

## CURRICULUM VITAE

**Dr. Tamar Gadrich**

**ד"ר תמר גדרִיך**

**Department:** Industrial Engineering and Management  
**Current Position:** Senior Lecturer, Department of Industrial Engineering and Management  
**Research Interests:** Applied probability ; Statistics; Biomathematics; Analysis of ordinal and nominal data  
**Courses:** Probability; Statistics; Random Processes in Operations Research  
**Email:** [tamarg@braude.ac.il](mailto:tamarg@braude.ac.il)  
**Telephone:** 972-77-9032069  
**Office:** D3 408  
**Office Hours:** Tuesday, 12:30-13:30  
**Site:** <https://w3.braude.ac.il/lecturer/dr-tamar-gadrich/>

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### EDUCATION

D.Sc. 1994, Statistics. Faculty of Industrial Engineering and Management, Technion – Israel Institute of Technology, Haifa, Israel.  
M.Sc. 1990, Operations Research. Faculty of Industrial Engineering and Management, Technion – Israel Institute of Technology, Haifa, Israel.  
B.A. 1986, Mathematics. Summa Cum Laude. Faculty of Mathematics and Computer Science, Haifa University, Haifa, Israel.

### RESEARCH INTERESTS

- Applied probability
- Biomathematics
- Analysis of ordinal and nominal data

### ACADEMIC APPOINTMENTS

2015 - 2018 Dean of Students, ORT Braude College, Israel  
2011 - 2015 Head, Department of Industrial Engineering and Management, ORT Braude College, Israel  
1994 –present ORT Braude College, Karmiel, Israel, Department of Industrial Engineering and Management, Lecturer (1994-2001); Senior Lecturer (since June 2001).

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|-------------|--|
| 1993–2002   | Technion – Israel Institute of Technology, Israel, Faculty of Industrial Engineering and Management, Adjunct Lecturer.   |
| 1996 – 1998 | Technion – Israel Institute of Technology, Israel, Division of Continuing Education and External Studies, Lecturer.      |
| 1986 – 1993 | Technion – Israel Institute of Technology, Israel, Faculty of Industrial Engineering and Management, Teaching Assistant. |

## **TEACHING EXPERIENCE**

### **The ORT Braude College:**

#### **Undergraduate Courses:**

Probability  
Statistics  
Random Processes in Operations Research

### **Technion – Faculty of Industrial Engineering and Management**

#### **Undergraduate Courses:**

Methods of Statistics in Engineering (Lecturer)  
Statistics I & II (Teaching Assistant)  
Simulation (Teaching Assistant)  
Introduction to Probability (Teaching Assistant)  
Random Processes in Operations Research (Teaching Assistant)  
Methods of Statistics in Technology (Teaching Assistant)  
Statistics for Engineers (Teaching Assistant)

#### **Graduate Courses:**

Introduction to Random Processes (Teaching Assistant)

### **Technion – Division of continuing Education and External Studies**

#### **Graduate Courses:**

Statistics for M.E. Mechanical Engineering

## **ACADEMIC AND PROFESSIONAL AWARDS AND GRANTS**

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|-------------|--|
| 2017        | ORT Braude College, Excellent Faculty Member Award   |
| 2016        | ORT Braude College, Excellent Faculty Member Award   |
| 2015        | ORT Braude College, Excellent Faculty Member Award   |
| 2009        | ORT Braude College, Excellent Faculty Member Award   |
| 2008        | ORT Braude College, Excellent Faculty Member Award   |
| 1986 – 1990 | Technion, Max Harris and Betty Muriel Kranzberg Fellowship, Julius and Dorothea Harband Fellowship |

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

### **ISA – Israel Statistical Association**

## **ACADEMIC ADMINISTRATIVE ACTIVITIES**

2015 – 2018: Dean of Students, ORT Braude College, Israel

2011 - 2015: Head, Department of Industrial Engineering and Management, ORT Braude College, Israel

## **PROFESSIONAL ACTIVITIES**

- Member, The Israel Statistical Association council, 2015-2017

### ORT Braude College

- Member, Board of Trustees, since 2017
- President's advisor on Gender Equity, 2017-2018
- Chair, College Steering committee for Israeli-hope at Academy, 2017-2018
- President's advisor on Israeli-hope at Academy, 2017-2018
- Member, College Steering committee for Flagship project, 2016-2018
- Chair, Pre-Academic studies scholarship committee, 2016-2018
- Member, Scholarship Committee, since 2015-2017
- Chair, Scholarship Committee, 2017-2018
- Member, College Steering committee for Increasing the Accessibility of Arab Society to Higher Education, 2015-2018
- Member, Dormitories Committee, 2015-2018
- Chair, Curriculum Committee, Industrial Engineering and Management, 2011-2015
- Chair, Student Admission committee, Industrial Engineering and Management Department, 2011-2015
- Member, Academic Council, 2011-2015
- Member, College Administration, 2011-2015
- Chair, Safety Committee, Industrial Engineering and Management, 2011-2015
- Chair, Scholarship Committee, 2011-2014.
- Member, College Steering committee for implementation of strategic plan, 2011-2015
- Chair, Commemoration committee of academic and administrative staff and students, 2014-2015
- Chair, development team of the M.Sc. in Industrial Engineering and Management, 2010
- Chair, Quality Management Committee, 2008-2009
- Member, development team of the new M.Sc. in Systems Engineering, 2007-2008.
- Member, development team of the new M.Sc. in Industrial Engineering and Management Science, 2007-2009
- Member, Industrial Engineering Departmental Curriculum Committee, 2000-2011
- Member of Teachers Appraisal Committee, 2008
- Academic consultant for 2<sup>nd</sup> year students at the Department of Industrial Engineering and Management, 2006-2009
- Member, College Ethics Committee, 2003-2004, 2007-2008
- Coordinator of the study administration programs submitted to the Council of Higher Education, 2004-2008:
  - ✓ Undergraduate degree: Full accreditation of B.Sc. in Industrial Engineering and Management
  - ✓ Graduate degree: M.Sc. in Systems Engineering, M.Sc. in Industrial Engineering and Management

- In charge of Department of Industrial Engineering and Management Internet site, 2006
- Member, College Steering Committee for Development a Center to Improve the Teaching and Learning, 2003-2006
- Member, Committee to Improve the Learning and Fostering Learn, Sub-Committee to College Teaching Committee, 2003-2006
- Development of internet-based courses for B.Sc. students, since 2000
- Participating in the project “Integrating the Internet in Academic Teaching”, based on WebAssign – A Web-based Assessment System, supported by The Israel Council of Higher Education, 2000-2002
- Member, College Steering Committee for the Project “Integrating the Internet in Academic Teaching”, 2000-2002
- Member, College Copyright Committee, 2001-2002
- Member, Statistical Laboratory Feasibility Committee, 2000

#### CONFERNCES ORGANIZING/SCIENTIFIC COMMITTEE MEMBERSHIP

- Organizing Committee, 4<sup>th</sup> Annual Industry-Academia Conference, ORT Braude College, Karmiel, Israel, March 13, 2013
- Organizing Committee, 3<sup>rd</sup> Annual Industry-Academia Conference, ORT Braude College, Karmiel, Israel, April, 2, 2012
- Organizing Committee, 18<sup>th</sup> International Conference of the Israel Society for Quality, Tel Aviv, Israel, November, 15-17, 2010
- Scientific Program Committee, International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Management (SMRLO10), Beer Sheva, Israel, February, 8-11, 2010
- Local Organizing Committee, XXVI International Seminar on Stability Problems for Stochastic Models, Nahariya, Israel, October 22-26, 2007.

#### REVIEWER of MANUSCRIPT SUBMITTED to the JOURNAL

*Probability and Statistics Letters*  
*Quality Technology and Quantitative Management*  
*Journal of Applied Statistics*  
*Probability in the Engineering and Informational Sciences*  
*Quality and Quantity Journal*

#### CONFERENCE and SEMINAR LECTURES

2020	23 <sup>rd</sup> Annual meeting of the Israel Analytical Chemistry Society (ISRANALYICA 2020), Israel- Keynote lecture of the Session: Metrology, Quality and Chemometrics.
2019	18 <sup>th</sup> Applied Stochastic Models and Data Analysis International Conference (ASMDA), Florence, Italy
2017	31 <sup>st</sup> European Meeting of Statisticians (EMS), Helsinki, Finland
2016	World Congress in Probability and Statistics, Toronto, Canada
2016	2 <sup>nd</sup> International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Management (SMRLO'16), Beer Sheva, Israel
2015	ORT Braude College 11 <sup>th</sup> Interdisciplinary Research Conference, Hagoshrim, Israel
2015	30 <sup>th</sup> European Meeting of Statisticians (EMS), Amsterdam, Netherlands

- 2015 16<sup>th</sup> Applied Stochastic Models and Data Analysis International Conference (ASMDA), Piraeus, Greece
- 2014 ORT Braude College 10<sup>th</sup> Interdisciplinary Research Conference, Nahariya, Israel
- 2014 Measurements and Standards in Quality Management: Developments and Trends, The Open University of Israel, Raananna, Israel
- 2013 59<sup>th</sup> World Statistics Congress of the International Statistical Institute (ISI 2011), Hong Kong, China
- 2012 Seminar on the ORDANOVA method, the Ruppin Academic Center
- 2012 Joint Statistical Meetings of ASA (American Statistical Association), San Diego, CA, USA
- 2012 Annual meeting of the Israel Statistical Association (ISA), Tel Aviv University, Israel
- 2011 58<sup>th</sup> World Statistics Congress of the International Statistical Institute (ISI 2011), Dublin, Ireland
- 2010 Joint Statistical Meetings of ASA, Vancouver, BC, Canada
- 2010 International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Management (SMRLO10), Beer Sheva, Israel
- 2010 18th International Conference of the Israel Society for Quality, Tel Aviv, Israel
- 2010 IsENBIS Meeting on Service Engineering, Herzlia, Israel
- 2010 ORT Braude College 6<sup>th</sup> Interdisciplinary Research Conference, Haifa, Israel
- 2010 Galilee Quality Conference, Karmiel, ORT Braude College, Israel
- 2009 ORT Braude College 5<sup>th</sup> Interdisciplinary Research Conference, Nahariya, Israel
- 2009 Joint Statistical Meetings of ASA, Washington, DC, USA
- 2009 4<sup>th</sup> Israel Industrial Engineering and Management Research Meeting (IIERM), Maalot, Israel
- 2008 International Conference of Applied and Engineering Mathematics (ICAEM), London, U.K
- 2008 15<sup>th</sup> Industrial Engineering and Management Conference, Tel Aviv, Israel
- 2008 17<sup>th</sup> International Conference of the Israel Society for Quality, Jerusalem, Israel
- 2008 ORT Braude College 4<sup>th</sup> Interdisciplinary Research Conference, Nazareth Elite, Israel
- 2007 ORT Braude College 3<sup>rd</sup> Interdisciplinary Research Conference, Kibbutz Hagoshrim, Israel
- 2007 12<sup>th</sup> International Conference on Quality and Productivity Research, University of Haifa, Israel
- 2002 1<sup>st</sup> Annual Conference of Meital (Inter-University Center for e-Learning), Technion, Israel

## LIST OF PUBLICATIONS

*D.Sc. Dissertation*

T. Gadrich, *Parameter Estimation for ARMA Processes with Symmetric Stable Innovations*, Faculty of Industrial Engineering and Management, Technion – Israel Institute of Technology, Haifa, Israel.

### A. Referred papers

1. T. Gadrich and G. Katriel, "Estimating the rate of defects under imperfect sampling inspection – a new approach", *Probability in the Engineering and Informational Sciences*, (Published on line October 28, 2019), p. 1-16, doi:10.1017/S0269964819000391
2. T. Gadrich and E. Bashkansky, "A Bayesian approach to estimating uncertainty of inaccurate categorical measurements", *Measurement*, Vol. 91, p. 186-193, 2016.
3. T. Gadrich and G. Katriel, "A mechanistic stochastic Ricker model: analytical and numerical investigations", *International Journal of Bifurcation and Chaos*, Vol. 26, No. 4, 2016.
4. T. Gadrich, E. Bashkansky and R. Zitikis, "Assessing variation: a unifying approach for all scales of measurement", *Quality and Quantity*, 49(3), p. 1145-1167, 2015.
5. M. Kaner, T. Gadrich, S. Dror and Y. Marmor, "Generating and evaluating simulation acenarios to improve emergency department operations", *IIE Transactions on Healthcare Systems Engineering*, Vol. 4, No. 3, p. 156-166, 2014.
6. M. Kaner, T. Gadrich, S. Dror and Y. Marmor, "Conceptualizing emergency department scenarios: A DSE-based methodology", *International Journal of Service Science, Management, Engineering and Technology (IJSSMET)*, Vol. 4, No. 1, p. 30-46, 2013.
7. T. Gadrich, E. Bashkansky and I. Kuselman, "Comparison of biased and unbiased estimators of variances of qualitative and semi-quantitative results of testing", *Accreditation and Quality Assurance*, Vol. 18, No. 2, p. 85-90, 2013.
8. E. Bashkansky and T. Gadrich, "Some statistical aspects of binary measuring systems", *Measurement*, Vol. 46, p. 1922-1927, 2013.
9. T. Gadrich and E. Bashkansky, "ORDANOVA: Analysis of Ordinal Variation", *Journal of Statistical Planning and Inference*, Vol. 142, p. 3174-3188, 2012.
10. E. Bashkansky, T. Gadrich and I. Kuselman, "Interlaboratory comparison of test results of an ordinal or nominal binary property: analysis of variation", *Accreditation and Quality Assurance*, Vol. 17, No. 3, p. 239-243, 2012.
11. E. Bashkansky and T. Gadrich, "Statistical quality control for ternary ordinal quality data", *Applied Stochastic Models in Business and industry*, Vol. 27, No. 4, p. 586-599, 2011.
12. T. Gadrich and E. Bashkansky, "Revealing latent quality information hidden within inspection reports of curtailed tests", *International Journal of Quality Engineering and Technology*, Vol. 2, No. 4, p. 306-327, 2011.
13. T. Gadrich and R. Ravid, "The sequential occupancy problem through group throwing of indistinguishable balls", *Methodology and Computing in Applied Probability*, Vol. 13, No. 2, p. 433-448, 2011.
14. M. Kaner, T. Gadrich, and S. Dror, "Engineering of service processes through designing simulation experiments", *International Journal of Services Sciences*, Vol. 4, No. 1, p.76-99, 2011.
15. E. Bashkansky, T. Gadrich and D. Knani, "Some metrological aspects of the comparison between two ordinal measuring systems", *Accreditation and Quality Assurance*, Vol. 16, p. 63-72, 2011.
16. E. Bashkansky and T. Gadrich, "Some metrological aspects of ordinal measurements", *Accreditation and Quality Assurance*, Vol. 15, No. 6, p. 331-336, 2010.
17. E. Bashkansky and T. Gadrich, "Evaluating quality measured on a ternary ordinal scale", *Quality and Reliability Engineering International*, Vol. 24, p. 957-971, 2008.

18. Mikosch, T. Gadrich, C. Klüppelberg and R. J. Adler, "Parameter estimation for ARMA models with infinite variance innovations", *The Annals of Statistics*, Vol. 23, p. 305-326, 1995.
19. Gadrich and R. J. Adler, "Slepian models for non-stationary Gaussian processes", *Journal of Applied Probability*, Vol. 30, p. 98-111, 1993.
20. R. J. Adler, G. Samorodnitsky and T. Gadrich, "The expected number of level crossings for stationary harmonisable, symmetric, stable processes", *The Annals of Applied Probability*, Vol. 3, No. 2, p. 553-575, 1993.

## **B. Chapters in books**

1. E. Bashkansky and T. Gadrich, *Reliability of Continuous-State Systems in View of Heavy-Tailed Distributed Performance Features*. In: Recent Advances in System Reliability: Signatures, Multi-state Systems and Statistical Inference. Eds. A. Lisnianski and I. Frenkel. Springer: London, p. 295-306, 2012.
2. E. Bashkansky and T. Gadrich "Mathematical and computational aspects of treatment ordinal measurement results", *Advanced Mathematical and Computational Tools in Metrology and Testing IX*, vol. 9, p. 35-42 (F. Pavese, M. Bär, J-R Filtz, A. B. Forbes, L. Pendrill, and K. Shirono, eds.), Series on Advances in Mathematics for Applied Sciences, vol. 84, World Scientific, Singapore, 2012.

## **D. Refereed Conference Proceedings**

1. M. Kaner, T. Gadrich, and S. Dror, "A generic scheme for designing emergency department simulation experiments", *MSOM 2010*, 2010.
2. E. Bashkansky and T. Gadrich, "Statistical quality control on a ternary scale basis", *20<sup>th</sup> International Conference of Production Research*, 2009.
3. T. Gadrich and R. Ravid, "The coupon collector problem in statistical quality control", *2008 International Conference of Applied and Engineering Mathematics (ICAEM)*, London, UK, July 2-4, 2008, p. 905-909 (ISBN: 978-988-17012-3-7), Publisher: IAENG.
4. E. Bashkansky, T. Gadrich, and E. Godik, "How to estimate quality on a ternary categorical scale?" *Proceedings of the 5<sup>th</sup> International Conference on Quality and Reliability*, 2007.

## **E. Other Conference Proceedings**

1. T. Gadrich and G. Katriel, "Estimating a Poisson parameter based on incomplete information: Precision vs. simplicity", *31<sup>st</sup> European Meeting of Statisticians (EMS)*, 2017.
2. T. Gadrich and G. Katriel, "Asymptotic and numerical analysis of stochastic population dynamics using a finite Markov chain", *World Congress in Probability and Statistics, University of Toronto, Fields Institute, Toronto, Canada*, 2016.
3. T. Gadrich and G. Katriel, "Application of Discrete Time Markov Chain to Ecological Models with Small populations", *2<sup>nd</sup> International Symposium on*

*Stochastic Models in Reliability Engineering, Life Science and Operations Management (SMRLO'16)*, 2016.

4. T. Gadrich and G. Katriel, "Statistical estimation of population parameters with multiple measurements", *ORT Braude College 11<sup>th</sup> Interdisciplinary Research Conference*, 2015.
5. T. Gadrich and G. Katriel, "Effect of reproductive distribution on the behavior of stochastic versions of population-dynamics models", *30<sup>th</sup> European Meeting of Statisticians (EMS)*, 2015.
6. T. Gadrich and G. Katriel, "From scramble competition to stochastic Ricker models", *16<sup>th</sup> Applied Stochastic Models and Data Analysis International Conference (ASMDA)*, 2015.
7. T. Gadrich and E. Bashkansky, "Correlation paradox of binary classification system", *Proceedings 59<sup>th</sup> International Statistical Institute (ISI) World Statistics Congress*, p. 3544-3549, 2013.
8. Bashkansky and T. Gadrich, "Analysis of ordinal variation as a tool for practical engineering applications", *Proceedings of the 17<sup>th</sup> Industrial Engineering and Management Conference*, 2012.
9. T. Gadrich and E. Bashkansky, "ORDANOVA: Analysis of ordinal variation", *58<sup>th</sup> World Statistics Congress of the International Statistical Institute (ISI 2011)*, 2011.
10. Bashkansky and T. Gadrich "Some metrological aspects of ordinal quality data treatment", *5<sup>th</sup> Israel Industrial Engineering and Management Research Meeting (IIERM)*, 2011.
11. R. Ravid and T. Gadrich "Waiting time in the sequential occupancy problem", *5<sup>th</sup> Israel Industrial Engineering and Management Research Meeting (IIERM)*, 2011.
12. T. Gadrich and E. Bashkansky, "Revealing latent quality information hidden within inspection reports of curtailed tests", *2010 Joint Statistical Meetings*, 2010.
13. T. Gadrich and E. Bashkansky, "Ternary ordinal quality data: Interpretation and process control", *International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Management (SMRLO10)*, 2010.
14. T. Gadrich and R. Ravid, "Waiting time in the sequential occupancy problem", *2009 Joint Statistical Meetings of ASA (American Statistical Association)*, 2009.
15. T. Gadrich and E. Bashkansky, "SPC performance for ternary ordinal quality measures", *4<sup>th</sup> Israel Industrial Engineering and Management Research Meeting (IIERM)*, 2009.
16. M. Kaner, T. Gadrich and S. Dror, "Engineering of service processes through design of experiments and simulation", *4<sup>th</sup> Israel Industrial Engineering and Management Research Meeting (IIERM)*, 2009.
17. S. Dror, T. Gadrich and M. Kaner, "Service process operations management using design of experiments and simulation", *XVIII International RESER Conference*, 2008.

**F. Other Publications:**

1. Tutorial manual in Stochastic Process in Operations Research, ORT Braude College (Hebrew).
2. Tutorial manual in Probability, ORT Braude College (Hebrew).
3. Tutorial manual in Statistics, ORT Braude College (Three parts, Hebrew).
4. Tutorial manual in Statistics for Engineers, Technion – Division of Continuing Education and External Studies (Hebrew).
5. Tutorial manual in Statistics for Engineers, ORT Braude College (Hebrew).