

# Professor Alexander Kostin

## 1. Homepage/ Anasayfa:

Biyografik paragraf/ a short-bio blurb

Alexander E. Kostin received his BS degree in electrical engineering from Ryazan Radiotechnical Institute (Technical University), Ryazan, Russia, a PhD in computer engineering from Moscow Engineering-Physical Institute (Technical University), Moscow, and a DSc degree in computer science from Moscow Institute of Electronic Technology (Technical University), Moscow. Up to 1995, he worked as Associate Professor and then as Professor in the Department of Computer Engineering at Moscow Institute of Electronic Technology – Technical University. Since 1995, he has been working as Associate Professor and then Professor in the Department of Computer Engineering of Eastern Mediterranean University, Famagusta, Cyprus. As a university professor, he prepared a variety of courses in computer science and computer engineering, including "Mathematical Foundations of Cybernetics", "System Simulation", "Systems Programming", "Computer Networks", "Network and Distributed Systems", "Internet Architecture and Protocols". His research and professional interests include computer systems analysis, distributed systems and their modeling and simulation, Petri nets and their extensions, advanced simulation systems. He is an author or co-author of six textbooks for students, of over one hundred of other works, including papers in journals and conference proceedings, and surveys of computer science and computer engineering books in English and German languages. His biographical information is published in Marquis Who's Who in the World, 23<sup>rd</sup> ed., 2006, and in S.Rains (ed.), "2000 Outstanding Intellectuals of the 21st Century", Ed. 5, Melrose Press, 2009.

## 2. Education/ Egitim:

<b>Degree</b>	<b>Area</b>	<b>University</b>	<b>Year</b>
BSc	Electronics Engineering	Ryazan Radiotechnical Institute – Technical University, USSR	1959
PhD	Computer engineering	Moscow Engineering Physics Institute – Technical University, USSR	1968
DSc	Computer science	Moscow Institute of Electronic Technology-Technical University, USSR	1989

## Academic Certificates

Asst Prof	Technical Cybernetics	Tula Technical University, USSR	1968
Assoc Prof	Technical Cybernetics	Tula Technical University, USSR	1970
Professor	Computer science	Moscow Institute of Electronic Technology-Technical University, USSR	1990

### 3. Academic Career/ Akademik Kariyer

2010 - present: **Professor** in Girne American University, Girne, Northern Cyprus, in Advanced Programming Languages (for graduate students), Advanced Programming (for graduate students), Data Communication and Networks (for graduate students), Distributed Computing (for graduate students), Advanced Topics in Software Systems, Advanced System Simulation (for graduate students), Computing Concepts and System Software (for graduate students), Advanced DBMS (for graduate students), Operating Systems (for undergraduate students), Networks and Telecommunication (for undergraduate students).

2007 - 2010: **Professor** at Eastern Mediterranean University, Magusa, Northern Cyprus, in Systems Programming, Computer Networks, Internet Architecture and Protocols, Networked Computing, Advanced Systems Simulation (for graduate students), Distributed Systems (for graduate students).

1995 - 2007: **Associate Professor** at Eastern Mediterranean University, Magusa, Northern Cyprus, in Systems Programming, Computer Networks, Systems Simulation (for graduate students), Distributed Systems (for graduate students).

1991 - 1995: **Professor** at Moscow Institute of Electronic Technology - Technical University, Moscow, Russia, in Computer Programming, Assembler Languages, Systems Programming, System Simulation, Data Structures, and Computer Networks.

1976 - 1991: **Associate Professor** at Moscow Institute of Electronic Technology (Technical University), Moscow, Russia, in Computer Programming, Assembler Languages, Systems Programming, System Simulation, Data Structures, and Computer Networks.

1970 - 1974: **Associate Professor** at Tula Technical University, Tula, USSR, in Mathematical Foundation of Cybernetics, Operations Research, Optimization Theory.

1969 - 1970: **Assistant Professor** at Tula Technical University, Tula, USSR, in Mathematical Foundation of Cybernetics, Operations Research, Optimization Theory.

1959 – 1969: **Project engineer** and then **leading project engineer** in a Research & Development Co., Tula, USSR.

## Awards/ Oduller:

A medal and diploma for the best Scientific work, by Ministry of Higher Education of USSR, 23.03.1983

Personal and professional information is presented in “**Marquis Who’s Who in the World**” (Edition 26, November 2005)

and in S.Rains (ed.), “**2000 Outstanding Intellectuals of the 21st Century**”, Edition 5, Melrose Press, 2009, to appreciate the achievements as an educator and scientist.

#### 4. Publications /Yayınlar:

##### SELECTED publications in English

##### Books and Chapters in books:

3. A.Kostin and L.Ilushechkina, *Modeling and Simulation of Distributed Systems*, World Scientific Publishing Co., 2010, **textbook**.

2. A.Kostin, "Using Transition Invariants for Reachability Analysis of Petri Nets," **Chapter in the book:** V.Kordic (Ed.) *Petri Net: Theory and Applications*, I-Tech Education and Publishing, Vienna, Austria, 2008, pp.435 - 458.

1. Y.K.Yuce, A.Kostin, and E.Basri, "An Ethernet-Oriented Receiver-Initiated Reliable Multicast Protocol with Early Message Loss Detection Scheme", **Chapter in the book:** T.Tugcu, E.Gelenbe, M.U.Caglayan, and F.Alagoz (Eds.), *New Trends in Computer Networks*, pp. 274 - 287, Imperial College Press, 2005.

##### Journal papers (refereed):

14. A. Kostin, Y. Fanaeian, H. Al-Wattar, "Anycast Tree-Based Routing in Mobile Wireless Sensor Networks with Multiple Sinks", *Wireless Networks* (SCI journal), DOI 10.1007/s11276-015-0975-3, available at <http://link.springer.com/article/10.1007/s11276-015-0975-3>.

13. A.Kostin, G.Oz, and H.Haci, "A Restricted Flooding Mechanism for Efficient Anycast Server Localization in MANETs", to appear in *Wireless Networks* (SCI journal), available online at <http://link.springer.com/article/10.1007/s11276-014-0872-1>.

12. M.Karay, A.Kostin, "Using Extended Petri Nets for Modeling and Simulation of Queuing Systems with Priorities", *International Journal of Science and Advanced Technology*, vol. 4, no. 7, pp. 1 – 6, July 2014.

11. A. Kostin, G. Oz and H. Haci, "Performance Study of a Wireless Mobile Ad Hoc Network with Orientation-dependent Inter-node Communication Scheme", *International Journal of Communication Systems*, vol. 27, No. 2, pp. 322 – 340, 2014. (SCI Expanded periodical)

Available also online at [//dx.doi.org/10.1002/dac.2363](http://dx.doi.org/10.1002/dac.2363)

10. Y.Fanaeian and A.Kostin, Simulated Study of Anycast-Based Routing Method for Wireless Sensor Networks with the Use of Petri Nets, *International Journal of Science and Advanced Technology*, vol.3, no. 4, pp. 18 – 27, 2013.

9. B. Necat, A.Kostin, Y.Fanaeian, Anycast-Based Routing Scheme with Restricted Flooding for Wireless Sensor Networks, *International Journal of Science and Advanced Technology*, vol.2, no. 7, pp. 11 – 18, 2012.
8. A.Kostin, "Probability Distribution of Distance Between Pairs of Nearest Stations in a Wireless Network", *Electronics Letters*, vol. 46, no. 18, pp. 1299 – 1300, 2010. (SCI periodical)
7. A.E. Kostin, "A Simple and Fast Multi-Class Piecewise Linear Pattern Classifier", *Pattern Recognition*, vol. 39, no. 11, pp. 1949 - 1962, 2006. (SCI periodical)
6. Kostin, A., "Reachability Analysis in T-Invariant-less Petri Nets," *IEEE Trans. on Automatic Control*, vol. 48, No 6, pp. 1019 - 1024, June, 2003. (SCI periodical )
5. A.E.Kostin, I.Aybay, and G.Oz, "A Randomized Contention-Based Load Balancing Protocol for a Distributed Multiserver Queuing System," *IEEE Trans. on Parallel and Distributed Systems*, vol.11, No 12, December 2000, pp.1252 - 1273. (SCI periodical )
4. Kostin, A.E. and Savchenko, L.V., "Modified E-Nets for Distributed Information Processing System Performance Analysis," *Automatic Control and Computer Sciences*, vol. 22, no. 6, 1988, pp. 27 - 35. (SCI Expanded periodical up to 2006)
3. Kostin, A.E., "Deterministic Algorithm for Determining Reachability of Marking in a Petri Net," *Automatic Control and Computer Sciences*, vol. 24, no. 2, 1990, pp. 16 - 22. (SCI Expanded periodical up to 2006)
2. A.E.Kostin, and S.A.Tchoudaikina, "Yet Another Reachability Algorithm for Petri Nets," *SIGACT News*, vol. 29, No 4, December 1998, pp. 98 - 110.
1. Kostin, A.E., "The Novel Algorithm for Determining the Reachability in Acyclic Petri Nets," *SIGACT News*, vol. 28, no.2, June 1997, pp. 70 - 79.

**Papers in Lecture Notes in Computer Science (LNCS) (refereed):**

7. A.Amintabar, A.Kostin, L.Ilushechkina, "A Leader Election Protocol for Timed Asynchronous Distributed Systems," LNCS, vol. 4263, pp.877 - 886, 2006.
5. A.Kostin, "An Anycasting Protocol for Anonymous Access to a Group of Contents-Equivalent Servers in a Distributed System," LNCS, vol. 4243, pp. 377 - 386, 2006.
4. A.Kostin, "A Reachability Algorithm for General Petri Nets Based on Transition Invariants," *Lecture Notes in Computer Science*, vol. 4162, pp. 608 - 621, 2006.
3. A.Kostin, L.Ilushechkina, and E.Basri, "A Comparative Performance Study of Distributed Mutual Exclusion Algorithms with a Class of Extended Petri Nets," *Lecture Notes in Computer Science*, vol. 3719, pp. 11 - 22, 2005.

2. A.Kostin and E.Basri, "Fault Tolerant and Robust Mutual Exclusion Protocol for Synchronous Distributed Systems," *Lecture Notes in Computer Science*, vol. 3733, pp. 162 - 172, 2005.

1. A.Kostin and L.Ilushechkina, "Winsim: A Tool for Performance Evaluation of Parallel and Distributed Systems," *Lecture Notes in Computer Science*, vol. 3261, pp. 312 - 321, 2004.

#### **Papers in Conference Proceedings (refereed):**

A.Kostin, G.Oz, and H.Haci, "Performance Study of a Wireless Ad Hoc Network with Orientation-Dependent Inter-Node Communication Links," Proc. Of 24th Int'l Symposium on Computer and Information Sciences (ISCIS 2009), Sep. 14 - 16, METU N.Cyprus Campus, 2009, IEEE Publ., pp. 326 - 331.

A.Kostin, G.Oz, and H.Haci, "Performance Study of a Wireless Ad Hoc Network with Orientation-Dependent Inter-Node Communication Links," Proc. Of 24th Int'l Symposium on Computer and Information Sciences (ISCIS 2009), Sep. 14 - 16, METU N.Cyprus Campus, 2009, IEEE Publ., pp. 326 - 331.

A. Kostin, G. Oz Akinci, Z. Sharghi, and A. M. Oyeniyi, "Generic Petri-Net-Based Model to Study Data Dissemination in Mobile Wireless Ad Hoc Networks," Proc. of the 8th International Symposium on Computer Networks (ISCN 2008), Istanbul, Turkey, June 18 - 20, 2008, pp. 126 - 131.

A. Kostin, G. Oz Akinci, Z. Sharghi, and A. M. Oyeniyi, "Generic Petri-Net-Based Model to Study Data Dissemination in Mobile Wireless Ad Hoc Networks," Proc. of the 8th International Symposium on Computer Networks (ISCN 2008), Istanbul, Turkey, June 18 - 20, 2008, pp. 126 - 131.

G.Oz, A.Kostin, A.M.Oyeniyi, S.Seifzadeh, and Z.Sharghi, "Prototype Application-Layer Test Bed for Implementation and Investigation of Routing and Data Dissemination in Wireless Mobile Ad Hoc Networks," Proc. of the 10th International Workshop on Computer Science and Information Technologies, Antalya, Turkey, Sept. 15 - 17, 2008, vol. 1, pp. 27 - 31.

A.Abed, G.Oz, and A.Kostin, "Competition-Based Load Balancing for Distributed Systems", Proc. of the IEEE 7th International Symposium on Computer Networks ISCN'06, June 16 - 17, 2006, Istanbul, Turkey, pp. 230 - 235.

A.Amintabar, A.Kostin, and L.Ilushechkina, "Simulation of a Novel Leader Election Protocol with the use of Petri Nets," *Proc. of the Ninth IEEE International Symposium on Distributed Simulation and Real-Time Applications*, 10 - 12 Oct. 2005, Montreal, Canada, pp. 283 - 289, 2005.

Kostin, A. and Oz G., "A Fault-Tolerant Load-Balancing Protocol for Distributed Multiserver Queuing Systems," *Proc. of the Eight IEEE Symposium on Computers and Communication*, (ISCC 2003), Antalya, Turkey, June 30 - July 3, pp. 1201 - 1206, IEEE Press, 2003.

Atlig, C. and Kostin, A., "A Distributed Resource Replication System Based on JavaSpaces," *Proc. of the 16th International Symposium on Computer and Information Sciences*, Nov. 5 - 7, Antalya, Turkey, 2001, pp. 72 - 79.

A.E.Kostin, I.Aybay, and G.Oz, "A Simple and Efficient Protocol of Load Balancing in Distributed Multiserver Queuing Systems," *Proc. of 17th International Conf. on Applied Informatics IASTED AI'99*, Innsbruck, Austria, February 15 - 18, 1999, Acta Press, pp. 474 - 476.

A.E.Kostin, I.Aybay, and G.Oz, "A Paradigm of Alternating Sequential/Parallel Computation in a Distributed-Memory System over a Shared Transmission Media," In: *Advances in Computer and Information Sciences '98, Proc. of the 13th International Symposium on Computer and Information Sciences ISCIS '98*, 26 - 28 Oct. 1998, Belek-Antalya, Turkey, IOS Press, Amsterdam, 1998, pp. 342 - 351.

Kostin, A.E., "A Protocol for Distributed Scheduling in a Processor Network," *Proc. of the Eleventh Int'l Symposium on Computer and Information Sciences*, Nov. 6 - 8 1996, Antalya, Turkey, METU, 1996, pp. 915 - 924.

Kostin, A.E., "MICROSIM - E-net Tool for Modelling Networks and Distributed Data Processing Systems," *Proc. of the First Symposium on Computer Networks*, May 30 - 31, 1996, Bebek, Istanbul, 1996, pp. 34 - 46.



## **Selected Publications in Russian**

### **BOOKS (refereed):**

1. Shangin, V.F., Kostin, A.E., Ilushechkin, V.M., and Timopheev, P.A., *Programming of Microprocessor Systems*, Vyshaya Shkola Publ., Moscow, 1990.
2. Kostin, A.E., *Structure and Functioning of Microcomputers*, Vyshaya Shkola Publ., Moscow, 1987.
3. Kostin, A.E., and Shangin, V.F., *Organization and Processing of Data Structures in Computer Systems*, Vyshaya Shkola Publ., Moscow, 1987.
4. Nesterov, P.V., Shangin, V.F., Gorbunov, V.L., Kostin, A.E., Panfilov, D.I., and Presnukhin, D.L., *Microprocessors, vol.1: Architecture and Design of a Microcomputer. Organization of Computing Processes*, Vyshaya Shkola Publ., Moscow, 1986.
5. Shangin, V.F., and Kostin, A.E., *Organization of Computing Processes on Microcomputers*, Vyshaya Shkola, Moscow, 1984.
6. Kostin, A.E., *Principles of Modeling of Complex Systems*, MIET Press, Moscow, 1983.
7. Kostin, A.E., *Introduction to Systems Programming*, MIET Press, Moscow, 1980.
8. Kostin, A.E., *Large Systems: Elements of Theory*, Tula Tech. Univ. Press, Tula, 1973.

**Note:** Vyshaya Shkola is the main publisher of textbooks for universities in Russia.

### **ARTICLES**

#### **In journals (refereed):**

1. Zverev, E.M, Mikhailov, B.A., and Kostin, A.E., "Implementation of Interprocessor Communication in a Multiprocessor System," *Communication Technology: Microelectronic Systems*, 1981, No. 1, pp. 90 - 94.
2. Ilushechkin, V.M., Kostin, A.E., and Shangin, V.F., "Interactive System for the Creation and Solving of E-net Simulation Models," *Electronic Technology*, 1983, No. 3(48), pp. 45 - 47.
3. Kornilov, A.R., and Kostin, A.E., "A Scheduler of Concurrent Processes for the DVK Operating System," *Microprocessor Tools and Systems*, (Moscow), 1986, No. 4, pp. 56 -58.

4. Kostin, A.E., "Software Package for the E-net Based Modeling of Discrete Systems with Concurrent Processes," *Control Systems and Machines*, (Moscow), 1987, No. 4, 58 - 72.
5. Kostin, A.E., Ilushechkin, V.M., and Kornilov, A.R., "Representation of Concurrent Processes in Distributed Microprocessor Systems by E-nets," *High School Communications: Instrumental Tools*, (Moscow), 1986, vol. 29, No. 3, pp. 28 - 33.
6. Kostin, A.E., and Savchenko, L.V., "Extended E-nets for Investigation of Systems of Distributed Information Processing," *Automatics and Computers*, (Riga Proceedings of All-Union Conference "Technology of Programming), 1988, No. 6, pp. 27 - 35.
7. Kostin, A.E., "Deterministic Algorithm for Computation of the Reachability in a Petri Net," *Automatics and Computers*, 1990, No. 2, pp. 16 - 22.

**In proceedings of conferences and workshops (refereed):**

1. Kostin, A.E., "Modeling as a Technological Stage in the Development of Real-Time Programs, *Proceedings of All-Union Conference "Technology of Programming"*, Kiev, Glushkov's Institute of Cybernetics, Academy of Science of Ukraine, 1986, pp. 180 - 182.
2. Kostin, A.E., and Ilushechkin, V.M., "Formalized Representation and Modeling of Network Systems," *Proc. of the 10<sup>th</sup> All-Union Workshop on Computer Networks*, Academy of Science of USSR, 1985, Part 3, pp. 66 - 71.
3. Kostin, A.E., Ilushechkin, V.M., and Kornilov, A.R., "Implementation of Inter-Layer Interfaces for a Local Area Network of Microcomputers," *Proc. of the 11<sup>th</sup> All-Union Workshop on Computer Networks*, Academy of Science of USSR, Riga, 1986, Part 3, pp. 298 - 302.
4. Kostin, A.E., Ilushechkin, V.M., and Shangin, V.F., "Modeling of Computer Networks by the Use of E-nets," *Proc. of the 5<sup>th</sup> All-Union Workshop on Computer Networks*, Academy of Science of USSR, 1980, pp. 72 - 77.
5. Kostin, A.E., and Ilushechkin, V.M., "An Interactive System for Modeling of Computing Complexes by the Use of E-nets," *Proc. of the Workshop on Computer Aided Design*, Moscow Society of Science and Technology, Moscow, 1981, pp. 54 - 59.
6. Kostin, A.E., Ilushechkin, V.M., and Shangin, V.F., "Representation and Modeling of Protocols by E-Nets," *Proc. of the 9<sup>th</sup> All-Union Workshop on Computer Networks*, Academy of Science of USSR, 1984, Part 1.1, pp. 14 - 19.
7. Kostin, A.E., and Kornilov, A.R., "Principles and Tools of E-net Modeling of Data Flow Computing Systems," *Proc. of the 2<sup>nd</sup> All-Union Symposium on Prospects of Evolution of Computing Systems*, Riga Polytechnic Institute, Riga, 1985, pp. 101 - 103.

8. Kostin, A.E., and Kornilov, A.R., "Architecture and Program Implementation of a LAN with a Tree Topology," *Proc. of the Workshop on Distributed Data Processing and Local Area Networks*, Moscow Society of Science and Technology, Moscow, 1987, pp. 102 - 108.
9. Kostin, A.E., and Savchenko, L.V., "Extended E-nets for the Investigation of Distributed Systems," *Proc. of the 13<sup>th</sup> All-Union Workshop on Computer Networks*, Academy of Science of USSR, 1988, pp. 14 - 19.
10. Kostin, A.E., "Mathematical Background and a Program System for E-net Modeling of Information Systems," *Proc. of the Workshop on Information Systems in National Economy*, Moscow Society of Science and Technology, Moscow, 1985, pp. 137 - 140.
11. Kostin, A.E., "A system for Information Exchange Between a NC Node and the Main Computer in a FMS LAN," *Proc. of the Workshop on Experience in the Development of Local Area Networks*, Moscow Society of Science and Technology, Moscow, 1988, pp. 144 - 152.

**In non-periodic proceedings of universities and research institutions (refereed):**

1. Kostin, A.E., "Determination of Piecewise-Linear Separating Boundaries in a Pattern Recognition System with an Arbitrary Number of Classes," In: Matikashvili, T.I. (Ed.), *Applied Mathematics and Computing*, Tula Technical University, Tula, 1972, pp. 96 - 108.
2. Kornilov, A.R., Kostin, A.E., and Lebedeva, A.B., "Methods and Tools of Program Implementation of Protocols for a Distributed Microprocessor System," In: Barhotkin, V.A. (Ed.), *Architecture and Software of Microprocessor Systems*, Moscow Institute of Electronic Technology (Technical Univ.), Moscow, 1985, pp. 90 - 95.
3. Kostin, A.E., "A Method for Search of Extremum of a Function of Multiple Arguments," In: Malov, D.I. (Ed.), *Automatic Control Systems for Technological Processes*, Tula Technical University, Tula, 1973, pp. 76 - 82.
4. Kostin, A.E., "On a Probability Distribution of Euclid Distance Between Pairs of the Closest Random Points in a Unit Square," In: Tsoj, P.V. (Ed.), *Applied Mathematics*, Tula Technical University, Tula, 1974, pp. 9 - 15.
5. Kostin, A.E., Ilushechkin, V.M., and Shangin, V.F., "E-Net Representation of Simulation Models of Microprocessor Computing Systems," In: Shangin, V.F. (Ed.), *Technical Cybernetics and Design of Microelectronic Systems*, Moscow Institute of Electronic Technology (Technical Univ.), Moscow, 1979, pp. 3 - 17.
6. Kostin, A.E., "A Structural Description of E-nets for the Formal Representation of Complex Discrete Systems," In: Shangin, V.F. (Ed.), *Algorithmic Support and Design of Microprocessor Computing Systems*, Moscow Institute of Electronic Technology (Technical University), Moscow, 1981, pp. 11 - 19.

7. Kostin, A.E., Ilushechkin, V.M., and Shangin, V.F., "A Language for E-Net Modeling of Computing Systems," In: Barhotkin, V.A. (Ed.), *Algorithmic Support and Design of Microprocessor Systems*, Moscow Institute of Electronic Technology (Technical Univ.), Moscow, 1982, pp. 67 - 79.
8. Kostin, A.E., Kornilov, A.R., and Fedorov, A.R., "A Multiprocessor Data Flow System for Parallel Signal Processing," In: Rastrigin, L.A. (Ed.), *Methods and Tools of Digital Signal Processing*, Lithuanian Academy of Science, Riga, 1983, pp. 317 - 320.
9. Kostin, A.E., "An E-net Model of a Multiprocessor System with a Common Bus," In: Barhotkin, V.A. (Ed.), *Architecture and Software of Microprocessor Control Systems*, Moscow Institute of Electronic Technology (Technical Univ.), Moscow, 1986, pp. 50 - 57.
10. Kostin, A.E., "An Algorithm for Synthesis of a Patter Recognition Classifier and Its Program Implementation," In: Markov, V.N. (Ed.), *Proceeding on Mathematical Tools and Programming for Computing and Control Systems*, Moscow Institute of Electronic Computing Systems, Moscow, 1986, pp. 65 - 70.
11. Kostin, A.E., and Savchenko, L.V., "Modeling of a Token Ring LAN," In: Barhotkin, V.A. (Ed.), *Design and Using of Microelectronic Systems*, Moscow Institute of Electronic Technology (Technical Univ.), Moscow, 1987, pp. 139 - 148.
12. Kostin, A.E., "E-Net Modeling in the Design and Investigation of Information Systems," In: Barhotkin, V.A. (Ed.), *Microprocessor Computing Tools of Control Systems*, Moscow Institute of Electronic Technology (Technical Univ.), Moscow, 1988, pp. 48 - 56.

#### **TECHNICAL REPORTS ON RESEARCH PROJECTS (in Russian)**

1. Kostin, A.E., and Shangin, V.F., *Principles of Design of Interactive Models of Microprocessor Computing Systems*, No. 78000181, Moscow institute of Electronic Technology, Moscow, Part 1, 1978, 106 p.; Part 2, 1979, 166 p.; Part 3, 1980, 305 p.
2. Kostin, A.E., and Kornilov, A.R., *Methods of Graph Representation of Programs*, No. 018112005163, Moscow Institute of Electronic Technology, 1982, 54 p.
3. Kostin, A.E., and Shangin, V.F., *Development of Software for Simulation Modeling Systems*, No. 01819004688, Moscow Institute of Electronic Technology, Moscow, Part 1, 1982, 68 p.; Part 2, 1983, 95 p.
4. Kostin, A.E., and Shangin, V.F., *Methods and Tools for Modeling and Performance Evaluation of Microprocessor Systems*, Moscow Institute of Electronic Technology, Moscow, Part 1, 1982, 247 p.; Part 2, 1983, 123 p.

5. Kostin, A.E., and Kornilov, A.R., *Principles of Organization and Processing of Spatial Data in a Computing System*, No. 01820082659, Moscow Institute of Electronic Technology, Moscow, Part 1, 1983, 72 p.; Part 2, 1984, 51 p.
6. Kostin, A.E., Shangin, V.F., *Models of Multimicroprocessor Data Flow Systems*, No. 01830018416, Moscow Institute of Electronic Technology, Moscow, 1984, 76 p.
7. Kostin, A.E., and Kornilov, A.R., *Models and Methods of Parallel and Distributed Data Processing in Microprocessor Systems*, No. 01840081, Moscow Institute of Electronic Technology, Moscow, Part 1, 1985, 113 p.; Part 2, 1986, 100 p.
8. Kostin, A.E., *Investigation of System Software for a Local Area Network*, Moscow Institute of Electronic Technology, Moscow, 1986, 78 p.
9. Kostin, A.E., and Ilushechkin, V.M., *Design and Investigation of a Distributed Microprocessor System*, No. 01840049856, Moscow Institute of Electronic Technology, Moscow, 1986, 202 p.
10. Kostin, A.E., *Development of Network Software for a Microclimate Control System*, No. 01860131871, Moscow Institute of Electronic Technology, Moscow, Part 1, 1987, 117 p.; Part 2, 1988, 69 p.
11. Kostin, A.E., Timopheev, P.A., and Shangin, V.F., *Development of Language and Software Tools for Distributed Information Processing in a FMS*, No. 01880024458, Moscow Institute of Electronic Technology, Moscow, 1989, 120 p.

## Conference Publications/Konferanslar

(in English)

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A.Kostin, G.Oz, and H.Haci, "Performance Study of a Wireless Ad Hoc Network with Orientation-Dependent Inter-Node Communication Links," Proc. Of 24th Int'l Symposium on Computer and Information Sciences (ISCIS 2009), Sep. 14 - 16, METU N.Cyprus Campus, 2009, IEEE Publ., pp. 326 - 331.

A.Kostin, G.Oz, and H.Haci, "Performance Study of a Wireless Ad Hoc Network with Orientation-Dependent Inter-Node Communication Links," Proc. Of 24th Int'l Symposium on Computer and Information Sciences (ISCIS 2009), Sep. 14 - 16, METU N.Cyprus Campus, 2009, IEEE Publ., pp. 326 - 331.

A. Kostin, G. Oz Akinci, Z. Sharghi, and A. M. Oyeniyi, "Generic Petri-Net-Based Model to Study Data Dissemination in Mobile Wireless Ad Hoc Networks," Proc. of the 8th International Symposium on Computer Networks (ISCN 2008), Istanbul, Turkey, June 18 - 20, 2008, pp. 126 - 131.

A. Kostin, G. Oz Akinci, Z. Sharghi, and A. M. Oyeniyi, "Generic Petri-Net-Based Model to Study Data Dissemination in Mobile Wireless Ad Hoc Networks," Proc. of the 8th

International Symposium on Computer Networks (ISCN 2008), Istanbul, Turkey, June 18 - 20, 2008, pp. 126 - 131.

G.Oz, A.Kostin, A.M.Oyenyi, S.Seifzadeh, and Z.Sharghi, "Prototype Application-Layer Test Bed for Implementation and Investigation of Routing and Data Dissemination in Wireless Mobile Ad Hoc Networks," *Proc. of the 10th International Workshop on Computer Science and Information Technologies*, Antalya, Turkey, Sept. 15 - 17, 2008, vol. 1, pp. 27 - 31.

A.Abed, G.Oz, and A.Kostin, "Competition-Based Load Balancing for Distributed Systems", *Proc. of the IEEE 7th International Symposium on Computer Networks ISCN'06*, June 16 - 17, 2006, Istanbul, Turkey, pp. 230 - 235.

A.Amintabar, A.Kostin, and L.Ilushechkina, "Simulation of a Novel Leader Election Protocol with the use of Petri Nets," *Proc. of the Ninth IEEE International Symposium on Distributed Simulation and Real-Time Applications*, 10 - 12 Oct. 2005, Montreal, Canada, pp. 283 - 289, 2005.

Kostin, A. and Oz G., "A Fault-Tolerant Load-Balancing Protocol for Distributed Multiserver Queuing Systems," *Proc. of the Eight IEEE Symposium on Computers and Communication*, (ISCC 2003), Antalya, Turkey, June 30 - July 3, pp. 1201 - 1206, IEEE Press, 2003.

Atlig, C. and Kostin, A., "A Distributed Resource Replication System Based on JavaSpaces," *Proc. of the 16th International Symposium on Computer and Information Sciences*, Nov. 5 - 7, Antalya, Turkey, 2001, pp. 72 - 79.

A.E.Kostin, I.Aybay, and G.Oz, "A Simple and Efficient Protocol of Load Balancing in Distributed Multiserver Queuing Systems," *Proc. of 17th International Conf. on Applied Informatics IASTED AI'99*, Innsbruck, Austria, February 15 - 18, 1999, Acta Press, pp. 474 - 476.

A.E.Kostin, I.Aybay, and G.Oz, "A Paradigm of Alternating Sequential/Parallel Computation in a Distributed-Memory System over a Shared Transmission Media," In: *Advances in Computer and Information Sciences '98, Proc. of the 13th International Symposium on Computer and Information Sciences ISCIS '98*, 26 - 28 Oct. 1998, Belek-Antalya, Turkey, IOS Press, Amsterdam, 1998, pp. 342 - 351.

Kostin, A.E., "A Protocol for Distributed Scheduling in a Processor Network," *Proc. of the Eleventh Int'l Symposium on Computer and Information Sciences*, Nov. 6 - 8 1996, Antalya, Turkey, METU, 1996, pp. 915 - 924.

Kostin, A.E., "MICROSIM - E-net Tool for Modelling Networks and Distributed Data Processing Systems," *Proc. of the First Symposium on Computer Networks*, May 30 - 31, 1996, Bebek, Istanbul, 1996, pp. 34 - 46.

## 5. Research/Arastirmalar

Computer systems analysis and simulation, computer networks, distributed systems, models and algorithms for organization of distributed data processing, distributed computing and distributed computing platforms and environments, network and systems programming (with object orientation), Petri nets and their extensions, development of advanced simulation systems, simulation of communication systems and protocols, pattern analysis and recognition, development of systems software.

1995 - present: **Modeling, simulation and investigation of networked and distributed data processing systems.**

1990 - 1995: **Scientific manager** of a research group in a number of projects on modeling and simulation of computer networks and distributed systems.

1984 - 1990: **Scientific manager** of a research group in a number of projects on the development of an advanced simulation system based on the extended Petri nets.

1980 - 1984: **Scientific manager** of a research group in a project on the design and implementation of the communication subsystem for a multiprocessor numerical control (NC) system.

1976 - 1980: **Scientific manager** of a research group in a project on the development and implementation of a multiprocessor message switching system.

1969 - 1976: **Scientific manager** of a research group on the design and implementation of algorithms and software for pattern recognition.

1959 - 1969: **Project engineer** and then **leading project engineer** in a research group on the development of algorithms and components of a pattern recognition system.

**Academic advisor** to several Ph.D. theses in Computer Engineering at Moscow Institute of Electronic Technology - Technical University (Moscow, Russia), Eastern Mediterranean University (Magusa, KKTC) and Girne American University (Girne, KKTC).

**Author** of about 100 scientific publications in Computer Science and Computer Engineering, including a few textbooks for university students.

**Translator and editor** of the Russian edition of the book of Tremblay, J.P., and Sorenson, P.G., An Introduction to Data Structures with Applications, McGraw-Hill, 1984.

**Personal and professional information** is included in the following Reference Books:

1. Marquis Who's Who in the World, Edition 26, published in November 2005, to appreciate the achievements as an educator and scientist.
2. 2000 Outstanding Intellectuals of the 21st Century, Edition 5, International Biographic Centre, UK, 2008.

## ArastirmaProjeleri/ Research in process –working papers

Modeling, simulation and investigation of networked and distributed data processing systems.

**List of PhD students of MIS Department, GAU, who have defended their PhD theses in 2012 – 2015 under supervision of Prof A.Kostin**

<b>Name and Surname</b>	<b>PhD thesis topic (abbreviated)</b>	<b>Date of defense</b>
Yasemin Fanaeian	Anycast-based routing in wireless sensor networks	October 19, 2012
Arif Sari	Security mechanisms in mobile ad-hoc networks	December 28, 2012
Hassan Rawash	Electronic human resource management	January 15, 2013
Bibigul Tulegenova	Using repertory grid technique	February 8, 2013
Gokhan Ozkartal	Speech understanding system	June 10, 2014
Mehmet Karay	Modeling of Distributed Workflow Processes in Information Systems with Extended Petri Nets	March 11, 2015

**Defended MSc and PhD theses (in EMU)**

<b>Name</b>	<b>Degree</b>	<b>Date Admitted</b>	<b>Student Status</b>	<b>Date Conferred</b>	<b>Thesis Title</b>
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A.Sundal	MS	05.10.2002	Graduated	10.11.2004	Performance Investigation of the IEEE 802.11b Wireless Network
A.Amintabar	MS	15.11.2002	Graduated	20.12.2004	Development of a New Distributed Leader Election Protocol
Z.Sharghi	MS	7.10.2007	Graduated	20.2.2009	Models and Methods of Dissemination of Information in Wireless Networks
H.Haci	MS	8.11.2008	Graduated	21.2.2010	Performance Investigation of Simulation Models of Wireless Mobile Networks
G. Oz	PhD	01.10.1997	Graduated	10.06.2001	Organization and Assessment of Distributed Load Balancing
A. Aktun	MS	10.09.1996	Graduated	20.07.1996	A Comparative Study of Network Application Programming Interfaces
R. Azmi	MS	12.09.1997	Graduated	10.07.1999	Design and Implementation of Alternating Sequential/Parallel Computation in a Distributed Environment
C. Atlig	MS	6.09.1998	Graduated	19.09.2000	Development of an Architecture and Implementation of Distributed Replicated Services
S. Khalid	MS	09.09.1999	Graduated	11.9.2001	The Design and Performance Study of a Distributed System Based on Java RMI
Z. Yetgin	MS	12.09.2000	Graduated	1.2.2002	Development of a Hierarchical

Y.K. Yuce	MS	15.09.2001	Graduated	18.9.2003	Election Algorithm for a Large-Scale Distributed System Development of a Reliable Multicast System in a Local Area Network
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## 6. Profesyonel Kariyer/ Professional Career

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### Appointments and Affiliations/ Uyelikler

2010 - present: **Professor** at Girne American University, Girne, Northern Cyprus, in Advanced Programming Languages (for graduate students), Advanced Programming (for graduate students), Data Communication and Networks (for graduate students), Distributed Computing (for graduate students), Advanced Topics in Software Systems (for graduate students), Advanced System Simulation (for graduate students), Computing Concepts and System Software (for graduate students), Advanced DBMS (for graduate students), Operating Systems (for undergraduate students), Networks and Telecommunication (for undergraduate students).

2007 - 2010: **Professor** at Eastern Mediterranean University, Magusa, Northern Cyprus, in Systems Programming, Computer Networks, Internet Architecture and Protocols, Networked Computing, Advanced Systems Simulation (for graduate students), Distributed Systems (for graduate students).

1995 - 2007: **Associate Professor** at Eastern Mediterranean University, Magusa, Northern Cyprus, in Systems Programming, Computer Networks, Systems Simulation (for graduate students), Distributed Systems (for graduate students).

1991 - 1995: **Professor** at Moscow Institute of Electronic Technology - Technical University, Moscow, Russia, in Computer Programming, Assembler Languages, Systems Programming, System Simulation, Data Structures, and Computer Networks.

1976 - 1991: **Associate Professor** at Moscow Institute of Electronic Technology (Technical University), Moscow, Russia, in Computer Programming, Assembler Languages, Systems Programming, System Simulation, Data Structures, and Computer Networks.

1970 - 1974: **Associate Professor** at Tula Technical University, Tula, USSR, in Mathematical Foundation of Cybernetics, Operations Research, Optimization Theory.

1969 - 1970: **Assistant Professor** at Tula Technical University, Tula, USSR, in Mathematical Foundation of Cybernetics, Operations Research, Optimization Theory.

1959 – 1969: **Project engineer** and then **leading project engineer** in a Research & Development Co., Tula, USSR.

## **7. Contact/iletisim:**

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