

# CURRICULUM VITAE

**Dr. Emil Bashkansky, Associate professor**

**November, 2020**

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## 1. Academic Education

- *Ph.D.* 1973, Theoretical and Mathematical Physics, Department of physics, Gorky University, Gorky, USSR, Diploma No. MFM 019 577
- *M.Sc.*, 1968, Physics (cum laude), Department of Physics, Gorky University, Gorky, USSR, Diploma No. P 455 144

## 2. Academic Employment

30.10.2016 -	Professor Emeritus, Department of Industrial Engineering and Management. ORT Braude College, Karmiel, Israel
01.03.2013 -01.10.2016	Associate Professor, Department of Industrial Engineering and Management. ORT Braude College, Karmiel, Israel
2003 – 2013	Senior Lecturer, Department of Industrial Engineering and Management. ORT Braude College, Karmiel, Israel
1991 – 2003	Lecturer, Department of Industrial Engineering and Management. ORT Braude College, Karmiel, Israel
1993	Adjunct Teacher, Department of Agricultural Engineering, Technion –Israel Institute of Technology, Haifa, Israel

### 3. Academic Activities

#### 3.1 Professional Experience

- 1995 – present Irregular cooperation with Dr. Grabov, Advanced Logistic Development (ALD) Ltd., in the fields of:
- uncertainty in measurement evaluations
  - quality classification
  - tolerancing & qualimetrix
  - SQC methods (joint publication)
- 1983 – 1990 Head, Physical Laboratory of Methodical Research, Leningrad Technological Institute, USSR:
- computational methods in data analysis
  - automatized experiment and design of experiments (DOE) methods in the high education.
- 1971 – 1983 Senior Scientist, Aircraft Technological Institute, Rybinsk, USSR;
- Statistical methods of quality control
  - Measurements for quality applications
  - Microelectronic's technology process modelling and optimization (in cooperation with Moscow Aircraft Technological Institute, USSR)
  - Magnetic circuits calculation problems
- 1968 – 1971 Research doctoral study, Department of Physics, Gorky university, USSR: quantum optics

#### 3.2 Research Collaboration

- 2014- Collaboration with Prof. V. Turetsky, ORT Braude College.  
**Research Topics: Ability evaluation by binary test: data analysis and design**
- 2014- Collaboration with Dr. Yariv Marmor, ORT Braude College.  
**Research Topics: SPC, Healthcare Data Analysis, Decision Support Systems, Processing new types of quality data**
- 2008-2014 Collaboration with Dr. Tamar Gadrich, ORT Braude College.  
**Research Topics: Quality Measurement, Control and Prediction on the Categorical Scale Basis, Multi-agent prioritization**
- 2011-present Collaboration with Dr. Ilya Kuselman, National Physical Laboratory of Israel.  
**Research Topics: Metrology on the Categorical Scale Basis**

- 2006-present Collaboration with Dr. Shuki Dror and Dr. Rachel Ravid,  
ORT Braude College  
**Research Topic: Different aspects of Quality and Safety Engineering**
- 2012-present Collaboration with Prof. Ricardas Zitikis, Department of  
Statistical and Actuarial Sciences, University of Western  
Ontario  
**Research Topic: Assessing variation: a unifying approach  
for all scales of measurement**
- 2013-present Collaboration with Prof. Vladimir Turetsky and Valery Glizer,  
Department of Applied Mathematics, ORT Braude College,  
**Research Topics: SPC with variable sampling interval,  
testing evaluation, item response function in antagonistic  
situation, polytomous IRF.**

### 3.3 Teaching Experience

#### A. ORT Braude College

##### **Graduate Courses:**

Advanced Topics of Quality Engineering

##### **Undergraduate Courses:**

- Quality Engineering
- Advanced Tools of Quality Engineering
- Statistical Quality Management
- Quality Assurance for Engineers
- Metrology
- University Physics

##### **Department of Continuing Education**

- Quality Assurance (basic course)
- Quality Assurance (advanced course)
- Applied Statistics for Industrial Applications

##### **Undergraduate Student Supervision:**

- Research project supervision (Lidia Lerner), 2004
- Research internship supervision (Naama Shitrit), 2010
- Research internship supervision (Hadar Willfend), 2013

## **B. Other Universities or Colleges**

### **University of Naples "Federico II", Italy**

Department of Industrial Engineering: "Quality-assured measurements" (a one-week course for M.Sc. & Ph.D. students, September, 2017)

#### **Technion – Israel Institute of Technology,**

- Department of Quality and Reliability Engineering:  
Product Quality Assurance

- Division of Continuing Education and External Studies:

Preparation for the Certified Quality Engineer (CQE), Examinations of American Society for Quality (ASQ)

#### **ALD Ltd.**

Preparation for the Certified Quality Engineer (CQE), Examinations of American Society for Quality (ASQ) (for Israel Standard Institute engineers)

#### **Leningrad Technological Institute, Department of Physics, Leningrad, USSR**

##### **Undergraduate course:**

University Physics I, II, III

#### **Aircraft Technological Institute, Department of Radio Engineering, Rybinsk, USSR**

##### **Graduate courses:**

- Theoretical Principles of Electrical Engineering
- The Theory of Electromagnetic Field
- Antenna Design and Wave Propagation
- Physical Fundamentals of Microelectronics
- Microelectronics Technologies

#### **Gorky University, Department of Physics, Gorky, USSR**

##### **Graduate courses:**

Theoretical Physics (seminars)

## **4. Academic and Professional Awards**

2003	Outstanding Lecturer, ORT Braude College
2009	Outstanding Faculty member, ORT Braude College
2010	Outstanding Faculty member, ORT Braude College
2013	Outstanding Faculty member, ORT Braude College

2014	Certificate of "Appreciation" from Israeli Society for Quality (ISQ)
2020	Certificate of "Lifetime Achievement Award" from Israeli Society for Quality (ISQ)

#### 4.1 Membership in professional societies

**ISQ** – Israel Society for Quality, since 1991

**IMS** – Israel Metrological Society, since 2002

**ISA** – The Israel Statistical Association, since 2015

### 5. Academic and Professional Activities

- Member, ORT Braude College Academic Council (since 2008)
- Founder and permanent chair of the Galilee quality conference “Quality - Theory and Practice”, held annually at the ORT Braude College of Engineering (27.05.2008, 26.05.2009, 01.06.2010, 12.05.2011, 15.05.2012, 02.05.2013, 01.05.2014, 10.06.2015, 02.06.2016, 24.05.2018, 30.05.2019) and integrated in the frame of Israeli “week of quality” events.
- Member of the Doctorate Examination Committee, by appointment of the Doctorate Board of the University of Amsterdam, doctoral thesis of Mr. Thomas Akkerhuis "*Measurement System Analysis for Binary Tests*", September 16, 2016
- Member of the Doctorate Examination Committee, by appointment of the Doctorate Board of the University of Naples, doctoral thesis of Mrs. Maria Sole Pelegrino "*Assessing and inferring intra and inter-rater agreement*", November 2018
- Member of the International Program Committee of the International Conference "Advanced Mathematical and Computational Tools in Metrology and Testing" (St. Petersburg, Russia, June 2014, Glasgow, August 2017).
- Member of the International Program Committee of the International Symposium *SMLRO'16* - the International Symposium on Stochastic Models in Reliability Engineering, Life Sciences and Operations Management, Sami Shamoon College of Engineering (SCE), (Beer Sheva, Israel, February 15-18, 2016).
- Member and keynote speaker of the International Program Committee of the **IMEKO** TC1-TC7-TC13-TC18 Joint Symposium: St. Petersburg, Russia, July 2-5, 2019
- Member of the Israeli Statisticians Association (ISA) 2012 Annual Conference Program Committee

- Member of the Israel Society for Quality (ISQ) Annual Conference Program Committee, from 2017
- Member, Research Committee, ORT Braude College, 2010-2013
- Examiner, graduate students' theses in Technion and Tel-Aviv University
- Reviewer of manuscripts submitted to journals:
  - ✓ *Quality and Reliability Engineering International*
  - ✓ *Applied Stochastic Models in Business and Industry*
  - ✓ *Journal of Testing and Evaluation*
  - ✓ *Accreditation and Quality Assurance*
  - ✓ *Measurement*
  - ✓ *Journal of Probability and Statistics*
  - ✓ *Computers & Industrial Engineering*
  - ✓ *Quality Engineering*
  - ✓ *Journal of Applied Statistics*
  - ✓ *International Journal of Advanced Manufacturing Technology*
  - ✓ *SN Applied Sciences*
  - ✓ *Socio-Economic Planning Sciences*
  - ✓ *METRON*
  
- Reviewer of chapter 9 in a book:
 

*Operational Risk Management: A practical approach to intelligent data analysis*, Eds. Ron Kenett and Yossi Raanan, John Wiley & Sons, UK, 2011
  
- Reviewer and consultant of the “Vocabulary for Nominal Properties and Nominal Examinations” - INTERNATIONAL FEDERATION OF CLINICAL CHEMISTRY AND LABORATORY MEDICINE
- Member, Technical Committee 1816 – Quality and Reliability Engineering of the Standard Institute of Israel (SII)
- Member, Sub – committee of Technical Committee 1816- destined to adopt standard ISO 22514-3:2008- Statistical methods in process management — Capability and performance - Part 3: Machine performance studies for measured data on discrete parts, 2011
- Consultant and member (from June, 2012) of ISO/REMCO WG13 destined to prepare ISO Guide 79 on the production of reference materials (RMs) for ‘qualitative analysis’ (testing of ‘nominal properties’), since 2011
- Consultant of IFCC-IUPAC project number: 2004-023-1-700, extended 2008-019-12 1-700 "Vocabulary on nominal property, nominal examination, and related concepts for clinical laboratory sciences", 2014-2015

- Member, Steering Committee of the Galilee Quality and Excellence Award, since 2008)
- Member, Teachers Appraisal Committee (2008-2010)
- Member, IE&M curriculum committee (since 2007)
- Member, College Quality Management Subcommittees: Lecturers – Students Relationships Improvement, ORT Braude College, 2007
- Abiturients' consultant, 2007-2008, 2011-present
- Head, Computer Services Procedure Development Committee, ORT Braude College, 2005-2007
- Member, Academic Affairs Subcommittee: Excellence Route Program Development and Lecturer Facilities Improvement, ORT Braude College, since 2005
- Responsible for the development of the department laboratories, ORT Braude College, 2003-2006
- Member, Academic Affairs Committee, ORT Braude College, 2003-2006, since 2013
- Member of the ad-hoc committee “Teaching Physics at the ORT Braude College”, 2003
- Academic consultant for students, ORT Braude College, 2002-2007
- Member, Academic Assessment Committee, ORT Braude College, 2002-2004
- Member, “College Quality Management Committee”, ORT Braude College, since 2001
- Member, College Quality Management Subcommittees: Customer Satisfaction Surveys (administrative, academic, employers), ORT Braude College, since 2001
- Responsible for the permanent department seminar of the Department of Industrial Engineering and Management, ORT Braude College, 2000-2003
- Member of Enrichment Educational Center for Youth Council, ORT Braude College, 1999-2003
- Member, Internet educational project, ORT Braude College, 1999-2000
- Academic monitoring of outstanding students, 2006 – 2009

## **6. Professional Activities**

## **7. Plenary and Invited Talks at Conferences**

- ISRANALITICA 2017, Pre-conference International workshop on validation of test methods, human errors and measurement uncertainty of results. January, 23 2017 ,Kfar Maccabiah , Ramat Gan. The title of the lecture: "VALIDATION OF QUALITATIVE METHODS: EVALUATION OF REPEATABILITY AND REPRODUCIBILITY"

- 17-th Annual European Network for Business and Industrial Statistics (ENBIS) Conference, Naples, Italy, September 10-15,2017, at ENBIS-17 special session titled "*Reliability of Subjective Measurement Systems*". The title of the lecture: "ASSESSING ASSESSORS (*by means of binary test design and analysis*)"
- **IMEKO TC1-TC7-TC13-TC18 Joint Symposium** - "The future glimmers long before it comes to be": St. Petersburg, Russia, July 2-5, 2019

## 8. Conferences & Seminar Lectures

### CONFERENCES, SEMINARS, SYMPOSIA and PROFESSIONAL MEETINGS

- |      |   |
|------|---|
| 1973 | The 1 <sup>st</sup> all-union Congress devoted to Light-echo phenomenon   |
| 1976 | The seminar of young scientists and specialists "Problems of Automation of Measuring", Rybinsk-Yaroslavl.   |
| 1976 | The 2 <sup>nd</sup> inter-republican seminar "System Analysis and Estimation of the Quality Characteristics of Complicated Systems", Minsk-Brest. |
| 1977 | The all-union conference "Increasing the effectiveness of manufacturing and quality in view of standardization", Moscow-Gorky.                    |
| 1984 | The all-union Conference "Theory and Practice of Design and Ensuring Quality and Reliability of Electronic Devices", Voronez.                     |
| 1988 | The Republican conference "The Main Trends of Quality Improvement of Engineers Training in view of High School Reorganization", Leningrad.        |
| 1988 | The IV-th Conference of the Heads of General Physics Departments (North-West Region), Petrozavodsk.   |
| 1996 | The 11 <sup>th</sup> International conference of the Israel Society for Quality, Jerusalem.   |
| 2003 | The 7 <sup>th</sup> National Conference, Israel Society for Quality, Tel Aviv, Israel.  |
| 2005 | The 18th International Conference on Production Research, Salerno, Italy, July,31-August,4.   |
| 2006 | The 14th Industrial Engineering and Management Conference, Tel Aviv, March 20-21.   |
| 2006 | The 16-th International Conference of the Israel Society for Quality, Tel Aviv, November 14-16.   |
| 2007 | The 12 <sup>th</sup> International Conference on Quality and Productivity Research, Haifa, July 10-12.  |
| 2007 | The 5 <sup>th</sup> International Conference on Quality and Reliability, Chang Mai, Thailand, November 5-7.                                       |



- 2007 The 9<sup>th</sup> National Conference, Israel Soc. for Quality, Tel Aviv, November 28-29.
- 2008 The 15th Industrial Engineering and Management Conference, Tel Aviv, March, 10-11.
- 2008 Seminar of the Engineering Department of TAU
- 2008 The 17-th International Conference of the Israel Society for Quality, Tel Aviv, November 18-20.
- 2009 The 3rd Israeli Industrial Engineering Research Conference, Malot, March 4-5.
- 2009 The 20th ICPR-International Conference on Production Research, Shanghai, China, August, 2-6.
- 2009 The 10<sup>th</sup> National Conference, Israel Soc. for Quality, Tel Aviv, November 23-24.
- 2010 *ISRANALYTICA 2010* - the 13th Annual Meeting of the Israel Analytical Chemistry Society, Tel Aviv, January 19-20.
- 2010 *SMLRO'10* - the International Symposium on Stochastic Models in Reliability Engineering, Life Sciences and Operations Management, Sami Shamoon College of Engineering (SCE), Beer Sheva, February 8-11.
- 2010 The 16th Industrial Engineering and Management Conference, Tel Aviv, March 23-24.
- 2010 The Joint Statistical Meetings (JSM), Vancouver, Canada. July 31-August 5.
- 2010 The 18th International Conference of the Israel Society for Quality, Tel-Aviv, November 15-17.
- 2011 The 5-th Israeli Research Conference on Industrial Engineering and Management, Ein Bokek, Dead Sea, Leonardo hotel, March 16-17.
- 2011 The 4th International Conference on Metrology, Jerusalem, May, 23-24.
- 2011 Advanced Mathematical and Computational Tools in Metrology and Testing (AMCTM 2011), Goteborg, Sweden, June 20-22.
- 2011 11-th Annual European Network for Business and Industrial Statistics (ENBIS) Conference, Coimbra, Portugal, September 4-8.
- 2011 Brainstorming session of ISO/REMCO, Working Group 13, Brussels, Belgium, November 8-9.

- 2011 The 11<sup>th</sup> National Conference, Israel Soc. for Quality, Haifa, November 9-10.
- 2012 *ISRANALYTICA 2012* - the 15th Annual Meeting of the Israel Analytical Chemistry Society, Tel Aviv, January 24-25.
- 2012 The 2012 Annual Conference of Israel Statistical Association, Tel Aviv University, May 22.
- 2012 13-th International Symposium on Biological and Environmental Reference Materials (BERM 13), IAEA Headquarters in Vienna, June 25 – 29
- 2012 The Joint Statistical Meetings, July 28 – August 2, San Diego, California
- 2012 The 19th International Conference of the Israel Society for Quality, Jerusalem, October 23.
- 2013 International workshop on human errors and out-of-specification test results, 29.01.2013, Tel Aviv, Israel
- 2013 The Joint Statistical Meetings, August 2- August 8, Montreal, Canada
- 2013 The 12<sup>th</sup> National Conference, Israel Soc. for Quality, Tel Aviv, November 29-30.
- 2014 The 18th Industrial Engineering and Management Conference, Tel Aviv, March, 25-26.
- 2014 The Joint Statistical Meetings, August 2- August 8, Boston, USA
- 2014 Advanced Mathematical and Computational Tools in Metrology and Testing (AMCTM 2014), St.Peterburg, Russia, 10-12 September.
- 2014 The 20-th International Conference of the Israel Society for Quality, Tel Aviv, November.
- 2015 Invited round-table moderator at the *ISRANALYTICA* - the 18th Annual Meeting of the Israel Analytical Chemistry Society, January 14th – 15th, 2015, the David Intercontinental Hotel, Tel-Aviv, Israel.
- 2015 Invited lecture at one-day Symposium "Quality management to achieve organizational leadership", March 11, 2015; AFEKA academic college, Israel
- 2015 The Joint Statistical Meetings, August 8- August 13, Seattle, USA
- 2015 The XXI World Congress IMEKO, August 30 - September 4, Prague, Czech Republic.
- 2015 15-th Annual European Network for Business and Industrial Statistics (ENBIS) Conference, September 6-9, Prague, Czech Republic,
- 2015 The 13<sup>th</sup> National Conference, Israel Soc. for Quality, November 24-25, Tel Aviv (Session chair).
- 2016 *SMLRO'16* - the International Symposium on Stochastic Models in Reliability Engineering, Life Sciences and Operations Management,

- Sami Shamoon College of Engineering (SCE), Beer Sheva, February 15-18, (Session chair).
- 2016 IMEKO TC1-TC7-TC13 Joint Symposium 2016, University of California, Berkeley 3-5 August
- 2016 The 21-th International Conference of the Israel Society for Quality, Tel Aviv, November (Session chair).
- 2017 Invited lecturer at the pre-conference International Workshop - the 20<sup>th</sup> Annual Meeting of the Israel Analytical Chemistry Society (ISRANALYTICA), January 23, Kfar Maccabiah, Ramat Gan, Israel.
- 2017 The 21th Industrial Engineering and Management Conference, , June, 4, Kfar Maccabiah, Ramat Gan, Israel
- 2017 International Conference "Advanced Mathematical and Computational Tools in Metrology and Testing", Glasgow, August 2017
- 2017 The 14<sup>th</sup> National Conference, Israel Soc. for Quality, November, Tel Aviv (Session chair).
- 2018 .....Ben Gurion University, Beer Sheva
- 2018 The 22th Industrial Engineering and Management Conference, , June, 4, Kfar Maccabiah, Ramat Gan, Israel
- 2018 18-th Annual European Network for Business and Industrial Statistics (ENBIS) Conference, Nancy, France, 2 - 6 September 2018.
- 2019 IMEKO TC1-TC7-TC13-TC18 Joint Symposium: St. Petersburg, Russia, July 2-5, 2019-Invited keynote speaker
- 2019 19-th Annual European Network for Business and Industrial Statistics (ENBIS) Conference, Budapest , September 2 - 4 September, 2019.
- 2019 The 15<sup>th</sup> National Conference, Israel Soc. for Quality, November, Tel Aviv (Session chair)

## 9. List of Publications

### 9.1 Ph.D. Thesis:

Bashkansky E. (1973). "Some problems of quantum – statistical theory of non – linear parametrical interaction between waves"

### 9.2 Refereed Papers

Note: Papers published in the journals of the USSR Academy of Science were translated into English after the USSR signed the copyright convention. These papers are marked by an asterisk.

1. \*E. Bashkansky, V. Mitjugov, "Group theory methods of the photon statistics." *Theoretical & Mathematical Physics*, vol. 7, no. 3, pp. 584-590, 1971.
2. E. Bashkansky, A. Protogenov, "Transition rules for the interaction between electron and electromagnetic excitations in presence of magnetic field."

- Scientific Transactions of Gorky University, Serial of Physics*, issue 126, pp. 3-5, 1971.
3. E. Bashkansky, V. Mitjugov, "Some properties of supercoherent states." *Scientific Transactions of Gorky University, Serial of Physics*, issue 126, pp. 10-12, 1971.
  4. E. Bashkansky, A. Protogenov, "Principles of electron transmissions in the presence of constant magnetic field." *Scientific Transactions of Gorky University, Serial of Physics*, issue 149, pp. 6-8, 1972.
  5. E. Bashkansky, V. Mitjugov, "To the statistical theory of non – linear interaction between waves." *VINITI, dep. Manuscript*, no. 4802-72, ref. 2D946, 1973.
  6. \*E. Bashkansky, V. Mitjugov, "Conservation laws in processes of non–linear transformation of light." *Optics & Spectroscopy*, vol. 35, no. 2, pp. 183-185, 1973.
  7. \*A. Gurevitch, E. Bashkansky, P. Gluzman, "Statistical quality control of manufacturing processes in which the influence of functional errors predominates." *Mechanical Engineering Journal*, vol. 55, no. 6, pp. 39-40, 1975.
  8. E. Bashkansky, P. Gluzman, V. Judin, "Theoretical analysis algorithms of inductron devices." *Magneto – Semiconductive and Electromagnetic Elements of Automatics, collected articles published by the Ryazan Institute of Radio–engineering*, issue 4, pp. 124-128, 1975.
  9. \*E. Bashkansky, A. Gurevitch, V. Ogvozdin, "Optimal tactics for a statistical quality control in the view of inadmissibility of defectives in adopted product." *Mechanical Engineering Journal*, no. 7, pp. 76-79, 1976.
  10. E. Bashkansky, A. Gurevitch, "Calculation of the optimal periodicity of quality control in the view of fixed probability of non–exceeding limited level of the output quality." *Aircraft Industry*, no. 7, pp. 74-79, 1976.
  11. E. Bashkansky, P. Gluzman, A. Gurevitch, "Periodicity of the quality control for group technological operations." *Quality Control and Reliability*, no. 5, 1976.
  12. E. Bashkansky, V. Milovzorov, P. Gluzman, V. Judin, "About one method of solving field problems for ferromagnetic modules with unevenly distributed parameters." *Theoretical Electrotechnics*, issue 22, pp. 101-106, 1977.
  13. E. Bashkansky, P. Gluzman, M. Morozov, V. Judin, "Analysis of the distribution of magnetic flux in inductrons in an asymptotic approximation." *Problems of Automation of Technological and Industrial Processes, Collected articles published by the Aircraft Technological Institute, Rybinsk-Yaroslavl*, issue 1, pp. 72-76, 1976.
  14. E. Bashkansky, V. Milovzorov, P. Gluzman, V. Judin, "Calculation of inductrons by the similitude method." *Problems of Automation of Technological and Industrial Processes, collected articles published by the Aircraft Technological Institute, Rybinsk-Yaroslavl*, issue 1, 1976.
  15. E. Bashkansky, V. Ogvozdin, "About possibility of creating an apparatus for optimal strategy of statistical control determination." *Problems of Automation*

- of Technological and Industrial Processes, collected articles published by the Aircraft Technological Institute, Rybinsk-Yaroslavl, issue 1, pp. 13-16, 1976.*
16. E. Bashkansky, V. Lando, V. Ogvozdin, "Optimal strategy for statistical control of hole stamping in printed circuit boards." *Quality Control and Reliability*, no.4, pp. 58-64, 1977.
  17. \*E. Bashkansky, V. Judin, P. Gluzman, A. Dvorson, "Variational method for calculation a magnetic field in non-linear inhomogeneous media by the means of a generalized functional." *Electric Technology USSR*, no. 7, pp. 85-87, 1977.
  18. E. Bashkansky, "Some problems of adoptive approach to the statistical control of technological processes." *Problems of Automation of Technological and Industrial Processes, collected articles published by the Aircraft Technological Institute, Rybinsk-Yaroslavl, issue 2, 1978.*
  19. E. Bashkansky, V. Judin, A. Dvorson, "Approbation of variational method of magnetic field calculation." *Problems of Automation of Technological and Industrial Processes, collected articles published by the Aircraft Technological Institute, Rybinsk-Yaroslavl, issue 2, 1978.*
  20. \*E. Bashkansky, V. Stanevko, "Nonlinear circuit analysis by the view of Lagrange formalism." *Theoretical Electrotechnics*, issue 33, pp. 93-101, 1982.
  21. E. Bashkansky, P. Gluzman "Solving of non-linear problem connected with the calculation of inductron's behavior." *Electromechanics*, no. 7, 1983.
  22. E. Bashkansky, V. Chernyaev, V. Korzo, A. Condrashin, "Analysis of physical phenomena in plazma separator." *Activated Processes in Microelectronics Technology, collected articles, published by the Taganrog Radio-engineering Institute, issue 7, pp. 89-109, 1984.*
  23. E. Bashkansky, A.C Chernyaev, "Parametrical classification in the collision theory." VINITI, dep. manuscript No. 6581-83 *Physics*, no. 4, 1984
  24. E. Bashkansky, P. Gluzman, A. Dvorson, "Calculation of the electromagnetic parameters of controllable transformer elements." *Theoretical Electrotechnics*, issue 38, pp. 66-72, 1985.
  25. E. Bashkansky, V. Chernyaev, A. Condrashin, N. Ostroukhov, "Mechanizm of plazma separation in the process of pellicle precipitation." *Electronical Technics, Series 6 – "Materials"*, issue 4/203/, pp. 28-32, 1985.
  26. E. Bashkansky, N. Netzer "The role of mediation in collisions and related analogs", *American Journal of Physics*, vol. 74, no. 12, pp. 1083-1087, 2006.
  27. E. Bashkansky, S. Dror, R. Ravid, P. Grabov, "Effectiveness of a Product Quality Classifier", *Quality Engineering*, vol. 19, issue 3, pp.235-244, 2007
  28. E. Bashkansky, T. Gadrich "Evaluating Quality Measured on a Ternary Ordinal Scale", *Quality and Reliability Engineering International*, vol. 24, issue 8, pp. 957 – 971, 2008
  29. E. Bashkansky, T. Gadrich, "Some Metrological Aspects of Ordinal Measurements", *Accreditation and Quality Assurance*, Vol. 15(6), pp. 331-336, 2010.

30. E. Bashkansky, T. Gadrich, "Some metrological aspects of the comparison between two ordinal measuring systems", *Accreditation and Quality Assurance*, Vol. 16, pp. 63-72, 2011.
31. R. Ravid, E. Bashkansky, S. Dror, "Integrating AHP in an FMECA Framework for Ranking Down Syndrome Tests", *IIE Transactions on Healthcare Systems Engineering*, Vol.1, pp. 91-100, 2011
32. T. Gadrich, E. Bashkansky, "Revealing latent quality information hidden within inspection reports of curtailed tests", *International Journal of Quality Engineering and Technology*, Vol. 2, No. 4, pp.306-327, 2011
33. E. Bashkansky, T. Gadrich, "Statistical Quality Control for a Ternary Ordinal Quality Data", *Applied Stochastic Models in Business and Industry*, Vol.27, pp. 586-599, 2011 (DOI: 10.1002/asmb.868).
34. E. Bashkansky, T. Gadrich, I. Kuselman, "Interlaboratory comparison of measurement results of an ordinal property", *Accreditation and Quality Assurance*, Vol. 17, Issue 3, pp. 239-243, 2012
35. E. Bashkansky, V. Glizer, "Novel Approach to Adaptive Statistical Process Control Optimization with Variable Sampling Interval and Minimum Expected Loss", *International Journal of Quality Engineering and Technology*, Vol. 3, No. 2, 2012
36. T. Gadrich, E. Bashkansky, "ORDANOVA: Analysis of Ordinal Variation", *Journal of Statistical Planning and Inference*, Vol. 142, 3174-3188, 2012
37. T. Gadrich, E. Bashkansky, I. Kuselman "Comparison of biased and unbiased estimators of variances of qualitative and semi-quantitative results of testing", *Accreditation and Quality Assurance*, Vol. 18, Issue 2, pp. 85-90, 2013
38. S. Dror, E. Bashkansky and R. Ravid, "House of security", *International Journal of Safety and Security Engineering*, Vol. 2, No. 4, 317–329, 2012
39. E. Bashkansky, T. Gadrich, "Some statistical aspects of binary measuring systems", *Measurement*, Vol. 46, 1922–1927, 2013
40. Kuselman I., Kardash E., Epstein M., Bashkansky E., Ginsbury K., Pennechi F., Fajgelj A., Stephen L.R. Ellison, S. Karpov Y., "House-of-security approach to measurement in analytical chemistry: quantification of human error using expert judgments", *Accreditation and Quality Assurance*, 18 (6): 459–467, 2013
41. V. Glizer, V. Turetsky, E. Bashkansky, "Statistical Process Control Optimization with Variable Sampling Interval and Nonlinear Expected Loss ", *Journal of Industrial and Management Optimization (JIMO)*, 11: 105 – 133, 2015

42. T. Gadrich, E. Bashkansky, R. Zitikis, "Assessing variation: a unifying approach for all scales of measurement", *Quality and Quantity*, May 2015, Volume 49, Issue 3, pp 1145-1167, 2015
43. E. Bashkansky, S. Dror " Matrix Approach to Human Errors Analysis and their Prevention by Quality Engineering and Managerial tools", *Quality and Reliability Engineering International*, 32, pp.535–545, 2016
44. V. Turetsky, E. Bashkansky "Testing and evaluating one-dimensional latent ability", *Measurement*, 78, pp. 348–357, 2016
45. E. Bashkansky, V. Turetsky, "Proficiency Testing: Binary Data Analysis", *Accreditation and Quality Assurance* 21 (4), 265-270, 2016
46. T. Gadrich, E. Bashkansky, " A Bayesian approach to evaluating uncertainty of inaccurate categorical measurements", *Measurement* 91, 186–193, 2016
47. Bashkansky E. Turetsky, V. "Ability evaluation by binary tests: Problems, challenges & recent advances", *Journal of Physics, Conference Series* 772 (2016) 012012. Berkeley: Institute of Physics, IOP Publishing House, doi:10.1088/1742-6596/772/1/012012, 2016
48. Y.N. Marmor & E. Bashkansky "Abrupt Change of Process Behavior: The Anderson-Darling Detection Tool", *Quality Engineering*, 30(2), 283-292, 2018
49. Turetsky V., Steinberg D., Bashkansky E. "Binary Test Design Problem", *Measurement* 122, 20-26, 2018
50. A. Vanacore, Y.N. Marmor and E. Bashkansky "Some Metrological Aspects of Preferences Expressed by Prioritization of Alternatives", *Measurement* , 135, 520-526, 2019
51. A Vanacore, MS Pellegrino, YN Marmor, E Bashkansky " Analysis of consumer preferences expressed by prioritization chains", *Quality and Reliability Engineering International* 35 (5), 1424-1435, 2019
52. Yariv N. Marmor, Emil Bashkansky " Processing new types of quality data" *Quality and Reliability Engineering International* 36 (8), 2621-2638, 2020
53. Turetsky V., Steinberg DM., Bashkansky E. "Item Response Function in Antagonistic Situations", *Applied Stochastic Models in Business and Industry*, 36 (5), 917-931, 2020
54. Yariv N. Marmor, Tamar Gadrich, Emil Bashkansky "Accuracy of multi-experts' prioritization under Mallows' model of errors creation", *Quality Engineering*, (2020) DOI: 10.1080/08982112.2020.1830419

### Conference Proceedings (refereed)

1. E. Bashkansky, "The Influence of the second harmonic of gyro-frequency on the statistical properties of the electron acceleration process in the presence of a constant magnetic field." *Proceedings of the 1<sup>st</sup> All-union Congress Devoted to Light-echo phenomenon, published at Scientific Transactions of Kazan Pedagogical Institute*, issue 125, pp. 120-125, 1973.
2. E. Bashkansky, V. Lando, "The statistical control of holes stamping by the means of decreasing expenditure." *Theses of the seminar of young scientists and specialists "Problems of Automation of Measuring"*, Rybinsk-Yaroslavl, pp. 10-14, 1976.
3. E. Bashkansky, V. Levin, A. Fishhoff, A. Fishman. H. Kolan, "Quality Assurance Learning at the ORT Braude College." *Proceedings of the 11<sup>th</sup> International conference of the Israel Society for Quality*, Jerusalem, pp. 239-241, November, 1996.
4. E. Bashkansky, S. Dror, R. Ravid, P. Grabov, "Effectiveness of Product Quality Classifier" , *Proceedings of the 18th ICPR Conference on Production Research*, Salerno, Italy, July,31-August,4, 2005.
5. R. Ravid, E. Bashkansky,S. Dror, "Repeated Measurements in Sorting Systems" , *Proceedings of the 14th Industrial Engineering and Management Conference*, Tel Aviv, March 20-21, 2006.
6. E. Bashkansky, R. Ravid, S. Dror, "Accuracy of Redundant Quality Classification Systems", *The 16-th International Conference of the Israel Society for Quality*, Tel Aviv, November 14-16, 2006.
7. E. Bashkansky, T. Gadrich, E. Godik " How to Estimate Quality on a Ternary Categorical Scale ?" *Proceedings of the 5<sup>th</sup> International Conference on Quality and Reliability*, Chang Mai, Thailand, November 5-7, 2007.
8. E. Bashkansky, T. Gadrich " Realization of SPC for ordinal quality measures ", *Proceedings of the 15th Industrial Engineering and Management Conference*, Tel Aviv, Israel, March 10-11, 2008.
9. R. Ravid, S. Dror, E. Bashkansky " Identifying Downs Syndrome Fetuses Using Tagichi's Approach: Selecting the Most Appropriate Detection Method ", *The 3rd World Conference on Production and Operations Management*, Tokyo, Japan, August 5-8, 2008
10. E. Bashkansky, T. Gadrich "SPC performance for ordinal quality measures – theory and practice", *The 17-th International Conference of the Israel Society for Quality*, Tel Aviv, November 18-20, 2008.
11. Bashkansky, T. Gadrich "SQC for ordinal quality measures" *Proceedings of the 3rd Israeli Industrial Engineering Research Conference*, Malot, March 4-5, 2009.



12. T. Gadrich, E. Bashkansky, "Ternary ordinal quality data: interpretation and process control", *Proceedings of the 20th ICPR Conference on Production Research*, Shanghai, China, August, 2-6, 2009
13. R.Ravid, S.Dror, E.Bashkansky "FMECA framework for ranking down syndrome tests", *Proceedings of the 20th ICPR Conference on Production Research*, Shanghai, China, August, 2-6, 2009
14. E. Bashkansky, T. Gadrich "Some metrological aspects of ordinal measurements in analytical chemistry", *ISRANALYTICA 2010*, the 13th Annual Meeting of the Israel Analytical Chemistry Society, Tel Aviv, Israel, January 19-20, 2010
15. E. Bashkansky, T. Gadrich "How to Evaluate and Monitor Quality on an Ordinal Scale Basis", *SMLRO'10 - the International Symposium on Stochastic Models in Reliability Engineering, Life Sciences and Operations Management*, Sami Shamoon College of Engineering (SCE), Beer Sheva, Israel, February 8-11, 2010
16. E. Bashkansky, Y.Dror, R.Ravid, P.Grabov "How to Measure Effectiveness of the Quality Classification Station?", *SMLRO'10 - the International Symposium on Stochastic Models in Reliability Engineering, Life Sciences and Operations Management*, Sami Shamoon College of Engineering (SCE), Beer Sheva, Israel, February 8-11, 2010
17. R.Ravid, Y.Dror, E. Bashkansky "FMECA Framework for Ranking DS Tests", *SMLRO'10 - the International Symposium on Stochastic Models in Reliability Engineering, Life Sciences and Operations Management*, Sami Shamoon College of Engineering (SCE), Beer Sheva, Israel, February 8-11, 2010
18. T. Gadrich, E. Bashkansky "Revealing Latent Quality Information Hidden Within Inspection Reports of Curtailed Tests", *Proceedings of the Joint Statistical Meetings (JSM)*, Vancouver, Canada. July 31-August 5, 2010
19. E. Bashkansky, T. Gadrich "Metrological Characteristics of Ordinal Data", *the Joint Statistical Meetings (JSM)*, Vancouver, Canada. July 31-August 5, 2010.
20. E. Bashkansky, T. Gadrich "Metrological aspects of ordinal data", *The 18th International Conference of the Israel Society for Quality*, Tel-Aviv, November 15-17, 2010.
21. E. Bashkansky, T. Gadrich "The comparison between two ordinal measuring systems", *The 18-th International Conference of the Israel Society for Quality*, Tel-Aviv, November 15-17, 2010.
22. E. Bashkansky, T. Gadrich "Some Metrological Aspects of Ordinal Quality Data Treatment", *Proceedings of the 5-th Israeli Research Conference on Industrial Engineering and Management*, Ein Bokek, Dead Sea, Leonardo hotel, March 16-17, 2011.

23. T. Gadrich, E. Bashkansky, "ORDANOVA: Analysis of Ordinal Variation", *Proceedings of the 58th World Statistics Congress*, Dublin, August 21-26, 2011
24. V.Y. Glizer, V. Turetsky and E. Bashkansky, "Application of Pontryagin's maximum principle to statistical process control optimization", *Proceedings of the ASME 2012 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, Vol. 3: 38<sup>th</sup> Design Automation Conference, arts A and B, paper No. DETC2012-70104, pp. 813-822, DOI:10.1115/DETC2012-70104, ASME Digital Collection Chicago, Illinois, USA, August 12-15, 2012
25. T. Gadrich, E. Bashkansky, "Correlation paradox of binary classification system", *Proceedings of the 59th World Statistics Congress*, Hong Kong, China, August 25-30, p. 3544-3549, 2013
26. E. Bashkansky and V. Turetsky "A New Approach to Simultaneous Latent Ability and Test Difficulty Estimation", *SMLRO'16 - the International Symposium on Stochastic Models in Reliability Engineering, Life Sciences and Operations Management*, Sami Shamoon College of Engineering (SCE), Beer Sheva, Israel, February 15-18, 2016
27. Bashkansky E. Turetsky, V. "Ability evaluation by binary tests: Problems, challenges & recent advances", *IMEKO2016 TC1-TC7-TC13*, University of California, Berkeley August 3-5, 2016, *Journal of Physics, Conference Series* **772** (2016) 012012. Berkeley: Institute of Physics, IOP Publishing House, doi:10.1088/1742-6596/772/1/012012, 2016

### 9.3 Books and Monographs

#### Chapter in a book

1. E. Bashkansky and T. Gadrich, "Reliability of Continuous-State Systems in View of Heavy-Tailed Distributed Performance Features", a chapter in a book *Recent Advances in System Reliability: Signatures, Multi-state Systems and Statistical Inference*, Eds. Anatoly Lisnianski and Ilia Frenkel, Springer-Verlag, London Limited, pp. 295-306, 2011
2. E. Bashkansky and T. Gadrich "Mathematical and computational aspects of treatment ordinal measurement results", *Advanced Mathematical and Computational Tools in Metrology and Testing*, vol.9 (F Pavese, M Bär, J-R Filtz, A B Forbes, L Pendrill, H. Shirono, eds.), Series on Advances in Mathematics for Applied Sciences, vol. 84, World Scientific, Singapore, 2012
3. Y.N. Marmor & E. Bashkansky " Patient Diagnostic State Evolution during Hospitalization: Developing a Model for Measuring Clinical Diagnostic Dynamics", chapter 15 in a book *Recent Advances in System Reliability*: Eds.

Anatoly Lisnianski and Ilia Frenkel, Springer International Publishing AG,  
2017

#### **9.4 Text books**

#### **9.5 Books review**

*Operational Risk Management: A practical approach to intelligent data analysis*, Eds. Ron Kenett and Yossi Raanan, John Wiley & Sons, UK, 2011

#### **9.6 Patents (Russian)**

1. E. Bashkansky, P. Gluzman, V. Judin A. Dvorson, "*Functional convertor of oscillation form.*" Patent USSR No.769564, 1980
2. E. Bashkansky, V. Judin, "*Stabilizer of alternating voltage.*" Patent USSR No.1001064, 1983

#### **9.7 Professional and Research Reports**

#### **9.8 Other Publications**

ISO/TR 79:2015, "Reference materials - Examples of reference materials for qualitative properties", First edition 2015-04-15, Ch.6, see:

<https://www.iso.org/obp/ui/#iso:std:iso:tr:79:ed-1:v1:en>