

## **Goharik Petrosyan**

### **Personal Details**



**Full Name:** Petrosyan Goharik Razmiki  
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**Nationality:** Armenian  
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**Marital Status:** Married

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### **Work Experience**

**2014- 2016**  
**Position:** Digitain LLC, former BetArchitect LLC  
Mathematical Model Developer  
Responsible for developing and implementing mathematical models

**2012-present**  
**Position:** International Scientific and Educational Center of NAS RA  
Lecturer, Assistant professor  
**Teaching Subjects:** Mathematical Modeling, Mathematical Programming, Electronic Business, Numerical Methods, Linear Algebra, Probability Theory

**2011-present**  
**Position:** Armenian State Pedagogical University, Chair of Informatics and its Teaching Methods  
Lecturer, Assistant professor

**2008-2010**  
**Position:** European Regional Educational Academy, Yerevan, RA Lecturer, Assistant professor

**2006-2011**  
**Position:** Gyumri State Pedagogical Institute, Chair of Methods of Teaching Informatics, RA  
Lecturer, Assistant professor

**2000-2011**  
**Position:** Armenian State Economic University, Gyumri branch Lecturer, Assistant professor (after 2008)

**1994-1999**  
**Position:** Anania Shirakatsy University, Republic of Armenia, Gyumri, Lecturer

### **Education**

**2006**  
**Awarded Degree:** Ph.D. (Candidate of Science Physics and Mathematics)  
(13.05 - Mathematical modeling, Numerical methods, Software complexes, IIAP of NAS RA)

**1989-1994**  
**Awarded Degree:** Yerevan State University Department of Applied Mathematics Chair of System Programming MS in Applied Mathematician (with honors)

### ***Additional Qualifications***

|   |   |
|---|---|
| <b><i>24 February-<br/>10 March, 2020</i></b> | HSE University Faculty of Economic Sciences / Department of Statistics and Data Analysis, Internship «Teaching courses in statistics and data analysis»   |
| <b><i>4-5 February, 2019</i></b>              | Erasmus+Higher Education Seminar “Driving University Strategies towards the Internationalization through the Use of International Benchmarks” conducted by Prof. Irina Ferencz at the Eurasia International University                          |
| <b><i>April-June, 2017</i></b>                | Distance Learning “Moodle”  |
| <b><i>2016</i></b>                            | Java and JavaScript course at ICT   |
| <b><i>2014</i></b>                            | English Language Course, AUA Extension Program  |
| <b><i>Qualification:<br/>2010</i></b>         | English 3rd level<br>International Scientific and Educational Center of NAS RA (“Modern Technologies and Methods of Teaching” program), (“Modernization and Agreement of Educational Programs with the European Standard and Criteria” program) |
| <b><i>2009</i></b>                            | Armenian Association of Woman with University Education, Woman’s Leadership school in Gyumri  |
| <b><i>1991-1993</i></b>                       | English Language Courses, YSU, Department of Social Sciences  |
| <b><i>Qualification:<br/>1980-1987</i></b>    | Technical Translator<br>Musical school  |
| <b><i>Qualification:<br/>Languages:</i></b>   | Pianist<br>Russian (fluent), English (good), Armenian (native)  |

### ***Professional Memberships***

|                             |                                       |
|-----------------------------|---------------------------------------|
| <b><i>2013- onwards</i></b> | Member of Armenian Mathematical Union |
|-----------------------------|---------------------------------------|

### ***Research Interests***

#### ***Applied Mathematics***

- Formal Languages, Petri Nets, Parallel and Distributed Systems
- Economic and Mathematical Modeling, Modeling of Asynchronous and Synchronous Systems

### ***International Conferences***

|                                   |  |
|-----------------------------------|--|
| <b><i>13-15 May 2019</i></b>      | “Photogrammetric & Computer Vision Techniques for Video Surveillance, Biometrics and Biomedicine”, 13–15 May 2019, Moscow, Russia<br><a href="https://www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XLII-2W12/">https://www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XLII-2W12/</a> |
| <b><i>May 29-June 2, 2018</i></b> | Emil Artin International Conference Dedicated to the 120th Anniversary of Emil Artin, Yerevan, RA  |
| <b><i>4–7 June 2018</i></b>       | The International Archives of the Photogrammetry, Remote Sensing and   |

Spatial Information Sciences, Volume XLII-2, 2018 ISPRS TC II Mid-term Symposium “Towards Photogrammetry 2020”, , Riva del Garda, Italy., 339-345, <https://doi.org/10.5194/isprs-archives-XLII-2-339-2018>

- 15-17 May 2017* 2nd International ISPRS Workshop on PSBB, Moscow, Russia
- April 2016* 3rd International Conference on Control, Decision and Information Technologies (CoDIT'16)
- June 2016* Armenian Mathematical Union, Annual Session 2016, Dedicated to the 110<sup>th</sup> Anniversary of Artashes Shahinyan, Yerevan
- 25-27 May, 2015* The International Society for Photogrammetry and Remote Sensing WGV/5 and WGIII/3 Workshop Photogrammetric techniques for video surveillance, biometrics and biomedicine PSBB'15, Moscow, Russia
- 28 Sept.- 2 Oct.,2015* CSIT Proceedings of the Conference, Computer Science and Information Technologies, Yerevan, Armenia
- 23-27 Sept.,2013* CSIT Proceedings of the Conference, Computer Science and Information Technologies, Yerevan, Armenia
- 1-3 Nov., 2012* Conference “Mathematical Logic and Application”, dedicated to the 80th anniversary of Igor D. Zaslavsky, IIAP of the NAS of RA and YSU

### **Scientific Connections**

Institute of Physics of the Earth named after O. Yu. Schmidt, RAS  
Participation in the project "Design of a seismic 3d model of Armenia",  
Moscow, Russia, 2012

A. V. Gaboutchian, GosNIIAS –State Research Institute of Aviation  
Systems, Moscow, Russia 2015  
E-mail: [armengaboutchian@mail.ru](mailto:armengaboutchian@mail.ru)

Start Date 10-Sep-2018 End Date 22-Mar-2019-Analyst of Grant\_SAM 1001 8tN0052-M001  
The social analysis performed at the Yerevan American Corner with an aim to understand the visitors' needs, purpose of their visits, their opinion on the services and activities and their expectations regarding future programs

### **Publications**

70 and more scientific articles and 3 manuals

### **Other Interests and Hobbies**

Travelling, reading, swimming, classical music, ballet

### **Some Publications**

- G. R. Petrosyan Modeling FIFO Queues by Dynamic Petri Nets, Conference “Mathematical Logic and Application”, dedicated to the 80th anniversary of Igor D. Zaslavsky. The conference took place on 1-3 November, 2012 at the IIAP of the NAS of RA and YSU, Mathematical

problems of computer science XXXVIII, Yerevan, 2012, page 84-86

- G. R. Petrosyan Interrelation of Languages of Colored Petri Nets, Modified Petri Nets and Some Classes of Formal Languages, CSIT Proceedings of the Conference, Computer Science and Information Technologies, September 23-27, 2013, Yerevan, Armenia, p. 45-48
- G. R. Petrosyan, A. Avetisyan, L. Ter-Vardanyan Interrelation of Languages of Colored Petri Nets and Some Traditional Languages, Open Journal of Modelling and Simulation, 2013, 1, 27-29 doi:10.4236/ojmsi.2013.13005 Published Online July 2013 (<http://www.scirp.org/journal/ojmsi>)
- G. R. Petrosyan, A. V. Gaboutchian, L. Ter-Vardanyan Modeling of biometric identification system using the Colored Petri Nets, The International Society for Photogrammetry and Remote Sensing WGV/5 and WGIII/3 Workshop Photogrammetric techniques for video surveillance, biometrics and biomedicine PSBB'15, Moscow, Russia, 25-27 May, 2015, published by GosNIIAS-State Research Institute of Aviation System, page 23-25
- G. R. Petrosyan, A. V. Gaboutchian, L. Ter-Vardanyan Prospects for odonto-and occlusiometric computer appliance use, The International Society for Photogrammetry and Remote Sensing WGV/5 and WGIII/3 Workshop Photogrammetric techniques for video surveillance, biometrics and biomedicine PSBB'15, Moscow, Russia, 25-27 May, 2015, published by GosNIIAS-State Research Institute of Aviation System, page 61-62
- G. R. Petrosyan Modeling of the Process of Consumers with Several Extensions of Petri Nets, CSIT Proceedings of the Conference, Computer Science and Information Technologies, Yerevan, Armenia, September 28-October 2, 2015, page 257-259
- G. R. Petrosyan, L. A. Ter-Vardanyan, Application of Colored Petri Nets for Modeling of Biometric Identification Protocol with Random Parameter, International Journal of Bioinformatics and Biomedical Engineering Vol. 2, No. 1, 2016, pp. 19-24 , AIS <http://www.aiscience.org/journal/ijbbe> ISSN: 2381-7399 (Print); ISSN: 2381-7402 (Online)
- Tadevosyan, G. R. Petrosyan, Software Module Development of Pupils' Performance Statistical Analysis in Public School. American Journal of Educational Science Vol. 2, No. 2, 2016, pp. 8-15, <http://www.aiscience.org/journal/ajes>, ISSN: 2381-7127 (Print); ISSN: 2381-7135 (Online)
- G. R. Petrosyan, The modelling of the problem of Patil with Colored Petri Nets. Abstracts, Armenian Mathematical Union, Annual Session 2016, Dedicated to the 110th Anniversary of Artashes Shahinyan, 30 May to June 1, Yerevan 2016, pp. 102-103
- G. R. Petrosyan, The Modelling of the Synchronization Problem with Colored Petri Nets. International Journal of Electronic Engineering and Computer Science, Vol. 1, No. 2, 2016, pp. 51-55. <http://www.aiscience.org/journal/ijeecs>
- Goharik R. Petrosyan, Lilit. A. Ter-Vardanyan, Modelling of identification and secret-key generation system with Colored Petri Net. 2016 International Conference on Control, Decision and Information Technologies (CoDIT) Requesting permission to reuse content from an IEEE publication, pp. 239-245, Copyright Clearance Center, <http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=7587666>
- G. Petrosyan, L. Ter-Vardanyan, A. Gaboutchian, Modelling of Biometric Identification system with given parameters using Colored Petri nets. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLII-2/W4, 2017 2nd International ISPRS Workshop on PSBB, 15–17 May 2017, Moscow, Russia, pp 145-150, scopus
- G. R. Petrosyan, A. M. Avetisyan, H. H. Harutyunyan, The modeling of mutual ties between Economy and Environment problem. European Journal of Economic and Financial Research ISSN: 2501-9430 ISSN-L: 2501-9430 Available on-line at:<http://www.oapub.org/soc>, doi: 10.5281/zenodo.495000, volume 2, Issue 2, 2017, pp. 64-72
- G. R. Petrosyan, Minimizing the sequence of transitions of Petri nets using the reachable tree. Abstracts, Armenian Mathematical Union, Annual Session, Yerevan 2017, pp. 55-56

- Petrosyan Goharik Razmiki, Description of the algorithm for finding the shortest sequence of transitions in a Petri net. Multidisciplinary Scientific Edition International Academy Journal Web of Scholar 5(14), August 2017, ISSN 2518-167X Founder – RS Global Media LLC, Kiev, Ukraine <http://webofscholar.com/> pp. 20-25
- Goharik Petrosyan, The Algorithm Description of the Shortest Possible Sequence of Transitions in Petri Nets. 11th International Conference on Computer Science and Information Technologies CSIT 2017 September 25 - 29, 2017, Yerevan, Armenia, pp. 43-46
- Goharik Petrosyan, Lilit Ter-Vardanyan, The calculations of mesio-distal and vestibule-lingual data by regression analysis. International conference Dedicated to 90th Anniversary of Sergey Mergelyan 20-25 May, 2018, Yerevan, Armenia, pp. 63-64, “Gitutyun” publishing house of NAS RA, [arpi@instmath.sci.am](mailto:arpi@instmath.sci.am)
- Goharik Petrosyan, Lilit Ter-Vardanyan, Armen Gabouchian, Description of the biometric identification process of teeth with the help of Colored Petri Nets. Emil Artin International Conference Dedicated to the 120th Anniversary of Emil Artin, Yerevan, RA, May 29-June 2, 2018, Abstracts, pp. 111-112
- A. Gaboutchian, H. Simonyan, V. Knyaz, G. Petrosyan, L. Ter-Vardanyan, N. A. Leybova, S. V. Apresyan, Automated shape analysis of teeth from the archaeological site of Nerqin Naver. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLII-2, 2018 ISPRS TC II Mid-term Symposium “Towards Photogrammetry 2020”, 4–7 June 2018, Riva del Garda, Italy., 339-345, <https://doi.org/10.5194/isprs-archives-XLII-2-339-2018>
- Goharik Petrosyan, Some Questions about the Possibilities of Modeling Petri Nets and their Extension. European Journal of Advances in Engineering and Technology, Volume 6, Issue 3, 2019, ISSN: 2394 - 658X, <http://www.ejaet.com/>, pp. 1-11
- A.V. Gaboutchian, V. A. Knyaz, N. A. Leybova, G. Petrosyan, H. Simonyan, S.V. Vasilyev, Application of Photogrammetric Techniques in Palaeodontological Studies Trough Automated Digital Shape Analysis of Human Teeth. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLII-2/W12, 2019 Int. Worksh. on “Photogrammetric & Computer Vision Techniques for Video Surveillance, Biometrics and Biomedicine”, 13–15 May 2019, Moscow, Russia, pp. 75-80, <https://www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XLII-2-W12/>
- Goharik Petrosyan, The Possibilities of Modeling Petri Nets and Their Extensions, chapter of monography Computer Simulation, Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI), Web of Science, © 2019 TheAuthor(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.  
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