

## Selected Publications

1. T. E. Duncan, Probability densities for diffusion processes with applications to nonlinear filtering theory and detection theory, Systems Theory Laboratory Rept. 7001-4, Stanford University, thesis, May 1967.
2. T. E. Duncan, Evaluation of likelihood functions, *Information and Control*, 13, 1968, 62-74.
3. T. E. Duncan, On the calculation of mutual information, *SIAM J. Appl. Math.*, 19 (1970), 215-220.
4. T. E. Duncan, On the absolute continuity of measures, *Ann. Math. Stat.*, 41 (1970), 30-38.
5. T. E. Duncan and P. Varaiya, On the solutions of a stochastic control system, *SIAM J. Control*, 9 (1971), 354-371.
6. T. E. Duncan, Stochastic integrals in Riemann manifolds, *J. Multivariate Anal.*, 6 (1976), 397-413.
7. T. E. Duncan, Dynamic programming optimality criteria for stochastic systems in Riemannian manifolds, *Appl. Math. Optim.*, 3 (1977), 191-208.
8. T. E. Duncan, Some filtering results in Riemann manifolds, *Information and Control*, 35, 1977, 182-195.
9. T. E. Duncan, Stochastic systems in Riemannian manifolds, *J. Optimization Theory Appl.*, 27 (1979), 399-426.
10. T. E. Duncan, The heat equation, the Kac formula and some index theorems, *Lecture Notes in Pure and Appl. Math.*, 48, 1979, 57-76, Marcel Dekker.
11. T. E. Duncan, Estimation for jump processes in the tangent bundle of a Riemann manifold, *Appl. Math. Optim.*, 4 (1978), 265-274.
12. T. E. Duncan, An algebro-geometric approach to estimation and stochastic control for linear pure delay time systems, *Lecture Notes in Control and Information Sci.*, 16, 1979, 332-343, Springer-Verlag.
13. C. I. Byrnes and T. E. Duncan, On certain topological invariants arising in system theory, *New Directions in Appl. Math.*, 29-71, P.J. Hilton and G.S. Young, eds., Springer-Verlag, 1982.

14. T. E. Duncan, Estimation for linear pure delay time systems, Proc. XVI Semester on Mathematical Control Theory, Banach Center, 199-227, 1982.
15. T. E. Duncan, A solvable stochastic control problem in hyperbolic three space, Systems and Control Letters 8 (1987), 435-439.
16. T. E. Duncan, An estimation problem in compact Lie groups, Systems and Controls Letters 10 (1988), 257-263.
17. T. E. Duncan, Brownian Motion and affine Lie algebras, J. Functional Analysis. 84 (1989), 135-145.
18. T. E. Duncan and B. Pasik-Duncan, Adaptive control of a continuous time portfolio and consumption model, J. Optimization Theory Appl., 61, (1989), 47-52.
19. T. E. Duncan and B. Pasik-Duncan, Adaptive control of continuous time linear stochastic systems, Mathematics of Control, Signals and Systems. 3 (1990), 45-60.
20. T. E. Duncan, Some solvable stochastic control problems in noncompact symmetric spaces of rank one, Stochastics and Stochastic Reports 35 (1991), 129-142.
21. T. E. Duncan, B. Goldys, and B. Pasik-Duncan, Adaptive control of linear stochastic evolution systems, Stochastics and Stochastic Reports 36 (1991), 71-90.
22. T. E. Duncan, P. Mandl and B. Pasik-Duncan, On least squares estimation in continuous time linear stochastic systems, Kybernetika 28 (1992) 169-180.
23. T. E. Duncan, B. Pasik-Duncan and L. Stettner, Almost self-optimizing strategies for the adaptive control of diffusion processes, J. Optim. Th. Appl. 81 (1994), 479-507.
24. T. E. Duncan, P. Mandl and B. Pasik-Duncan, Numerical differentiation and parameter estimation in higher order stochastic systems, IEEE Trans. Autom. Control, 41 (1996), 522-532.
25. T. E. Duncan and H. Upmeyer, Stochastic control problems and spherical functions on symmetric spaces Trans. Amer. Math. Soc., 347 (1995), 1083-1130.
26. T. E. Duncan, B. Pasik-Duncan and L. Stettner, Adaptive control of a partially observed discrete time Markov process Appl. Math. Optim., 37 (1998), 269-293.

27. T. E. Duncan, B. Maslowski and B. Pasik-Duncan, Ergodic boundary/point control of stochastic semilinear systems, *SIAM J. Control Optim.* 36 (1998), 1020-1047.
28. T. E. Duncan, L. Guo and B. Pasik-Duncan, Adaptive continuous time linear quadratic Gaussian control, *IEEE Trans. Autom. Control* 44 (1999), 1653-1662.
29. T. E. Duncan, Y. Hu and B. Pasik-Duncan, Stochastic calculus for fractional Brownian motion I. Theory, *SIAM J. Control Optim.* 38 (2000), 582-612.
30. T. E. Duncan, B. Maslowski and B. Pasik-Duncan, Fractional Brownian motion and linear stochastic equations in Hilbert space, *Stochastics Dynamics* 2(2002), 225-250.
31. T. E. Duncan, Some processes associated with a fractional Brownian motion, *Mathematics of Finance*, (eds. G. Yin and Q. Zhang) *Contemp. Math.* 351 (2004), 93-102.
32. T. E. Duncan, B. Maslowski and B. Pasik-Duncan, Stochastic equations in Hilbert space with a multiplicative fractional Gaussian noise, *Stoc. Proc. Appl.* 115 (2005), 1357-1383.
33. T. E. Duncan, J. Jakubowski and B. Pasik-Duncan, Stochastic integration for fractional Brownian motion in Hilbert spaces, *Stochastics Dynamics*, 6 (2006), 53-75.

