

Publications of Charles Tier

1. “Asymptotic analysis of diffusion equations in population genetics” (with J. B. Keller), *SIAM J. Appl. Math.* **34** (1978), 549–576.
2. “A tri-allelic diffusion model with selection” (with J. B. Keller), *SIAM J. Appl. Math.* **35** (1978), 521–535.
3. “A tri-allelic diffusion model with selection, migration, and mutation,” *Math. Biosci.* **44** (1979), 41–60.
4. “An asymptotic solution of the first passage problem for singular diffusion in population biology” (with F. B. Hanson), *SIAM J. Appl. Math.* **40** (1981), 113–132.
5. “Persistence in density dependent stochastic populations” (with F. B. Hanson), *Math. Biosci.* **53** (1981), 89–117.
6. “An analysis of neutral-alleles and variable-environment diffusion models,” *J. Math. Biol.* **12** (1981), 53–71.
7. “A stochastic model for tumor growth” (with F. B. Hanson), *Math. Biosci.* **61** (1982), 73–100.
8. “Diffusion across characteristic boundaries with critical points” (with B. J. Matkowsky and Z. Schuss), *SIAM J. Appl. Math.* **43** (1983), 673–695.
9. “Harvesting under demographic uncertainty” (with F. B. Hanson), in *Proc. of the Int. Conf. on Population Biology-Univ. of Alberta*, Lecture Notes in Biomath., vol. 52, Springer-Verlag, New York, 1983.
10. “Uniform expansion of the transition rate in Kramers’ problem” (with B. J. Matkowsky and Z. Schuss), *J. Stat. Phys.* **35** (1984), 443–456.
11. “Solution of Kramers-Moyal equations for problems in chemical physics” (with M. Mangel, B. J. Matkowsky, Z. Schuss and C. Knessl), *J. Chem. Phys.* **81** (1984), 1285–1293.
12. “Asymptotic solution of the Kramers-Moyal equation and first passage times for Markov jump processes” (with M. Mangel, B. J. Matkowsky, Z. Schuss and C. Knessl), *Phys. Rev. A* **29** (1984), 3359–3369.
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14. “An asymptotic theory of large deviations for Markov jump processes” (with B. J. Matkowsky, Z. Schuss and C. Knessl), *SIAM J. Appl. Math.* **46** (1985), 1006–1028.
15. “Frequency fluctuations in noisy oscillators” (with B. J. Matkowsky and Z. Schuss), *SIAM J. Appl. Math.* **45** (1985), 843–854.
16. “An analysis of a dendritic neuron model with an active membrane site” (with S. Baer), *J. Math. Biol.* **23** (1986), 137–161.
17. “A singular perturbation approach to first passage times for Markov jump processes” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *J. Stat. Phys.* **42** (1986), 169–184.
18. “A finite capacity single-server queue with customer loss” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *Comm. Statist. Stochastic Models* **2** (1986), 97–121.
19. “Asymptotic analysis of a state-dependent M/G/1 queueing system” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *SIAM J. Appl. Math.* **46** (1986), 483–505.
20. “System crash in a finite capacity M/G/1 queue” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *Comm. Statist. Stochastic Models* **2** (1986), 171–201.
21. “On the performance of state-dependent single-server queues” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *SIAM J. Appl. Math.* **46** (1986), 657–697.
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23. “Two parallel queues with dynamic routing” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *IEEE Trans. Comm.* **34** (1986), 1170–1175.
24. “The two repairmen problem: A finite source M/G/2 queue” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *SIAM J. Appl. Math.* **47** (1987), 367–397.
25. “Asymptotic expansions for a closed multiple access system” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *SIAM J. Comp.* **16** (1987), 378–398.
26. “A Markov-modulated M/G/1 queue I: Stationary distribution” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *Queueing Systems: Theory and Applications* **1** (1987), 355–374.
27. “A Markov-modulated M/G/1 queue II: Busy period and time for buffer overflow” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *Queueing Systems: Theory and Applications* **1** (1987), 375–397.
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33. “Response times in processor-shared queues with state-dependent arrival rates” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *Comm. Statist. Stochastic Models* **5** (1989), 83–113.
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35. “An integral equation approach to the M/G/2 queue” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *Operations Research* **38** (1990), 506–518.
36. “Approximations to the moments of the sojourn time in a tandem queue with overtaking” (with C. Knessl), *Comm. Statist. Stochastic Models* **6** (1990), 499–524.
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38. “Asymptotic methods for Markov jump process” (with B. J. Matkowsky and Z. Schuss), *A.M.S. Lectures in Applied Mathematics* **27** (1991), 215–240.
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46. “On state dependent GI/G/1 queues” (with C. Knessl, B. J. Matkowsky and Z. Schuss), *European J. Appl. Math.* **5** (1994), 217–241.
47. “A processor-shared queue which models switching times: heavy usage asymptotics” (with C. Knessl), *SIAM J. Appl. Math.* **54** (1994), 854–875.
48. “Asymptotic approximations for multiple class queueing networks with a terminal node” (with J. D. Mei), *SIAM J. Appl. Math.* **54** (1994), 1745–1767.
49. “Asymptotic properties of first passage times for tandem Jackson networks I: build up of large queue lengths” (with C. Knessl), *Commun. Statist. Stochastic Models* **11** (1995), 133–162.
50. “Applications of singular perturbation methods in queueing” (with C. Knessl), in *Advances in Queueing: Theory, Methods and Open Problems*, J. H. Dshalalow, ed., CRC Press, New York, 1995, 311–336.
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53. “Asymptotic approximations and bottleneck analysis in product form queueing networks with large populations” (with C. Knessl), *Performance Evaluation* **33** (1998), 219–248.
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55. “A diffusion model for two tandem queues with general renewal input” (with C. Knessl), *Comm. Stat.- Stochastic Models* **15** (1999), 299–343.
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58. “A ray approximation to a PDE arising in the study of tandem queues” (with C. Knessl), *Studies in Appl. Math.* **102** (1999), 87–120.

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