**RESUME** - Peter C. Kiessler

## PERSONAL DATA

Associate Professor
Department of Mathematical Sciences
Clemson University
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## EDUCATION

PhD, Virginia Polytechnic Institute and State University, 1983, Industrial Engineering and Operations Research

MS, Virginia Polytechnic Institute and State University, 1980, Industrial Engineering and Operations Research

BS, Virginia Polytechnic Institute and State University, 1977, Mathematics

## PROFESSIONAL EXPERIENCE

Clemson University, 2011-Present, Professor of Mathematical Sciences

Clemson University, 1989-2011, Associate Professor of Mathematical Sciences

Virginia Commonwealth University, 1983-1989, Assistant Professor of Mathematical Sciences

## PUBLICATIONS

### Books

Disney, R.L. and Kiessler, P.C., *Traffic Processes and Queueing Networks: A Markov Renewal Approach*, The Johns Hopkins University Press, Baltimore and London, (1987).

### Chapters in Monographs

Coffin, M.A. and Kiessler, P.C., "A simulation approach to queueing networks whose arrivals form a nonstationary finite point processes", *Applied Mathematical Modeling, An Interdisciplinary Approach*, edited by Shier, D.R. and Wallenius, K.T., CRC Press, 151-184, (1999).

Melloy, B.J., Coffin, M.A. and Kiessler, P.C., " A stepwise optimal procedure for setting machines and adjusting processes", in *Optimization and Quality Control*, edited by Al-Sultan, K.S. and Rahim, M.A., Kluwer Academic Publishers, 261-278, (1997).

## Refereed Journal Publications

Annis, D., Kiessler, P.C., Lund, R. and Steuber, T.L., "Estimation for reversible Markov chains", *The American Statistian*, Volume 64, 116-120, (2010).

Kiessler, P.C. and Lund,R., "Traffic intensity estimation", *Naval Research Logistics*, Volume 56, 385-387, (2009).

Clark, S. and Kiessler, P.C., "A diffusion approximation for Markov renewal processes", *Journal of Applied Probability*, Volume 44, 365-377, (2007).

Lund, R., Zhao, Y. and Kiessler, P.C., "Shapes of stationary autocovariances", *Journal of Applied Probability*, Volume 43, 1186-1193, (2006).

Lund, R., Zhao, Y. and Kiessler, P.C., "A monotonicity in reversible Markov chains", *Journal of Applied Probability*, Volume 43, 486-499, (2006).

Kiessler, P.C. and Nimitkiatklai, K. "The lifetime of a random set", *Journal of Applied Probability*, Volume 42, 566-580, (2005).

Kiessler, P.C., Klutke, G.A. and Yang, Y., "Availability of periodically inspected systems subject to Markovian degradation", *Journal of Applied Probability*, Volume 39, 700-711, (2002).

Klutke, G.A., Kiessler, P.C. and Wortman, M.A., "A critical look at the bathtub curve", *IEEE Transactions on Reliability*, Volume 52, 125-129, (2003).

Clark, S.P. and Kiessler, P.C. "On the convexity of value functions of a certain class of stochastic dynamic programming problems", *Stochastic Analysis and Applications*, Volume 20, 783-789, (2002).

Jefferies, C., Coffin, M.A. and Kiessler, P.C. "Two tools for network traffic analysis", *Comnet*, Volume 36, 169-179, (2001).

Field, A., McKnew, M. and Kiessler, P.C. "A simulation comparison of buffet restaurants: applying Monte Carlo simulation", *Cornell Quarterly, Hotel and Restaurant Administration*, Volume 86, 68-77, (1997).

Kiessler, P.C., "A simple proof of the equivalence of input and output intervals in Jackson networks of single server nodes", *Operations Research*, Volume 37, 645-647, (1990).

Kiessler, P.C., Melamed, B., Yadin, M. and Foley, R.D., "Analysis of a three-node queueing network", *Queueing Systems*, Volume 3, 53-72, (1988).

Kiessler, P.C. and Wortman, M.A., "Workload in queues having priorities assigned according to service times", *Queueing Systems*, Volume 10, 403-408, (1992).

Kiessler, P.C. and Disney, R.L., "Further remarks on queueing networks", *European Journal of Operational Research*, Volume 36, 285-296, (1988).

Foley, R.D. and Kiessler, P.C. "Positive correlations in a three node Jackson queueing network", *Advances in Applied Probability*, Volume 21, 241-242, (1989).

Kiessler, P.C., "On the equivalence of input and out processes in networks of infinite server queues", *Asian Pacific Journal of Operations Research*, Volume 5, 84-89, (1988).

Klutke, G.-A., Kiessler, P.C. and Disney, R.L., "Interoutput times in processor sharing queues with feedback", *Queueing Systems*, Volume 3, 363-376, (1988).

Wortman, M.A., Disney, R.L. and Kiessler, P.C., "The M/G/1 Bernoulli feedback queue with vacations", *Queueing Systems*, Volume 9, 353-364, (1991).

### Book Reviews

Kiessler, P.C., "Review of *Statistical Inference for Ergodic Diffusion Processes* by Kutoyants", *Journal of the American Statistical Society*, 2006.

Kiessler, P.C., "Review of *Comparison Models for Stochastic Models and Risks* by Müller and Stoyan", *Journal of the American Statistical Association*, 2005.

Kiessler, P.C., "Review of *Extreme Value Theory: An Introduction* by De Haan and Ferreira", *Journal of the American Statistical Association*, 2008.

Kiessler, P.C., "Review of *An Introduction to Random Sets* by Nguyen and *Random Sets* by Molchanov", *Journal of the American Statistical Association*, 2008.

Kiessler, P.C., "Review of *Stochastic Switching Systems* by Boukas", *Journal of the American Statistical Association*, 2008.

Kiessler, P.C., "Review of *Probabilistic Applications of Tauberian Theorems* by Yakimiv", *Journal of the American Statistical Association*, 2008.

Kiessler, P.C., "Review of *Measure Theory and Probability Theory* by Athreya and Lahiri", *Journal of the American Statistical Association*, 2007.

### Conference Proceedings (Reviewed)

Kiessler, P.C., Wypasek, C., Fennell, R.E. and Westall, J., "Markov renewal models for traffic exhibiting self-similar behavior", *Proceedings of IEEE Southeast Conference*, 76-79, (1996).

Disney, R.L. and Kiessler, P.C., "Equivalence and reversibility of point processes", in *Lecture Notes in Control and Information Sciences*, edited by Germani, A., Springer-Verlag, NY, 30-41, (1987).

Jefferies, C., Kiessler, P.C. and Ntasin, L., "Rapid training of GIL neural Networks", in *Applications of Science and Computation Intelligence II, Proceedings of SPIE*, edited by Priddy, K.L., Keller, P.E., Fogel, D.B. and Bezdek, J.C., 57-66, (1999).

### Work in Progress

Kiessler, P.C. and Nimitkiatklai, K., "Analytical approach to a thin homogeneous system", revision to be submitted to *Extremes*.

Kiessler, P.C. and Lund, R., "Traffic intensity estimation", to be submitted to *Naval Research Logistics Quarterly*.

## PRESENTATIONS

Kiessler, P.C., "Affordability of a research and development project", INFORMS, San Francisco, CA., November 2005.

Kiessler, P.C., "The lifetime of a random set", Joint Statistical Meetings, Minneapolis, MN., August 2005.

Kiessler, P.C., "Reliability of a system subject to Levy degradation", IIE Research Conference, Atlanta, GA., May 2005.

Jeffries, C., Kiessler, P.C.and Ntasin, L., "Rapid training if GIL neural networks", SPIE's AreoSense '99, Orlando FL., April 1999.

Kiessler, P.C., "The lifetime of a single server queue with an increasing arrival rate", SIAM Conference on Control, Jacksonville, Fl., May 1998.

Kiessler, P.C., Wypasek, C., Fennell, R.E., and Westall, J. (1996). "Markov renewal models for traffic exhibiting self-similar behavior", IEE Southeast Conference, Tampa, FL., April 1996.


## SPONSORED RESEARCH

"Uncertainty in the modeling and description of autonomous agent system", SANDIA, Principle Investigator, $14,000, ($14,000), (2005).

"SCREMS", National Science Foundation, Principal Investigator, $68,900, ($22,966), (1997-1998).

"Rapid Training of Neural Networks", Army Research Office, Principle Investigator, $15,500, ($15,500), (1998-1999).

"Affordability", Office of Naval Research, Investigator, Co-Investigator, $760,000, ($68,698), (1997-1999).


## SERVICE

Associate Editor for *Operations Research*, 1990-1993.

Associate Editor for *Journal of the American Statistical Society*, 2004-Present.

Faculty Senate, 2002-2005.

College and University Curriculum Committees, 1995-1997.

Referee for the following journals: *Operations Research*, *Journal of Applied Probability* and *Advances in Applied Probability*, *European Journal of Operational Research*, *Probability and Related Fields*, *Applied Stochastic Models*, *Journal of Nonparametric Statistics*, *IIE Transactions*, *Applied Stochastic Models in Business and Industry*, *Journal of Applied Mathematics*, and *IEEE Transactions on Computers*.

## GRADUATE STUDENT ADVISING

### Doctoral Graduates

Bell, Marla, "Analysis of a single server priority queue in discrete time", (1992).

Bell, Stephen, "Convex ordering properties in single server queueing systems", (1992).

Field, Arthur, "A Brownian flow model of an amusement park", (1999).

Clark, Steven, "Option modeling of R&D projects", (2000).

Nimitkiatklai, Kanoktip, "Lifetimes of random sets", (2005).

Rezaei, Mahmoud, (PhD) "Inference in queueing systems".

Steuber, Tara, (PhD) "Inference for reversible Markov chains", (co-advised with Robert Lund).

Carden, Stephen, (PhD) "A stochastic control problem".

Gong, Zhiyun, (PhD) "Extreme values in time series models", (co-advised with Robert Lund) .

### Masters Graduates

Tara, Jennifer, " A similuation model of a transient queueing system".

Girimurugan, Senthil B., "Queueing Networks with nonhomogeneous arrivals".

Stueber, Tara "Estimating transition probabilities of time reversible Markov chains", (co-advised with Robert Lund), (2008).

Volny, Frank, "Resetting a degrading single server queue", (2007).

Walker, Ervin, "The move-up-two self organizing heuristic", (1998).

Labelle, Victor, "Time series forecasting of customer demand for manufactured products", (1996).

Shiley, Jon, "A queue simulation to stationary and nonstationary Poisson processes in risk theory", (1996).

Bolton, Kevin, "Testing for the order of a Markov chain", (1991).

Kirschman, Jill "An analysis of registration at Clemson University", (1991).

### Current Students

Chan, Fun Choi John, (PhD) "Convergence rates for reversible Markov chains ", (co-advised with Robert Lund).

Nicholson, John "Point process models in reliablity".

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