantum effects in cavity electrodynamics by atoms in semi-classical dressed states*-G.S.Agarwal and R.R.Puri, *J. Opt. Soc. Amer.* **B5** 1669-1672 (1988).
33. Coherent two-photon transitions in Rydberg atoms in a cavity with finite Q-R.R.Puri and G.S.Agarwal, *Phys. Rev.* **A37** 3879-3883 (1988).
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- R.R.Puri, J. Mod. Opt **36** 215-224 (1989).
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  41. *On the detection of squeezing in a radiated cooperative system*-R.R.Puri and S.S.Hassan, J. Phys. **B22** L289-L293 (1989).
  42. *Quantum theory of propagation of elliptically polarized light through a Kerr medium*-G.S.Agarwal and R.R.Puri, Phys. Rev. **A40** 5179-5186 (1989).
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91. *Exact dynamics of a class of two-level and three-level atoms interacting with quantized field*-R.R.Puri, J.Mod.Opt. **46**, 1465 (1999).
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104. *Field-dependent atomic relaxation in a squeezed vacuum* -S.S.Hassan, T.M.Jarad, R.R.Puri and R.K.Bullough, J.Opt. B: Quantum Semiclassical Opt. **7**, 329 (2005).

105. *Quasiprobability-Based Criterion for Classicality and Separability of States of Spin-1/2 Particles* - R.R.Puri, Phys.Rev. **A86**, 052111 (2012).

106. *Local Hidden Variable Theoretic Measure of Quantumness of Mutual Information* - R.R.Puri, J.Phys. **A47**, 115303 (2014).

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2. Open Cavity Diodes-A High Power Electromagnetic Source -D.Biswas, Raghwendra Kumar and R.R.Puri, BARC Report BARC/2005/I/009.