

VAZGEN MELIKYAN

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Date of birth: 29/01/1956

Nationality: Armenian

WORK EXPERIENCE

[2011 – current] Head of Microelectronic Circuits and Systems Chair of European University
European University of Armenia
Yeravan, Armenia

[2004 – current] Director of Educational Department
Synopsys Armenia CJSC
Yeravan, Armenia

[2001 – current] Head of Microelectronic Circuits and Systems Chair of National Polytechnic
University of Armenia (NPUA),
National Polytechnic University of Armenia
Yeravan, Armenia

[2001 – 2004] VP of University and R&D Program, Director of Educational Department
LEDA Design Inc
Yeravan, Armenia

[2002 – 2004] Director of Digital and I/O Design Department
LEDA Design Inc
Yeravan, Armenia

[1994– 2001] Vice Director of Graduate School
SEUA
Yeravan, Armenia

[1989– 1991] Scientific-research worker
Technical University of Vienna
Vienna, Austria

[1985– 2001] Associate Professor, Department of Computer Systems & Informatics
SEUA
Yerevan, Armenia

[1984– 1985] Associate Professor, Department of Computer Systems & Informatics
SEUA
Yerevan, Armenia

[1981– 1984] PhD student, Chair of Electronics of MIFI
MIFI

Moscow, RF

[1978– 1981] Assistant to Professor, Department of Computer Systems & Informatics
SEUA
Yerevan, Armenia

EDUCATION

[2016] Academician of Engineering Academy of Armenia
Engineering Academy of Armenia
Yerevan, Armenia

[2014] Corresponding Member of National Academy of Sciences of the Republic of Armenia
National Academy of Sciences of the Republic of Armenia
Yerevan, Armenia

[2006] Full Professor in Automated Systems
SEUA
Yerevan, Armenia

[2006] Doctor of Technical Sciences
SEUA
Yerevan, Armenia

[1985] Associate Professor in Computer Science Supreme Certification Board
Computer Science Supreme Certification Board
Moscow, RF

[1984] PhD
Moscow Engineering-Physics Institute (MIFI)
Moscow, RF

[1973-1978] Diploma of Excellence in Computer Science
Polytechnic Institute
Yerevan, Armenia

[1963-1973] Attestat in No 3 Secondary School
No 3 Secondary School
Yerevan, Armenia

PUBLICATIONS

[2018] Melikyan V.Sh., Martirosyan M., Melikyan A., Piliposyan G. 14nm Educational Design Kit: Capabilities, Deployment and Future // Proceedings of the 7th Small Systems Simulation Symposium 2018, -P.37-41, Niš, Serbia

- [2018] Melikyan V.Sh., Avetisyan A.V., Safaryan K.H. Cut-off Circuit for Dual Rail SRAM Periphery with Improved Dynamic Power // Proceedings of RA NAS and NPUA, Series of Technical Sciences. Vol 70, N 4, -P. 459-466, Yerevan
- [2018] Melikyan V.Sh., Mkhitarian A.Kh., Hayrapetyan A.K., Avetisyan Z.M., Petrosyan A.A., Melikyan Sh.V. High Overshoot Correction Method in Voltage Regulators // Proceedings of the 2018 IEEE 38th International Conference on Electronics and Nanotechnology (ELNANO), -P.130-133 (in English), Kiev, Ukraine
- [2018] Melikyan V., Martirosyan M., Babayan D., Janpoladov V., Musayelyan D. Multi-Voltage and Multi-Threshold Low Power Design Techniques for ORCA Processor Based on 14 nm technology // Proceedings of the 2018 IEEE 38th International Conference on Electronics and Nanotechnology (ELNANO), -P.120-126 (in English), Kiev, Ukraine
- [2018] Melikyan V., Martirosyan M., Melikyan Sh. Digital Standard Cell Libraries for Integrated Circuit Automated Low Power Design Based on FinFET Transistors // Tanaev's readings. Proceedings of the 8th International Scientific Conference, -P. 200-204, Minsk, Belarus
- [2018] Melikyan V. Simulation and Optimization of Digital Circuits: Considering and Mitigating Destabilizing Factors // Springer International Publishing AG, part of Springer Nature-P.355 (in English)
- [2018] Melikyan V., Baghramyan B., Mkhitarian A., Ramazyan A., Hayrapetyan A., Trdatyan A., Mkrtchyan A., Melikyan Sh. Transmitter Output Impedance Calibration Method // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'18), -P.51-58 (in English), Kazan, Russia
- [2018] Melikyan V., Mkhitarian A., Hayrapetyan A., Grigoryants V., Petrosyan G., Avetisyan Z., Beglaryan N. Low Power, Low Offset, Area Efficient Comparator Design in Nanoscale CMOS Technology // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'18), -P.75-80 (in English), Kazan, Russia
- [2018] Melikyan V., Petrosyan A., Khachikyan K., Trdatyan A., Matevosyan A., Martirosyan A., Musayelyan R., Hakobyan D. High quality factor 5.0 Gbps CTLE circuit for SERDES serial links // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'18), -P.641-645 (in English), Kazan, Russia
- [2018] Melikyan V.Sh., Melikyan N.V. Integrated Circuit Design in Conditions of Uncertainties of Parameters // Chartaraget, P.146 (in Armenian), Yerevan, RA
- [2018] Melikyan V.Sh., Avetisyan Z.M., Hovsepyan A.A., Mkhitarian A.Kh., Hayrapetyan A.K., Petrosyan A.A., Mkrtchyan A.E. SDF Report Generation Methodology for Digital Delay Lines without Simulations // Proceedings of 8th All-Russian scientific-technical conference "Problems of Developing Advanced Micro- and Nanoelectronic Systems -2018" (MES-2018), Issue 1.-P.63-68 (in English), Zelenograd, Russia
- [2018] Melikyan V.Sh., Petrosyan A.A., Mkhitarian A.Kh., Hayrapetyan A.K., Avetisyan Z.M., Mkrtchyan A.E. The Single Event Upset Forecasting in Digital and Analog Integrated Circuits in

SAED 14nm FinFET Technology // Proceedings of 8th All-Russian scientific-technical conference “Problems of Developing Advanced Micro- and Nanoelectronic Systems -2018” (MES-2018),–Issue 4.- P.76-81 (in English), Zelenograd, Russia

[2018] A.K. Hayrapetyan, L.D. Cheremisinova, D.I.Cheremisinov, V.Sh.Melikyan. Self-Heating and Thermal Noise Minimization of the Serial-Link Transmitter // // RAs National Academy of Science and NPUA, Vol. 71, N 2, Yerevan-P. 188-194 (in English), Yerevan, RA

[2019] Melikyan V.Sh., Atanesyan A.A., Grigoryan M.T., Kostanyan H.T., Safaryan K.H., Musayelyan R.H. Duty-Cycle Correction Circuit For High Speed Interfaces // Proceedings of the 2019 IEEE 39th International Conference on Electronics and Nanotechnology (ELNANO),-P.42-46 (in English), Kiev, Ukraine

[2019] Melikyan V.Sh., Haruytunyan A.G., Martirosyan A.R. Ranking-based Placement of IC Logic Cells // Proceedings of the 2019 IEEE 39th International Conference on Electronics and Nanotechnology (ELNANO), -P.42-46 (in English), Kiev, Ukraine

[2019] Melikyan V., Gevorgyan V. Low-Jitter Phase-Locked Loop with Ring Voltage Controlled Oscillator Using a Prompt Phase-Error Compensation Technique // Proceedings of the 2019 IEEE 39th International Conference on Electronics and Nanotechnology (ELNANO),-P.102-106 (in English), Kiev, Ukraine

[2019] Melikyan V., Mkhitaryan A., Petrosyan G., Ghazaryan L., Petrosyan A., Musayelyan R., Aghababyan V. The Overshoot Reducing Method In Voltage Regulators In SAED 14nm FinFet Technology // Proceedings of the 2019 IEEE 39th International Conference on Electronics and Nanotechnology (ELNANO), -P.106-110 (in English), Kiev, Ukraine

[2019] Melikyan V., Khachatryan A., Harutyunyan S., Harutyunyan H. A Novel Voltage Mode High Speed Sense Amplifier // Proceedings of the 2019 IEEE 39th International Conference on Electronics and Nanotechnology (ELNANO), -P.120-124 (in English), Kiev, Ukraine

[2019] Melikyan V., Petrosyan O., Avetisyan Z., Ghukasyan S., Vardanyan H., Musayelyan R., Hakobyan K. Accuracy increasing approach in aging-aware standard cell libraries // Proceedings of the 2019 IEEE 39th International Conference on Electronics and Nanotechnology (ELNANO), - P.292-296 (in English), Kiev, Ukraine

[2019] D. Cheremisinov, L. Cheremisinova, V. Melikyan, A. Sahakyan. Reachability Graph Reduction for Model Based Testing of Concurrent Systems // PRIP’2019. Pattern Recognition and Information Processing. Proc.of 14th International Conference PRIP. – Minsk: Bestprint p. 74–79, Minsk, Belarus

[2019] V.Sh.Melikyan, Haruytunyan S.A., Safaryan K.H., M.V. Bazikyan Implementation of D Flip-Flop for Ultra-low Power Systems // RAs National Academy of Science and NPUA, Yerevan, RA, Vol. 72, N 2,-P. 210-217 (in English), Yerevan, RA

[2019] Melikyan V.Sh., Hayrapetyan A.K., Kostanyan H.T., Margaryan H.V., Grigoryan H.T., Martirosyan A.A. Power Supply Ratio Improvement Using Self-Calibration in Voltage Regulators// Proceedings of Universities. Electronics Scientific-technical journal, Vol.24, N. 3, ISSN 1561-5405,

-P.248-257 (in English)

[2019] Melikyan V., Mkhitarian A., Kostanyan H., Grigoryan H., Kostanyan H., Grigoryan M., Musayelyan R., Margaryan H. Power Supply Noise Rejection Improvement Method in Modern VLSI Design // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'19), -P.34-37 (in English), Batumi, Georgia

[2019] Melikyan V.Sh., Hakobyan H.H., Kaplanyan T.K., Momjyan A.M. Unit Regression Test Selection Mechanism Based on Hashing Algorithm // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'19), -P.103-107 (in English), Batumi, Georgia

[2019] Melikyan V., Martirosyan M., Virabyan D., Kostanyan H. Development of Method For Automation of SPICE Models Generation // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'19), -P.523-526 (in English), Batumi, Georgia

[2019] Melikyan V.Sh., Khachikyan K.T., Gumroyan H.V., Babayan A.V., Avushyan S.A., Hakobyan K.T. Crystal Area Reduction Method for Impedance Matching Systems in High-Speed Data Links // Proceedings of Universities. Electronics Scientific-technical journal, Vol.24, N. 5, ISSN 1561-5405,-P.503-510 (in English)

[2020] Melikyan V., Petrosyan K., Mkhitarian A., Margaryan H. The Method of Low Power, High Performance and Area Efficient Address Decoder Design For SRAM // Proceedings of the 2020 IEEE 40th International Conference on Electronics and Nanotechnology (ELNANO),-P.276-279 (in English), Kiev, Ukraine

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[2020] V.Sh. Melikyan, E.R. Kagramanyan, H.A. Babajanyan, R.H. Musayelyan. Frequency to voltage converter with two operational amplifiers and reduced delay time range of output signal // RAs National Academy of Science and NPUA, Vol. 73, N 1,-P. 54-63 (in English), Yerevan, RA

[2020] V.Sh. Melikyan, A.S. Sahakyan, A.K. Hayrapetyan, A.S. Trdatyan. Peculiarities of Nanoscale Integrated Circuit I/O Cells Design // Yerevan, Chartaraget, P.240 (in Armenian), Yerevan, RA

[2021] V.Sh. Melikyan, V.D. Hovhannisyan, M.T. Grigoryan, A.A. Avetisyan, H.T. Grigoryan. Real Number Modeling Flow of Digital to Analog Converter // Proc. Of Universities. ELECTRONICS, Vol.26, N.2, ISSN 1561-5405, -p.144-153 (in English)

[2021] V.Sh. Melikyan, V.S. Gevorgyan. A Reset Signal Generation Circuit for Dynamic Memory Interfaces During Supply Ramp-Ups And Ramp-Downs // RAs National Academy of Science and NPUA, Vol. 74, N 2,-P. 182-188 (in Armenian), Yerevan, RA

- [2021] V. Melikyan, S. Harutyunyan, T. Kaplanyan, A. Kirakosyan. UVM Verification IP for AXI // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'21), -P.17-20 (in English), Batumi, Georgia
- [2021] V. Melikyan, T. Kaplanyan, S. Harutyunyan, A. Kirakosyan, A. Momjyan, V. Amiryan. Design and Verification of Novel Sync Cell // Proceedings of IEEE East-West Design & Test Symposium (EWDTS'21), -P.7-11 (in English), Batumi, Georgia
- [2021] V. Melikyan, S. Abazyan. Enhanced pin-access prediction and design optimization with machine learning integration // Microelectronics Journal, Vol. 116, 105198, Elsevier Science. <https://doi.org/10.1016/j.mejo.2021.105198>, ISSN 0026-2692-P.1-5 (in English)
- [2021] Melikyan V.Sh., Abgaryan G.A., Petrosyan P.S., Avakyan N.A. Low Power Analogue-Digital Converter Model // Journal of Contemporary Physics (Armenian Academy of Sciences), 56, 275–279, ISSN 1934-9378
- [2021] Melikyan V.Sh., Gevorgyan V.S. High Accuracy Two-Step Flash ADC with Changeable Comparison Range Using Latch Based Comparator // Manual of Universities. ELECTRONICS, Vol.26, N.3-4, ISSN 1561-5405, 2021.-p.273-281
- [2022] Melikyan V.Sh. Integrated Circuits: Evolution, Market, Challenges and Solutions // Proceedings of the 9th Small Systems Simulation Symposium 2022 (Plenary session), -P.34-39, Niš, Serbia
- [2022] V. Melikyan. A New, Effective Model of Industry/University Cooperation” Chapter in the book “Towards Third Generation Learning and Teaching. Contours of The New Learning” under the editorship of M. Yulik and H. Wissema // Anthem Press. P. 307-320, London
- [2022] V.Sh. Melikyan, H. V. Gumroyan, D. S. Shaljian, D. V. Manucharyan. A voltage control system for a low-power devices to address transistor overstress in I2C systems // Manual of Universities. ELECTRONICS, Vol.27, N.3, ISSN 1561-5405, -p.374-381
- [2022] V. Melikyan, P. Petrosyan, N. Avagyan, G. Abgaryan. Self-Heating Analysis Method of Integrated Circuits // International Conference on Microwave & THz Technologies and Optoelectronics (IRPhE'), Yerevan, Armenia
- [2022] V. Melikyan, S. Abazyan, Sh. Melikyan. Standard Cell Full Abutment Check Method // Proceedings of the 2022 IEEE 41st International Conference on Electronics and Nanotechnology (ELNANO),-P.47-50, Kiev, Ukraine
- [2022] Melikyan V.Sh. Integrated Circuit Reliability: Current State, Challenges and Solutions // Proceedings of the XIV International Symposium on Industrial Electronics and Applications (Plenary session), Banja Luka, Bosnia and Herzegovina

OTHER

- [2020] – Honorary Professor of Xidian University, China

- [2019] – Certificate of Appreciation for the Involvement in the Establishment and Development of the University from European University, Yerevan, Armenia
- [2018] – Certificate of Merit from National Polytechnic University of Armenia, Yerevan, Armenia
- [2016] – Gold medal of the Ministry of Education and Science of Armenia for "the greatest contribution to the field of education and science", Yerevan, Armenia
- [2016] – Gold Medal of Yerevan State University for significant contribution in the field of University Education and Science and the long-term fruitful cooperation with Yerevan State University, Yerevan, Armenia
- [2016] – Gold Medal of the Russian-Armenian (Slavonic) University for many years of close cooperation, training highly qualified specialists in "Design and Technology of Electronic Means" specialization, Yerevan, Armenia
- [2016] – Medal of European University, Yerevan, Armenia
- [2016] – Gold Medal of VivaCell-MTS for significant contribution in the field of Education and Science, Yerevan, Armenia
- [2015] – Acknowledgement of Gratitude for “Efficient Activities and Participation of Works of Public Council by the Ministry of Defense of RA, Yerevan, RA
- [2015] – Honorary Professor of Artsakh State University for significant contribution in the field of Science and Education, productive activities and scientific connections with the Artsakh State University
- [2013] – “Vazgen Sargsyan” Medal of the Ministry of Defense of RA, order of the Minister of Defense of RA No 93 01.02.2013, Yerevan, RA
- [2012] – “Garegin Nzhdeh” Medal of the Ministry of Defense of RA, order of the Minister of Defense of RA No 966 14.09.2012, Yerevan, RA
- [2012] – Honorary Professor of National Research University MIET, decision of Scientific Board of MIET of April 16, 2012, Moscow, Russia
- [2011] – Jubilee medal “Military Forces of RA 20 Years” of the Ministry of Defense of RA, order of the Minister of Defense of RA No 1537 24.12.2011, Yerevan, RA
- [2011] – Gold medal of State Engineering University of Armenia, university administration decision No 01/03-1 06.10.2011, order No 01-03/456 10.10.2011, certificate 0210, Yerevan, RA
- [2011] – Diploma of Yerevan State University “For Achievements in Science and Significant Contribution in University Education Development”, Yerevan, RA
- [2011] – Honorable Medal of European Regional Educational Academy 10-year Anniversary, order No 8, Yerevan, RA

- [2010] – “President of the Republic Prize” in “Technical Sciences and Information Technologies” area, Yerevan, RA
- [2010] – Best Paper Award in the 8th IEEE East-West Design & Test International Symposium, St. Petersburg, Russia
- [2010] – Diploma for Outstanding Training of Excellent student-Experts in Design and Test of Computer Systems”, Open International Student Olympiad “Technical Diagnosis of Computer Systems and Networks”, Kharkov, Ukraine
- [2009] – Honorable Professor of European Regional Academy of Armenia, Yerevan, RA
- [2009] – Best Paper Award in the 7th IEEE East-West Design & Test International Symposium, Moscow, Russia
- [2008] – Honorary Medal of Engineering Academy of Armenia, Diploma CM 020, Protocol 1 12.15.2008, Yerevan, RA
- [2008] – Best Paper Award in the 6th IEEE East-West Design & Test International Symposium, Lvov, Ukraine
- [2007] – Title of Honorable Scientist of the Republic of Armenia, Yerevan, RA
- [2007] – 1st prize in SEUA Scientific Contest in the nomination of the Best Scientific Publication (research work), 2006-2007, Yerevan, RA
- [2007] – Best Paper Award in the 5th IEEE East-West Design & Test International Symposium, Yerevan, RA
- [2006] – Best Paper Award in Problems of Developing Advanced Microelectronic Systems Conference, Moscow, RF
- [1999] – 1st prize in SEUA Scientific Contest in the nomination of the Best Scientific Publication (research work), 1998-1999, Yerevan, RA
- [1997] – 1st prize in SEUA Scientific Contest in the nomination of the Best Master Theses Supervisor, Yerevan, RA
- [1996] – Praise of SEUA Board of Trustees and Management, Yerevan, RA
- [1978] – Medal for the Best Diploma Work of Armenia, Yerevan, RA
- [1975-1978] – Lenin Scholarship awarded for academic excellence, Yerevan, RA
- [1973] – 2nd prize in all-union Mathematics Olympiad of USSR pupils, Kishinev, Moldova, 1973