CURRICULUM VITAE

1. Name **:** Oktay VELİEV

2. Date opf both: 1954

3. Academic Title: Prof. Dr.

4. Education:

5. Institution : Dogus University

Degree	Program	University	Date
BA/BS	MATHEMATICS	Moscow State University	1977
MA/MS/MBA	MATHMATICS	Moscow State University	1977
Ph.D.	MATHMATICS	Moscow State University	1980

5. Academic Titles:

Assşstant Professor : 1980
Associate Professor : 1983
Ful Profesor 1989

6. Theses Supervised

6.1. M.A. /MBA/MS Theses

6.2. Ph.D. Theses:

1. Talıbov T. Differential operators with periodic operator-valued potential, Akad. Nauk Azerbaijan SSR, 1987.
2. Mirsoev V. Differential operators with nonlinear spectral parameters, Akad. Nauk Azerbaijan SSR, 1989.
3. Kuliev N. On the non-selfadjoint differential operators with ingresing coefficients, Baku State University, 1990.
4. Mehrabov, V. Asymptotic formulae for eigenvalues of Pauli operator in Parallelepiped, Akad.Nauk Azerbaijan Repablic, 1996.
5. Gasimov, Y.S. Asymptotic formulae for eigenvalues of Pauli operator in Cylinder, Akad.Nauk, Azerbaijan Repablic 1996.
6. Abdullaev. C. On the pertubation of multiple eigenvalues, Akad.Nauk. Azerbaijan Repablic 1997.
7. M.Toppamuk Duman. On the singilar Sturm-Lionville boundary value problem, Dokuz Eylül University, 1999.
8. Şirin Atılgan, Asymptotic Formulae for Eigenvalues of the multidimensional Schrodinger Operator, Dokuz Eylül University, 2002
9. Seder Erim, On the pertubation theory for the multidimensional Schrodinger Operator, Dokuz Eylül University, 2003

10. Alparslan Kırac, On the Spectral analysis of non-selfadjoint differential operators, Dokuz Eylül University, 2004,

11. Güldem Yıldız, Asymptotic formulas and numerical approaches for eigenvalues of regular differential operators, Marmara University, 2012.

12. Seza Dinibütün, Asymptotic and numerical analysis of the non-self-adjoin differential operator, Marmara University, 2013

13. Cemile Nur, On the root functions of ordinary differential operator, Dogus (Turkey) and Nantes (France) Universities (International. Joint Supervision of Doctoral Theses), 2014.

14. Fulya Şeref, On the spectral properties of the operators generated by a system of differential equations. Dogus (Turkey) and Nantes (France) Universities (International Joint Supervision of Doctoral Theses), 2014.

7. Publications

7.1. Articles published in SCI journals:

1. O. A. Veliev, The one-dimensional Schrödinger operator with periodic complex - valued potential, Soviet Math. Dokl., 250, no.6, pp.1292-1296 (1980).

2. F.G.Maksudov, O. A. Veliev, Nonselfadjoint differential operators in the space of the vector functions with periodic coefficients, Soviet Math. Dokl., Vol 258 ,no.1, pp. 2630 (1981).

3. O. A. Veliev, On the spectrum of the Schrödinger operator with a periodic potential, Soviet Math. Dokl. Vol. 268, no.6, pp.1289-1293 (1983).

4. O. A. Veliev, The spectrum and spectral singularities of the differential operators with periodic complex-valuedcoefficients. Differential Equations, no.8, pp. 1316-1324 (1983).

5. O. A. Veliev, S.A. Molchanov, The construction of spectrum of the periodic Schrödinger operator in the Euclidian toures. Functional Analysis and Appl., Vol.19 , no.3, pp.86-87 (1985).

6. O. A. Veliev, The spectral resolution of the nonselfadjoint differential operators with periodic coefficients. Differential Equations Vol.22, no12, pp. 2052-2059 (1986).

7. O. A. Veliev, Asymptotic formulae for eigenvalues of the multidimensional Schrödinger operator and some appl. Mathematical Surveys, Vol.41, no.4, pp.134-135 (1986).

8. O. A. Veliev, Asymptotic formulae for eigenvalues of Schrödinger operators and Bethe - Sommerfeld conjecture. Functional Analysis and Appl., Vol.21, no.2, pp.1-15 (1987).

9. O. A. Veliev, On the isoenergetic surfaces of the Schrödinger operator with periodic potantial. Mathematical Surveys, Vol.42, no.4, pp.132-133 (1987).

10. O. A. Veliev, Spectral analysis of the differential operators with periodic matrix coefficients. Differential Equations, Vol .25, no.3, pp. 400-409 (1989).

11. O. A. Veliev, Toppamuk Duman, The Spectral Expansion for a Nonselfadjoint Hill Operators with a Locally Integrable Potential. Journal of Mathematical Analysis and Applications, Vol.265, No. 1, pp. 76-90 (2002).

12. Neşe Dernek, O. A. Veliev, On the Riesz Basisness of the root functions of the Nonself adjoint Sturm-Liouville operator, Israel Journal of Mathematics, 145, pp.113-123 (2005).

13. S. Karakılık, Ş. Atılgan, O. A. Veliev, Asymptotic Formulae for Eigenvalues for the Schrodinger Operator with Dirichlet and Neumann Boundary Conditions, Reports on Mathematical Physics, Vol. 55, No. 2, pp. 221-239 (2005).

14. B. Yılmaz, O. A. Veliev, Asymptotic Formulas for Dirichlet Boundary Value Problems, Studia Scientiarum Mathematicarium Hungarica, Vol. 42, No. 2, pp. 153-171 (2005).
15. O. A. Veliev, Spectral Expansion for a Nonselfadjoint Periodic Differential Operator, Russian Journal of Mathematical Physics, Vol. 13, No. 1, pp.101-110, (2006).
16. O. A. Veliev, Asymptotic formulae for the Bloch eigenvalues near planes of diffraction , Reports on Mathematical Physics, Vol. 58, No. 3, pp. 445-464 (2006).
17. O. A. Veliev, On the Nonself-adjoint Sturm-Liouville Operators with Matrix Potentials, Mathematical Notes, Vol.81, No. 3-4, pp.440-448 (2007).
18. M. Duman,A. A. Kirac, O.A. Veliev, Asymptotic Formulae with Arbitrary Order for Nonselfadjoint DifferentialOperators, Studia Scientiarum Mathematicarium Hungarica, Vol. 44, No. 3, pp. 391-409 (2007).
19. O. A. Veliev , On the constructively determination of spectral invariants of the periodic Schrödinger operator with smooth potentials, , Journal of Physics A: Mathematical and Theoretical, Volume 41,Number 36, 365206 (26pp),2008.
20. Veliev O.A. "On the Hill's operator with a matrix potential, Mathematische Nachrichten, 281, NO.9, p.1341-1350, 2008.
21. O. A. Veliev, Uniform Convergence of the Spectral Expansion for a Differential Operator with Periodic Matrix Coefficients, Boundary Value Problems, Volume 2008, Article ID 628973, 22 pages, 2008.
22. A. A. Shkalikov, O. A. Veliev, On the Riesz Basis Property of the Eigen- and Associated Functions of Periodic and Antiperiodic Sturm-Liouville Problems, Mathematical Notes,Vol 85, No. 5, pp.647-660, 2009.
23. O. A. Veliev, On the constructive determination of the periodic potentials from the Bloch eigenvalues, Journal of Physics A: Mathematical and Theoretical, Volume 42,Number 37, 375201 (19pp), 2009.
24. O. A. Veliev, On the Differential Operators with Periodic Matrix Coefficients, Abstract and Applied Analysis, Volume 2009, Article ID 934905, (21pp), 2009.
25. O. A. Veliev, On the Nonself-adjoint Ordinary Differential Operators with Periodic Boundary Conditions. Israel Journal of Mathematics, 176, pp.195-208 (2010).
26. O. A. Veliev, On the Basis Property of the Root Functions of Differential Operators with Matrix Coefficients, Central European Journal of Mathematics, Vol. 9, (16pp), 2011.
27. O. A. Veliev, An algorithm for finding the periodic potential of the three-dimensional Schrodinger operator from the spectral invariants, Journal of Physics A: Mathematical and Theoretical, Volume 44, Number 15, 155202 (25 pp), (2011)
28. O.A. Veliev, Asymptotic Analysis of Non-self-adjoint Hill Operators, Central European Journal of Mathematics, Volume 11, Issue 12 ,2013.
29. O. A. Veliev, Isospectral Mathieu-Hill Operators, Letters in Mathematical Physics, Volume 103, Issue 8, 2013
30. .Guldem Yıldız, Bulent Yılmaz and O.A. Veliev, Asymptotic and Numerical Methods in Estimating Eigenvalues, Mathematical Problems in Engineering, Volume 2013, Article ID 415479, 8 pages,2013
31. Seza Dinibütün and O. A. Veliev, On the estimations of the small periodic eigenvalues, Abstract and Applied Analysis, Volume 2013, Article ID 145967, 11 pp. (2013).
32. Fulya Şeref, O.A. Veliev, On the non-self-adjoint Sturm-Liouville operators in the space of vector-functions, Mathematical Notes, Vol 95, No 2, pp.180-190, (2014).
33. O. A. Veliev, On the simplicity of the eigenvalues of the non-self-adjoint Mathieu-Hill operators, Applied and Computational Mathematics, Vol.13, no 1, pp 122-134, (2014)

34. Cemile Nur and O. A. Veliev: On the basis property of the root functions of some class of non-self-adjoint Sturm-Liouville operators. Boundary Value Problems, Vol.2014, Is.1, pp. 17 (2014).
35. O. A. Veliev, Spectral Problems of a Class of Non-self-adjoint One-dimensional Schrodinger Operators, Journal of Mathematical Analysis and Applications, Vol. 422, pp. 1390–1401 (2015).
36. Cemile Nur, O.A. Veliev, On the basis property of the root functions of Sturm-Liouville operator with general regular boundary conditions, Moscow Mathematical Journal, Vol.15, Is. 3 pp.511-526 (2015)
37. O. A. Veliev, On the Spectral Singularities and Spectrality of the Hill Operator, Operators and Matrices, Vol. 10, No. 1, pp.57-71 (2016)
38. Fulya Seref, O. A. Veliev, On the Sharp Asymptotic Formulas for the Sturm-Liouville Operator with a Matrix Potential, Mathematical Notes, Vol 100, No 2, pp. 291-297 (2016)
39. Oktay Veliev, On the spectral properties of the Schrodinger operator with a periodic PTsymmetric potential, International Journal of Geometric Methods in Modern Physics, Vol. 14, No. 5 (2017) 1750065 (18 pages)
40. O. A. Veliev, Essential spectral singularities and the spectral expantion for the Hill operator, Communucation on Pure and Applied analysis, Volume 16, Number 6, 2017, pp. 2227-2251.
41. O. A. Veliev,The spectrum of the Hamiltonian with a PT-symmetric periodic optical potential, International Journal of Geometric Methods in Modern Physics, Vol. 15, No 1, 2018 , 33 pages
42. O. A. Veliev, Asymptotically Spectral Periodic Differntial Operators, Mathematical Notes, 2018, Vol. 104, No. 3, 2018, pp. 364–376.
43. Oktay Veliev, Spectral expansion series with parenthesis for the nonself-adjoint periodic differential operators, Communucation on Pure and Applied analysis, Volume 18, No 1, 2019, pp. 397-424.
44. O. A. Veliev On a Class of Non-self-adjoint Multidimensional Periodic Schrodinger Operators, Turkish Journal of Mathematics, Vol.43, Number 5, 2019, pp. 2515-2432.
45. O. A. Veliev, On the finite-zone periodic PT-symmetric potentials, Moscow Mathematical Journal, Vol.19, No 4, 2019, pp. 807-816.

46. O. A. Veliev, on the spectrality and spectral expansion of the non-self-adjoint Mathieu-Hill operatör, Communucation on Pure and Applied analysis, Vol. 19, No 3, 2020, pp. 1537-1562.

7.2. Articles published in other international indexed jornals

1. O. A. Veliev, On the spectrum of the multidimensional periodic operators. Teor. Funk.Functional Anal.i Prilozhen, 49, 17-34 (1988).
2. S. Karakılık, Ş. Atılgan, O. A. Veliev, Asymptotic Formulae for Eigenvalues of the Schrodinger Operator. Turkish Journal of Math., Vol 26, no. 2, 215-228 (2002).
3. S. Karakılık, O. A. Veliev, Ş. Atılgan, Asymptotic Formulae for Resonance Eigenvalues of the Schrodinger Operator. Turkish Journal of Math., Vol 29, no 4, pp.323-346 (2005)

4. O. A. Veliev, A. A. Kirac On the nonself-adjoint differential operators with the quasiperiodic boundary conditions, International. Mathematical Forum, Vol. 2, 2007, no. 33-36, 1703-1715.
5. O. A. Veliev, Perturbation theory for the periodic multidimensional Schrodinger operator and the Bethe-Sommerfeld conjecture, International Journal of Contemporary Mathematical Sciences, Vol.2 no.2, 2007,p.19-87.

6. C. Nur, O. A. Veliev, On the estimations of the small eigenvalues of the non-self-adjoint Sturm-Liouville operatorsi Journal of Applied and Engineerng Mathematics, Vol. 9, issue 4, p.882-893.

7.3. Proceedings (International)

1. O. A. Veliev, Some geome tr ical property of the isoenergetic surface of the Schrodinger operator with a periodic potantial. Thesis of the international topological conference, Vol. 2, Baku, 1987.
2. O. A. Veliev, Some applications of asymptotic formulae of the Bloch function. The 2-nd Turkish-Azerbaijan Mathematics Symposium, Baku , 1992.
3. O. A. Veliev, Asymptotic formulae for current ma tr ix. The 3-d Azerbaijan - Turkish Math. Symposium, Trabzon, Turkey, 1993**.**
4. O. A. Veliev, On connection between multidimensional Schrodinger operator and ordinary differential operators. The 4-d Azerbaijan - Turkish Math. Symposium, Baku, 1994.
5. O. A. Veliev, Y.S. Gasumov, Asymptotic formulas for eigenvalues of Pauli operator in cylindrical domains. Third International Congress of Applied and Undus tr al Mathematics, Germany, Hamburg, 1995.
6. O. A. Veliev, Toppamuk Melda, On the spec tr al expansion of nonselfadjoint Hill's operators. International Conference functional differential - difference equations and applications, Antalya, Turkey,18-22 /08/,1997.
7. O. A. Veliev, On the cons tr uctively determination of the potential of Theredimensional Schrodinger operator from Fermi surfaces. International Conference "Inverse Problems", Izmit, Turkey, 21-27/ 08/1998.
8. O. A. Veliev, Finding the potensial of three-dimensional Schrodinger operator from fermi surfaces. Regional Conferance on Mathematical Physics 9, Istanbul, 1999.
9. O. A. Veliev, The Spec tr al Expansion for a Nonselfadjoint Hill Operators with a Locally Integrable Potential.Turkish Mathematics Symposium, Anadolu University, 19-21/ 09/ l 2001
10. O. A. Veliev, Riess Basis of the Root Functions of the Periodic boundary Value Problem**,** International Conference "Differential Equations and Related Topics" Moscow Lomonosov State University, May 16 -22, 2004.
11. O. A. Veliev, On the Multidimensional Periodic Schrodinger Operator International Conference "QMath9, France, September 11-18, 2004
12. O. A. Veliev, Perturbation Theory for the Multidimensional Periodic

Schrodinger Operator, International Conference Miami 2005, Miami, USA ,13-18 December, 2005

13. O. A. Veliev, On Nonself-adjoint Sturm-Liouville Operator with a Ma tr ix Potential, International Conference Miami 2006, Miami, USA ,12-17 December, 2006
14. O. A. Veliev, On the Cons tr uctively Determination of the Spec tr al Invariants of the Periodic Multidimensional Schrodinger, International Conference "Differential Equations and Related Topics" Moscow Lomonosov State University , May 21 -26, 2007.
15. O.A. Veliev, On the Inverse Problem for the Multidimensional Schrödinger Operator with a Periodic Potential, International conference " Analysis, PDEs and Applications, Roma, Italy, 30.06.2008-03.07.2008
16. O. A. Veliev , On the Differential Operators with Periodic Ma tr ix Coefficients, International conference "Mathematical Analysis, Differential Equations and Their Applications" Famagusta, September 12-15, 2008.
17. O. A. Veliev, An Algorithm for Finding the Potential of the Three Dimensional Schrödinger Operator by the Spectral Invariants. International conference “Shape optimization and inverse problems” Nantes, France, 17-20 December, 2008.
18. O. A. Veliev, On the Inverse Spectral Problem for the Three-dimensional Schrodinger Operator with a Periodic Potential, Ukrainian Mathematical Congress 2009 (Dedicated to the Centennial of Nikolai N. Bogoliubov), Kiev, Ukraina, 27-29 august, 2009.
19. O. A. **Veliev**, On the Basis Property of the Root Functions of Differential Operators with Matrix Coefficients, International conference " Spectral Problems and Related Topics" Moscow State University, November 18-21, 2009
20. O. A. **Veliev**, On Direct and Inverse Problems for Schrödinger and Pauli Operators, International conference on Partial Differential Equation, PoitiersFuturoscope, France, February 18-20, 2010.
21. O. A. **Veliev**, On the Basis Property of the Root Functions of Differential Operators with Regular Boundary Conditions, International Conference Miami 2010, Miami, USA ,14-19 December, 2010
22. O. A. Veliev, On the multidimensional Schrödinger operator with a periodic potential, International conference "Operator theory & boundary value problems," University Paris-Sud 11. May 25-27, 2011.
23. O. A. Veliev, On the inverse problems for the multidimensional periodic Schrödinger operator, The XXII nd International Colloquium on Integrable Systems (ISQS-22), Czech Technical University in Prague, 23-29 June, 2014.
24. O. A. Veliev, On the Fermi Surfaces of the Multidimensional Periodic Schrödinger Operator, The 24-th International Colloquium on Integrable Systems and Quantum Symmetries (ISQS-24), Czech Technical Univ., Prague, 14-18 June, 2016.
25. O. A. Veliev, Spectral Singularities and the Spectral Expansion for the Nonself-adjoin Schrodinger Operator with a Periodic Potential, Workshop of the GAMM Activity Group Applied Operator Theory, Hamburg University of Technology, Germany, May 19-20, 2017.

26. O. A. Veliev, On the spectral analysis of the Schrodinger operator with a periodic PT-symmetric potential, CIRM conference on mathematical aspects of the physics with non-self-adjoint operators, Marseille, France, 5 – 9 June, 2017
27. O. A. Veliev, Schr¨odinger operator with the periodic PT-symmetric potentials,
The 14th international conference Analytic and algebraic methods in physics Prague, 11-14 September, 20
28. O. A. Veliev, Hill operator with the periodic PT-symmetric potential, International conference , Operators, functions and system of mathematical physics conference, Baku 21-24 May, 2018
29. O. A. Veliev, On the PT-symmetric finite-zone potentials, The 15-th international conference Analytic and algebraic methods in physics Prague, 11-14 September, 2018.
30. 30. O. A. Veliev, On the finite-zone potentials, International conference on applied, mathematica, modeling and life sciences. Istanbul, 03-05 October 2018.
31. O. A. Veliev, On some Application of the Perturbation Theory for the Multidimensional Schrodinger operator, Barcelona 24-29 June, 2019

7.4. Books or chapters in books (International)

1. Oktay Veliev, Multidimensional Periodic Schrödinger Operator (Perturbation Theory and Applications), Springer Cham Heidelberg New York Dordrecht London 2015. (Book, Monografy) **http://link.springer.com/book/10.1007/978-3-319-16643-8**
2. Oktay Veliev, Multidimensional Periodic Schrödinger Operator (Perturbation Theory and Applications), Springer Cham, second edition 2019.
https://www.springer.com/gp/book/9783030245771

7.5. Articles published in national refreed journals

1 O. A. Veliev, Spectral expansion of differential operators with periodic complexvalued coefficients. Dokl.Akad.Nauk Azerbaijan SSR, 36, no.6, pp.13-17 (1980).
2 F.G. Maksudov, O. A. Veliev, Spectral analysis of the Dirac operator with periodic complex-valued coefficients. Dokl.Akad.Nauk Azerbaijan SSR , 37, no.2, pp. 3-7 (1981).
3 O. A. Veliev, Differential operators with periodic complex-valued coefficients. Spectral Theory of Operators and its. Appl, Vol 4, pp. 21-55 (1982).
4 O. A. Veliev, Asymptotic formulae for eigenvalues of the multidimensional

Schrödinger operator. Spectral Theory of Oper. and Appl, Vol.8, pp. 41-71 (1987).

5 O. A. Veliev, Asymptotic formulae for Bloch functions of a multidimensional periodic Schrödinger operator and some of their appl. Spectral Theory of Operators and its Appl , Vol.9, pp. 59-76 (1989).

6 O. A. Veliev, On the two-dimensional Schrödinger operator with periodic locally squary integrable potential. Spectral Theory of Operators and its Appl. Vol 10, pp.6476 (1991).

7 O. A. Veliev, On inverse problems for the multidimensional periodic Schrödinger operator by isoenergeic surfaces. Proceeding of the Azerbaijan Mathematical Society, Vol.1, pp. 29-44 (1994).

8 O. A. Veliev, Inverse problem for the multidimensional periodic Schrödinger operator, Proceeding of Azerbaijan Mathematical Society, Vol. 2 , pp.14-32 (1996).

9 O. A. Veliev, Y.S. Gasumov, V.A. Mehrabov, Asymptotic formulae for eigenvalues of Pauli operator. Proceeding of Baku State University, Vol.4, pp. 25-38 (1997).

10 O. A. Veliev, On the Polyharmonic Operator with a Periodic Potential,, Proceeding of the Institute Math. and Mech. of the Azerbaijan Acad. of Sciences, no 2, pp. 127-152 (2005).

7.6. Proceedings (national)

7.7. Other publications

8. Projects

108T683 No'lu TÜBİTAK 1001 Araştırma Projesi, Yönetici

9. Administrative Responsibilities

Head of Department of Mathematics

10. Membership for academic or professional organizations

11. Awards

1. Grant of American Mathematical Society, 1993
2. Grant (No:MVVOOO) of the Competition of Long-time Research Project of International Science Foundation, 1995

12. Undergraduate and graduate courses taught in the last two years (including the summer school program)

Academic Year	Semester	Dersin Adı	Teaching Hours		Number of Students
			Theory	Practice	
2017-2018	Fall	Analysis 3 (MATH 253)	5	0	
		Introduction to Real Analysis (MATH 351)	3	0	
		Matematik 1 (MATE 111) Linear Algebra (Math213) Linear Algebra 1 (Math 261) Graduation Project (Math 492)	3 3 3 0	2 0 0 6	
	Spring	Calculus 2 (MATH 112)	3	2	
		Genel Matematik (MATE 102)	1	2	
		Real Analysis (MATH352) Graduation Project (Math 492)	3 0	0 6	
2018-2019	Fall	Sosial Bilimler için Matematic (Mate 101)	2	0	
		Introduction to Real Analysis (MATH 351)	3	0	
		Calculus 1 (Math 111) Calculus 1 (Math 111)	3 3	2 2	
	Spring	Genel Matematik 1 (Mate 112)	1	2	
		Matematik 2 (Mate 112)	3	2	
		Diferansiyel Denklemler (MATE 214)	2	2	