

Kemal Dinger Dinger, Ph.D.

CONTACT INFORMATION	Gebze Technical University, Department of Industrial Engineering 41400, Gebze, Kocaeli, Turkey <i>E-mail:</i> kdingec@gtu.edu.tr
WORK EXPERIENCE	(February 2020 – Present) Assistant Professor in the Industrial Engineering Department at Gebze Technical University, Turkey. (February 2016 – February 2020) Assistant Professor in the Industrial Engineering Department at Altinbas University, Turkey. (October 2014 – October 2015) Post-doctoral researcher in the H. Milton Stewart School of Industrial and Systems Engineering (ISyE) at Georgia Institute of Technology (Georgia Tech), U.S. (January 2013 – October 2014) Post-doctoral researcher in the Industrial Engineering Department at Bogazici University, Turkey. (January 2012 – January 2013) Researcher in the Department of Industrial and Systems Engineering at Yeditepe University, Turkey. (April 2010 – January 2012) Researcher in the Industrial Engineering Department at Bogazici University, Turkey.
DEGREES	Ph.D., Industrial Engineering, Bogazici University, Turkey, 2013. Thesis: “Option Pricing by Simulation”. M.S., Industrial Engineering, Bogazici University, Turkey, 2007. Thesis: “Analysis of Disassembly Systems in Remanufacturing using Kanban control”. B.S., Industrial Engineering, Istanbul Technical University, Turkey, 2005.
RESEARCH INTERESTS	Monte Carlo Simulation (Variance Reduction and Output Analysis), Quantitative Finance, Stochastic Models of Manufacturing Systems.
RESEARCH VISITS	ISyE, Georgia Tech, U.S. 6 short term visits (3 to 4 weeks) on dates Jan 2017, Aug 2017, Jan 2018, Aug 2018, Jan 2019, and Aug 2019. Worked on the project “Simulation Output Analysis” in collaboration with David Goldman. Funded by Georgia Tech. Xi’an Jiaotong-Liverpool University (XJTU), China Aug 3, 2016 – Aug 30, 2016 Worked on the project “Simulation Based Dynamic Portfolio Optimization” in collaboration with Halis Sak. Funded by XJTU.
PUBLICATIONS	Papers in Archival Journals <ol style="list-style-type: none">1. K. D. Dinger and W. Hörmann, Efficient algorithms for tail probabilities of exchangeable lognormal sums, <i>Methodology and Computing in Applied Probability</i>, 1–29, 2021. (SCI-E)2. B. Silahlı, K. D. Dinger, A. Çifter, and N. Aydın, Portfolio value-at-risk with two-sided Weibull distribution: Evidence from cryptocurrency markets. <i>Finance Research Letters</i>, 38: 101425, 2021. (SSCI)

3. K. D. Dengeç, Efficient simulation of the price and the sensitivities of basket options under time-changed Brownian motions. *International Journal of Computer Mathematics*, 96(12): 2441–2460, 2019. (SCI-E)
4. K. D. Dengeç, H. Sak, and W. Hörmann, Variance reduction for Asian options under a general model framework. *Review of Finance*, 19(2):907–949, 2015. (SSCI)
5. A. Korugan, K. D. Dengeç, T. Önen, and N. Y. Ateş, On the quality variation impact of returns in remanufacturing. *Computers & Industrial Engineering*, 64(4):929–936, 2013. (SCI-E)
6. K. D. Dengeç and A. Korugan, A stochastic analysis of asynchronous demand in disassembly processes of remanufacturing systems. *European Journal of Industrial Engineering*, 7(2):175–205, 2013. (SCI-E)
7. K. D. Dengeç and W. Hörmann, Control variates and conditional Monte Carlo for basket and Asian options. *Insurance: Mathematics and Economics*, 52(3):421–434, 2013. (SCI-E, SSCI)
8. K. D. Dengeç and W. Hörmann, A general control variate method for option pricing under Lévy processes. *European Journal of Operational Research*, 221(2):368–377, 2012. (SCI-E)
9. K. D. Dengeç and W. Hörmann, Using the continuous price as control variate for discretely monitored options. *Mathematics and Computers in Simulation*, 82(4):691–704, 2011. (SCI-E)

Papers in International Refereed Conference Proceedings

1. C. Alexopoulos, J. H. Boone, D. Goldsman, A. Lolos, K. D. Dengeç and J. R. Wilson, Steady-State Quantile Estimation Using Standardized Time Series. In *Proceedings of the 2020 Winter Simulation Conference*, Institute of Electrical and Electronics Engineers, Piscataway, NJ, 2020.
2. K. D. Dengeç, C. Alexopoulos, D. Goldsman, and J. R. Wilson, Multiply reflected variance estimators for simulation. In *Proceedings of the 2018 Winter Simulation Conference*, Institute of Electrical and Electronics Engineers, Piscataway, NJ, 2018.
3. K. D. Dengeç, C. Alexopoulos, D. Goldsman, J. R. Wilson, W. Chiu, and T. Aktaran-Kalaycı, Jackknifed Variance Estimators for Simulation Output Analysis. In *Proceedings of the 2015 Winter Simulation Conference*, Institute of Electrical and Electronics Engineers, Piscataway, NJ, 2015.
4. K. D. Dengeç and W. Hörmann, Improved Monte Carlo and Quasi-Monte Carlo Methods for the Price and the Greeks of Asian Options. In *Proceedings of the 2014 Winter Simulation Conference*, Institute of Electrical and Electronics Engineers, Piscataway, NJ, 2014.
5. K. D. Dengeç and W. Hörmann, New Control Variates for Lévy Process Models. In *Proceedings of the 2012 Winter Simulation Conference*, Institute of Electrical and Electronics Engineers, Piscataway, NJ, 2012.
6. A. Korugan and K. D. Dengeç, Analysis of Disassembly Systems in Remanufacturing using Kanban Control. In *Proceedings of the POMS 18th Annual Conference*, Dallas, TX, 2007.

Papers in National Journals

1. F. Börü, K. D. Dengeç, and D. M. Demiröz, The Effect of Technological and Scientific Knowledge on Economic Growth in Turkey (1980-2015), *Akdeniz İİBF Journal*, 20(1):111–128, 2020.

REFEREE ACTIVITY

ACM Transactions on Modeling and Computer Simulation
European Journal of Operational Research
International Journal of Production Economics
International Journal of Computer Mathematics
Emerging Markets Finance and Trade
Proceedings of the 2014 Winter Simulation Conference

PRESENTATIONS

Talks in International Conferences

- Variance Reduction Techniques for Right-Tail Probabilities of Exchangeable Lognormal Sums. *15th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC 2022)*, Linz, Austria, July 17–22, 2022.
- Improved Monte Carlo and Quasi-Monte Carlo Methods for the Price and the Greeks of Asian Options. *Winter Simulation Conference 2014*, Savannah, GA, USA, December 7–10, 2014.
- Control Variates and Conditional Monte Carlo for Asian and Basket Options. *9th IMACS Seminar on Monte Carlo Methods*, Annecy-le-Vieux, France, July 15–19, 2013.
- Variance Reduction for Asian Options under a General Model Framework. *The International Conference on Computational Science (ICCS) 2013, Workshop on Computational and Algorithmic Finance (WCAF) 2013*, Barcelona, Spain, June 5–7, 2013.
- New Control Variates for Lévy Process Models. *Winter Simulation Conference 2012*, Berlin, Germany, December 9–12, 2012.
- A General Control Variate Method for Option Pricing under Lévy Processes. *8th World Congress in Probability and Statistics*, İstanbul, Turkey, July 9–14, 2012.
- Variance Reduction for Asian Options. *International Conference on Mathematical Finance and Economics (ICMFE) 2011*, İstanbul, Turkey, July 6–8, 2011.
- A New Control Variate Method for Discrete Barrier and Lookback Options. *24th Mini EURO Conference on Continuous Optimization and Information-Based Technologies in the Financial Sector, MEC-EurOPT-2010*, İzmir, Turkey, June 23–26, 2010.

Talks in National Conferences

- Efficient Algorithms for Tail Probabilities of Lognormal Sums and Financial Applications. *Yöneylem Araştırması ve Endüstri Mühendisliği 40. Ulusal Kongresi (YAEM 2021)*, 5-7 Temmuz 2021.
- Benzetim için Çoklu Yansıtılmış Varyans Tahmin Edicileri. *Yöneylem Araştırması ve Endüstri Mühendisliği 37. Ulusal Kongresi (YAEM 2017)*, 5-7 Temmuz 2017.
- Asya Opsiyonları için Polinom Yaklaşımları. *Yöneylem Araştırması ve Endüstri Mühendisliği 36. Ulusal Kongresi (YAEM 2016)*, İzmir, 13-15 Temmuz 2016.

Seminar Talks

Evaluating CDF and PDF of the Sum of Lognormals by Monte Carlo Simulation. *Institute for Statistics and Mathematics, Vienna University of Economics and Business*, Vienna, Austria, May 25, 2018.

Jackknifed Variance Estimators for Simulation Output Analysis. *Department of Industrial Engineering, MEF University*, Istanbul, Turkey, June 6, 2017.

Improved Monte Carlo and Quasi-Monte Carlo Methods for the Price and the Greeks of Asian Options. *Department of Industrial Engineering, İstanbul Kültür University*, Istanbul, Turkey, December 11, 2015.

New Control Variates for Lévy Processes and Asian Options. *Institute for Statistics and Mathematics, Vienna University of Economics and Business*, Vienna, Austria, June 20, 2013.

TEACHING EXPERIENCE

Courses Taught

Simulation (Spring 2022), Undergraduate course,
Department of Industrial Engineering, Gebze Technical University.

Forecasting Methods and Applications (Fall 2021), Undergraduate course,
Department of Industrial Engineering, Gebze Technical University.

Engineering Economics (Spring 2020, Spring 2021, Fall 2021), Undergraduate course,
Engineering Faculty, Gebze Technical University.

Probability (Fall 2020), Undergraduate course,
Department of Industrial Engineering, Gebze Technical University.

Advanced Probability in Industrial Engineering (Fall 2020, Fall 2021), M.S. course (in Turkish),
Department of Industrial Engineering, Gebze Technical University.

Industrial Statistics (Spring 2021, Spring 2022), M.S. course,
Department of Industrial Engineering, Gebze Technical University.

Statistics for Engineers (Spring 2016, Spring 2017, Spring 2018, Spring 2019),
Undergraduate course,
Department of Industrial Engineering, Altinbas University.

Engineering Economics and Finance (Fall 2016, Fall 2017, Fall 2018),
Undergraduate course,
Department of Industrial Engineering, Altinbas University.

Introduction to Financial Engineering (Spring 2016, Fall 2017, Fall 2018),
Undergraduate course,
Department of Industrial Engineering, Altinbas University.

Forecasting (Fall 2016, Spring 2018), Undergraduate course,
Department of Industrial Engineering, Altinbas University.

Quantitative Finance (Spring 2017), Undergraduate course,
Department of Industrial Engineering, Altinbas University.

Probability Theory and Applications (Fall 2017), M.S. course,
Department of Industrial Engineering, Altinbas University.

Statistics Theory and Applications (Spring 2018, Spring 2019), M.S. course,
Department of Industrial Engineering, Altinbas University.

Statistics Theory and Applications (Spring 2017), M.S. course (in Turkish),
Department of Industrial Engineering, Altinbas University.

Advanced Engineering Economics (Fall 2017, Fall 2018), M.S. course (in Turkish),
Department of Electrical and Electronics Engineering, Altinbas University.

Advanced Engineering Mathematics (Fall 2016), M.S. course (in Turkish),
Department of Electrical and Electronics Engineering, Altinbas University.

Courses Assisted

Statistical Inference (Spring 2013, Spring 2014), M.S. course,
Department of Industrial Engineering, Boğaziçi University.

Quantitative Methods in Finance (Fall 2013), M.S. course,
Department of Industrial Engineering, Boğaziçi University.

Quantitative Methods in Finance (Fall 2012), Ph.D. course,
Department of Industrial and Systems Engineering, Yeditepe University.

Forecasting (Spring 2011), Undergraduate course,
Department of Industrial Engineering, Boğaziçi University.

SKILLS

English: Fluent
Programming languages: R, C
Mathematica, Arena
L^AT_EX

REFERENCES

David Goldsman, Prof.,
H. Milton Stewart School of Industrial and Systems Engineering,
Georgia Institute of Technology,
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Wolfgang Hörmann, Assoc. Prof.,
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