CURRICULUM VITAE

Rza Bashirov

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1. Education

1990	Ph.D. in Computer Science, Moskow State University
1982	M.S. in Applied Mathematics, Azerbaijan State University

2. Academic Positions

2010 - due date	Professor of Computer Science, Eastern Mediterranean University
1997 - 2010	Associate Professor, Eastern Mediterranean University
1993 - 1997	Assistant Professor, Eastern Mediterranean University
	Assistant Professor (on part-time basis), Baku State University

3. Administrative Experience

2010 - 2017	Dean, Faculty of Arts and Sciences, Eastern Mediterranean University
2011 – 2013	Founder and Acting Head of Department, Department of Biological Sciences, Eastern Mediterranean University
2010 - 2017	Founder and Chair, University Elective Courses Committee, Eastern Mediterranean University
2005 - 2011	Vice Dean, Faculty of Arts and Sciences, Eastern Mediterranean University
1997-2005	Vice Head of Department, Department of Mathematics, Eastern Mediterranean University
1992-1993	Head of Department, Institute of Cybernetics, Academy of Sciences

4. Thesis Supervision

Master Theses:

- Krivdić, A., *Comprehensive analysis of mathematical and computational models of cell cycle*, EMU, September 2015
- Akgün, G., *Performance Analysis of Hill cipher and its modifications*, EMU, February 2014
- Dolma, F., *Implementing Petri nets for modeling and simulation in biosciences*, EMU, January 2012
- Kayımzade, F., *Primality test algorithms*, EMU, February 2004
- Pilli, O., *Modeling interconnection networks with Petri nets*, EMU, August 2000

- Babagil, M., *Survey on containment of interconnection networks*, EMU, September 1997
- Yüce, F. B, *On rearrangeability of 5-stage interconnection networks*, EMU, August 1996
- Bilgen, A., *Rearrangeable butterfly type interconnection networks*, EMU, February 1995
- Esener, İ., *Efficient mapping of parallel algorithms based on recursive doubling scheme*, EMU, September 1994
- Gürbüz, R., *Efficient mapping of class of parallel algorithms into interconnection networks*, EMU, September 1994
- Ngandjoug, G. Y., *Qualitative analysis of cancer pathways with transition and place invariants*, EMU (continuing)
- Adam, M. L., *Biomodeling with discrete, continuous and hybrid Petri nets*, EMU (continuing)

Ph.D Theses:

- Mehraei, M., *Exploiting hybrid functional Petri nets to investigate transcriptional activity of hemoglobin switching*, EMU, July 2016
- Akçay, İ.N., *Petri net-based quantitative modeling and validation of p16-mediated signaling pathway*, EMU, February 2016
- Karanfiller, T., *Exploiting Petri nets to reduce switch crosstalk and path-dependent-loss in optical interconnection networks*, EMU, February 2012
- Lort, H., *Analyzing the permutation admissibility with CP-nets*, EMU, December 2008
- Duranay, R., *Identifying potential targets in alleviating Spinal Muscular Atrophy via the SMN2 gene using quantitative modeling with Petri nets* (continuing)

5. Publications

Articles in SCI and SCIE indexed journals:

- Duranay, R., **Bashirov, R.**, Şeytanoğlu, A., Mehraei, M., Predicting effective targeted drug combinations for Spinal Muscular Atrophy using fuzzy stochastic modeling with hybrid Petri nets, *Nonlinear Analysis: Hybrid Systems* (SCIE), submitted for publication in 2018
- **Bashirov, R.**, Akçay, İ., Stochastic simulation-based prediction of the behavior of p16-mediated signaling pathway, *Fundamenta Informaticae* (SCIE) 160, 2018, 167–179, DOI 10.3233/FI-2018-1679
- **Bashirov, R.**, Mehraei, M., Identifying targets for gene therapy of β-globin disorders using quantitative modeling approach, *Information Sciences* (SCI) 397-398, 2017, 37-47
- Mehraei, M., **Bashirov, R.**, Tüzmen, Ş., Target based drug discovery for β-globin disorders: drug target prediction implementing quantitative modeling with hybrid functional Petri nets, *Journal of Bioinformatics and Computational Biology* (SCIE) 14(4), 2016, 1650026, DOI: 10.1142/S0219720016500268

- Akçay, İ., **Bashirov, B.**, Tüzmen, Ş., Validation of signaling pathways: case study of the p16-mediated pathway, *Journal of Bioinformatics and Computational Biology* (SCIE) 13(2), 2015, 1550007, DOI: 10.1142/S0219720015500079
- **Bashirov, R.**, Karanfiller, T., On path dependent loss and switch crosstalk reduction in optical networks, *Information Sciences* (SCI) 180, 2010, 1040-1050
- **Bashirov, R.**, Kordon, F., Lort, H., Exploiting colored Petri nets to decide on permutation admissibility, *Acta Informatica* (SCI) 46 (1), 2009, 43-55
- **Bashirov, R.**, Crespi, V., Analyzing permutation capability of multistage interconnection networks with colored Petri nets, *Information Sciences* (SCI) 176, 2006, 3143- 3165
- **Bashirov, R.**, Rearrangeability of 2log-1 stage networks employing a uniform connection pattern, *Calcolo* (SCIE) 38, 2000, 85-95
- **Bashirov R.**, On the rearrangeability of multistage interconnection networks employing uniform connection pattern, *Lecture Notes in Computer Science* (SCIE) 1909, 2000, 170-180

Articles in other than SCI and SCIE indexed journals:

- Duranay R., **Bashirov, R.**, Şeytanoğlu, A., Simulation-based identification of optimal combination of drug candidates for Spinal Muscular Atrophy, *Procedia Computer Science* (Web of Science, Scopus) 120, 2018, 253-259
- **Bashirov R.**, Analysis of rearrangeable single-stage interconnection networks, *Transactions of National Academy of Sciences of Azerbaijan. Series of Physical-Technical and Mathematical Sciences* (AMS) 19(3-4), 1999, 166-171
- **Bashirov R.**, On the mapping some regular and irregular parallel algorithms, *Transactions of National Academy of Sciences of Azerbaijan. Series of Physical-Technical and Mathematical Sciences* (AMS) 14, 1993, 63-69

Articles in proceedings of refereed international conferences:

- Duranay R., **Bashirov, R.**, Şeytanoğlu, A., Simulation-based identification of optimal combination of drug candidates for Spinal Muscular Atrophy, In: *Proc. 9th International Conference on Theory and Application of Soft Computing, Computing with Words and Perception*, Budapest, 24-25 August, 2017
- **Bashirov, R.**, The integrated modelling of biological processes with differential equations and Petri nets, In: *Proc. 11th International Conference on Applications of Fuzzy Systems and Soft Computing*, Rouen, 2-3 September, 2014, 47-55
- Çetin, İ.N., **Bashirov, R.**, Tüzmen, Ş., Petri net based modelling and simulation of p16-Cdk4/6-Rb pathway, In: *Proc. 4th International Workshop on Biological Processes and Petri nets*, CEUR, Vol. 988, Milan, 24-25 June, 2013, 30-44
- **Bashirov, R.**, Karanfiller, T., Lort, H., An approach to reduce path-dependent-loss in optical networks implementing Petri nets, In: *Proc. 8th International Conference on*

Application of Fuzzy Systems and Soft Computing, Quadrat Verlag, Helsinki, 1-3 September, 2008, 91-96

- **Bashirov, R.**, On admissibility of permutations to hybrid optical interconnection networks with minimum number of stages, In: *Proc. 4th International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control*, Antalia, 27-28 August, 2007, 309-315
- **Bashirov, R.**, Lort, H., A study of permutation admissibility with colored Petri nets, In: *Proc. 3rd International Symposium on Electrical, Electronic and Computer Engineering*, Nicosia, 23-25 November, 2006, 91-95
- **Bashirov, R.**, Qualitative analysis of permutation capability through exploiting place invariants in colored Petri nets, In: *Proc. 7th International Conference on Application of Fuzzy Systems and Soft Computing*, Quadrat Verlag, Siegen, 13-14 September, 2006, 106-112
- **Bashirov, R.**, Crespi, V., Qualitative analysis of permutation capability with colored Petri nets, In: *Proc. 13th IEEE Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems*, IEEE Press, Atlanta, 27-29 September, 2005, 463-470
- **Bashirov, R.**, Using extended HCPN modeling for investigating the permutation capability of multistage interconnection networks, In: *Proc. 3rd International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control*, Quadrat Verlag, Antalia, 1-2 September, 2005, 226-236
- **Bashirov, R.**, Analyzing multistage interconnection networks with hierarchical Petri nets, In: *Proc. 6th International Conference on Application of Fuzzy Systems and Soft Computing*, Quadrat Verlag, Barcelona, 28-30 September, 2004, 232-239
- **Bashirov, R.**, Lort, H., Analyzing permutation capability of multistage interconnection networks with colored Petri nets and Design/CPN, In: *Proc. 2nd International Conference on Soft Computing and Computing with Words in System Analysis, Decision and Control*, Quadrat Verlag, Antalia, 9-11 September, 2003, 197-207
- **Bashirov, R.**, Using Petri net for analysis of permutation capability in multistage networks, In: *Proc. International Conference Parallel and Distributed Processing Techniques and Applications*, CSREA Press, Vol. 1, Las Vegas, 25-28 June, 2001, 226-231
- **Bashirov, R.**, On the rearrangeability of 2s-1 stage nonsymmetric interconnection networks, In: *Proc. International Conference Parallel and Distributed Processing Techniques and Applications*, CSREA Press, Vol. 2, Las Vegas, 26-29 June, 2000, 907-913
- **Bashirov, R.**, Combinatorial model of the class of rearrangeable nonsymmetric interconnection networks. In: *Proc. International Conference Parallel and Distributed Processing Techniques and Applications*, CSREA Press, Vol. 2, Las Vegas, 26-29 June, 2000, 891-899

Chapters in international refereed books:

- **Bashirov, R.**, Mapping of some sorting algorithms into architecture of rearrangeable single stage interconnection networks, Computer Architecture and Numerical Methods (Ed. V. Voyevodin), Academy of Sciences, Moscow, 1990, 3-12 (in Russian)
- **Bashirov, R.**, Realization of some graphs on rearrangeable interconnection networks, Computer Architecture and Numerical Methods (Ed. V. Voyevodin), Academy of Sciences, Moscow, 1988, 15-25 (in Russian)
- **Bashirov, R.**, Routing algorithm for a class of universal interconnection networks, Computer Architecture and Numerical Methods (Ed. V. Voyevodin), Academy of Sciences, Moscow, 1987, 35-44 (in Russian)
- **Bashirov, R.**, On the universality of shuffle-exchange networks, Computer Architecture and Numerical Methods (Ed. V. Voyevodin), Academy of Sciences, Moscow, 1985, 3-15 (in Russian)

Articles in proceedings of refereed national conferences:

- **Bashirov, R.**, Combinatorial model of an optimal nonsymmetric multistage interconnection networks, In: *Proc. 7th Symposium of Turkish Mathematical Society*, 29 August – 2 September, Bilkent University, Ankara, 1994, 33-47
- **Bashirov, R.**, Esener, I., Gürbüz, R., Two efficient mapping methods for parallel algorithms, In: *Proc. 7th Symposium of Turkish Mathematical Society*, 29 August – 2 September, Bilkent University, Ankara, 1994, 171-185
- **Bashirov, R.**, On the mapping of some parallel numerical methods. In: *Proc. 6th Symposium of Turkish Mathematical Society*, Eastern Mediterranean University, Famagusta, 8-12 September, 1993, 161-171

Presentations in conferences:

- **Bashirov, R.**, The essence of primality test in information security, In: *Proc. 2nd International Conference on Business, Management and Economics*, Yaşar University, Çeşme, 16-18 June, 2006
- **Bashirov, R.**, Information security and cryptographic techniques, In: *Proc. 1st International Conference on Business, Management and Economics in a Changing World*, Yaşar University, Ceşme, 16-19 June, 2005

6. Projects

- B-type research project (MEKB-08-09) of T.R.N.C. Ministry of Education : Deciding on permutation admissibility in multistage interconnection networks (Director: Rza Bashirov; Researcher: Hüseyin Lort; Start date: 01.12.2008; Duration: 12 months; Budget: 10,000 TL; Project completed on 01.12.2009)

7. Other Academic Activities

- Reviewer for *Acta Informatica* (SCI)
- Reviewer for *Annals of Mathematics and Artificial Intelligence* (SCIE)
- Reviewer for *Computer Communications* (SCIE)
- Reviewer for *Information Sciences* (SCI)
- Reviewer for *Journal of Applied Mathematics* (SCIE)
- Reviewer for *Lecture Notes in Computer Science* (SCIE)
- Chair of organizing committee and member of program committee of *7th Conference on Machines, Computations and Universality*, Easterm Mediteranean University, Famagusta, North Cyprus, 9-11 September, 2015
- Chair of organizing committee (dean of the host faculty) of *7th Meeting of Deans of Arts and Sciences Faculties (FEFKON)*, Eastern Mediterranean University, Famagusta, North Cyprus, 24-25 May, 2012
- Member of program committee of *National conference in Biology and Biotechnology*, Antalia, 15-18 November, 2012
- Member of program committee of *International Workshop on Petri Nets Tools and Applications (PNTAB'08)*, Marseille, 3 March, 2008
- Member of program committee of *6th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA'2008)*, Doha, 31 March 31 – 4 April, 2008
- Organizer and chair of the session "Petri Nets" in *2008 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2008)*, Las Vegas, 2008
- Member of organizing committee of *6th International Conference on Application of Fuzzy Systems and Soft Computing (ICAFSSC'2004)*, Barcelona, 28-30 September, 2004
- Member of organizing committee of *2nd International Conference on Soft Computing and Computing with Words in Systems Analysis (ICSCCWS'2003)*, Antalia, 9-11 September, 2003

8. Courses taught

Undergraduate courses:

- COMP181 Introduction to Computer Science I
- COMP182 Introduction to Computer Science I
- COMP285 Design and Analysis of Algorithms
- COMP275 Object Oriented Programming
- COMP286 Data Structures
- COMP333 Access for Windows
- COMP354 Computing Structures
- COMP385 Parallel Algorithms

- COMP386 Parallel Data Structures
- COMP483 Operating Systems
- MATE163 Discrete Mathematics (in Turkish)
- MATH103 Mathematics for Business and Economics I
- MATH104 Mathematics for Business and Economics II
- MATH105 Mathematics for Arts and Social Sciences
- MATH106 Linear Algebra
- MATH111 Basic Mathematics I
- MATH112 Basic Mathematics II
- MATH161 Mathematical Logic of Computers
- MATH163 Discrete Mathematics

Graduate courses:

- COMP512 Theory of Algorithms
- COMP544 Petri Nets
- COMP551 Theory of Graphs
- COMP552 Combinatorics
- COMP553 Interconnecting Networks
- COMP558 Parallel Processing
- COMP586 Cryptography and Data Security
- COMP645 Mathematical and Computational Modeling of Biological Systems