

CURRICULUM VITAE(CV) Name/Surname: Veli Shakhmurov



1. Veli Şahmurov
2. Prof. Dr.

3. Education:

| Degree     | Department            | University   | Year |
|------------|-----------------------|--|------|
| Bachelor   | Mathematical Analysis | Azerbaijan State University Tusy, Faculty of Mathematics   | 1973 |
| Master     | Mathematical Analysis | Faculty of Mathematics.  | 1975 |
| Ph.Dr.,    | Mathematical Analysis | Akademy of Science Az. SSSR, and V. Steklov Matematik Institute, Akademy of Science SSSR, Moscow | 1979 |
| Science Dr | Mathematical Analysis | V.Steklov Matematik Institute, Akademy of Science SSSR, Moscow                                   | 1987 |

5.1. Institution he is working at:

| Title               | Discipline          | University                                 | Year |
|---------------------|---------------------|--|------|
| Assistant Professor | Mathematic Analysis | Azerbaijan State University Tusy           | 1981 |
| Associate Professor |                     | Azerbaijan State University of Engineering | 1983 |
| Full Professor      |                     | Baku State University                      | 1989 |
| Ful professor       |                     | Ak Deniz Universiti, Depart.of Mathematics | 1993 |

|               |  |   |                   |
|---------------|--|---|-------------------|
|               |  |   | 1994              |
|               |  |   |                   |
| Ful Professor |  | İstanbul University,<br>Engineering Faculty | 1997<br>-<br>2007 |
| Ful Professor |  | Okan University,<br>Engineering Faculty     | 2007<br>-<br>2017 |

## 5.2. Academic degree:

1990. Professor

## 6.1. Managed Master Theses:

- 1). Continious of embedding in Hilbert- valued Sobolev spaces and applications, 1989, Baku State University;
- 2). Compactness of embedding in vector-valued anisotropic spaces and applications, 1989, Baku State University;
- 3). Embedding of anisotropic Sobolev spaces and applications, 1990, Baku State University;
- 4). Normal solvability properties of boundary value problems for abstract elliptic equations, 1990, Baku State University;
- 5). Fredholm properties of boundary value problems for operator- elliptic equations, 1990, Baku State University;
- 6). Fredholm properties of boundary value problems for quasi elliptic equations, 1990, Baku State University;
- 7). Solvability properties of boundary value problems for regular degenerate elliptic equations, 1991, Baku State University;
- 8). Stability properties of initial value problems for parabolic equations, 1991, Baku State University;
- 9). Regularity properties of boundary value problems for singular degenerate elliptic equations, 1992, Baku State University;
- 10). Regularity properties of initial value problems for degenerate parabolic equations, 1992, Baku State University;
- 11). Fredholm properties of boundary value problems for degenerate elliptic equations, 1993, Baku State University;
- 12). Wel-posedeness of initial value problems for degenerate parabolic equations, 1994, Baku State University;

- 13). Approximation numbers of embedding operators in vector valued Sobolev spaces, 1995, Baku State University;
- 14). Spectral properties of degenerate differential operators considered in bounded domain, 1995, Baku State University;
- 15). Estimates of resolvents of degenerate elliptic operators in half plane, 1995, Baku State University;
- 16). Embedding theorems in abstract anisotropic spaces and applications, ( Hadica Ismail, Istanbul Technical University, 2009);
- 17). Fredholm properties of Agranovich-Vishik type elliptic equations,( Asuman Mert, Istanbul Technical University, 2010).

## 6.2. Managed Ph.D. Theses:

- 1). Coercive boundary value problems for abstract differential equations on half plane ( Azad Babayev-1985, Baku State University);
- 2). Maximal regular properties of degenerate differential operator equations ( Emin Musayev-1986, Baku State University);
- 3). The stability properties of solutions of some nonlinear partial differential equations by means of finite element and Galerkin methods ( Gasim Farruh-1992, Baku State University )
- 4). Embedding theorems and application to differential-operator equations (Hummet Musayev-1997, IMM Baku)
- 5). Embedding in abstract Besov spaces and well-posedness of degenerate abstract equations in its ( Doctor of Science, Malik Cebrailiv-1997, IMM Baku);
- 6). Maximal regularity properties of Agranovich-Vishik type abstract elliptic equations ( Asuman Mert, (Thesis defense phase, Istanbul Technical University).

4. Supervised Master and Ph.D. Thesis Prof Dr. S. Yakubov

5.1 Title of Master Thesis, Embedding theorems in vektor-valued Sobolev spaces.

5.2 Dissertation Title: Ph.Dr: Embedding theorems in abstract Sobolev spaces and applications to elliptic and quasi elliptic differential-operator equations: Science Dr: Embedding theorems in weighted Sobolev spaces and applications to degenerate differential operator equations

Citations: 1055

I am dealing with in the following scientific fields of analysis :

1. Abstract harmonic Analysis;
2. Operator-valued singular integral operators and multiplier theorems in abstract function spaces;
3. Embedding and trace theorems in Sobolev-Lions and Besov-Lions type spaces of vector-valued functions;
4. Compactness of embedding and estimates of approximation numbers of embedding operators in abstract function spaces;
5. Separability properties of boundary value problems for operator-differential equations in Banach spaces;
6. Well-posedness of abstract parabolic equations;
7. Maximal regularity properties of linear and nonlinear abstract differential equations with small parameters;
8. Maximal regularity properties of linear and nonlinear degenerate operator-differential equations;
9. Maximal regularity properties of linear and nonlinear convolution elliptic equations in Banach spaces;
10. Carleman estimates and unique continuation results for abstract differential equations;
11. Spectral properties of differential operators;
12. Maximal regularity properties of abstract Stokes operators in  $L_p$  spaces;
13. Navier Stokes problems;
14. Boussinesq equations;
15. Nonlinear wave equations
16. Schrödinger equations;
17. Mathematical Medicine, the dynamics of a tumor growth models.

7) Publications - 150

7.1 International refereed Journal Publications (SCI)

- 1 (SCI) Shakhmurov V. B. (with Yakubov S, Y.), Theorems on imbedding in anisotropic spaces of vector-valued functions, *Mathematical Notes.*, 22 ( 1-2 )1977, 657-659.
- 2 (SCI) Shakhmurov V. B., Compactness of embedding in anisotropic vector function spaces and applications, *Doklady Akademii Nauk SSSR*, (6)241,1285-1287, 1978.
- 3 (SCI) Shakhmurov V. B. (with Maksudov F. G.), On the completeness of the system of the eigen and attached vectors of the non local boundary -value problems for the quasi-elliptic partial -differential-operator equations, *Doklady Akademii Nauk SSSR*, 268 (1 ) 1983, 33-35.
- 4 (SCI) Shakhmurov V. B. (with Maksudov F. G.), The estimations of resolvent for some class of quasi- elliptic partial differential-operator equations, *Doklady Akademii Nauk SSSR*, 268 (4 ), 1983, 799-802.
- 5 (SCI) Shakhmurov V. B., The embedding theorems in abstract anisotropic spaces and their applications, *Doklady Akademii Nauk SSSR*, 281, (5), 1985, 1068-1072.
- 6 (SCI) Shakhmurov V. B., Coercive boundary- value problems for degenerate abstract equations, *Doklady Akademii Nauk SSSR*, 280 ( 6 ), 1985, 1316-1320.
- 7 (SCI) Shakhmurov V. B., Coercive boundary value problems for strongly degenerated differential-operator equations, *Doklady Akademii Nauk SSSR*, 290 ( 3 ) 1986, 37-40.
- 8 (SCI) Shakhmurov V. B., Theorems of embedding compactness of in weighted anisotropic spaces and their applications, *Doklady Akademii Nauk SSSR*, 291, ( 6 ) 1986,1305-1309.
- 9 (SCI) Shakhmurov V. B., The embedding theorems in abstract function spaces and their applications, *Mathematics of the USSR-Sbornik*, 134(1-2), 1987, 261-276.
- 10 (SCI) Shakhmurov V. B., Embedding theorems and their applications to degenerate equations, *Differential Equations*, 24, ( 4 ) 1988, ), 475-482.
- 11 (SCI) Shakhmurov V. B.(with Lizorkin P. I.), Embedding theorem for vector-valued functions. 1, *Izvestiya Vushkh Uchebnykh Zavedenie Matematika* (1), 1989, 70-79.
- 12 (SCI) Shakhmurov V. B, Coercive boundary value problems for degenerate anisotropic equations, *Izvestiya Vushkh Uchebnykh Zavedenie Matematika* ( 8 ) 1989, 69-78.
- 13 (SCI) Shakhmurov V. B. (with Lizorkin P. I.),Embedding theorem for vector-valued functions. 2, *Izvestiya Vushkh Uchebnykh Zavedenie Matematika* (2), 1989, 47-54.
- 14 (SCI) Shakhmurov V. B.(with Babaev A. A.), Coercive problems for equations with parameters, *Doklady Akademii Nauk SSSR*, 315 (1 ), 1990, 799-802.
- 15 (SCI) Shakhmurov V. B., Embedding theorems and maximal regular differential operator equations in Banach-valued function spaces, *Journal of Inequalities and*

Applications, ( 4 ) 2005, 605-620.

- 16 (SCI) Shakhmurov V. B., Coercive boundary value problems for regular degenerate differential-operator equations, *Journal of Math. Anal. Appl.*, 292, 2004 (2), 605-620.
- 17 (SCI) Shakhmurov V. B. (with Shahmurova A. M.), Fractional Time-Varying Energy Distributions of Biological signals, *Applicable Analysis*, ( 85) 2005, 539-553.
- 18 (SCI) Shakhmurov V. B. (with Agarwal R., Bohner M.), Maximal regular boundary value problems in Banach-valued weighted spaces, *Boundary value problems*, (1)2005, 9-42.
- 19 Shakhmurov V. B., Maximal regular boundary value problems for differential operator equations in Banach-valued function spaces, *International journal of Mathematics and Mathematical Sciences*, v. 2006, (2006), 1-26.
- 20 (SCI) Shakhmurov V. B., Embedding theorems in Banach-valued B-spaces and maximal B-regular differential operator equations, *Journal of Inequalities and Applications*, v. 2006, 1-22.
- 21 (SCI) Shakhmurov V. B., Separable anisotropic differential operators and applications, *J. Math. Anal. Appl.* 2006, 327(2), 1182-1201.
- 22 (SCI) Shakhmurov V. B. (with Agarwal R., Bohner M.), Linear and nonlinear nonlocal boundary value problems for differential-operator equations, *Applicable analysis* 2006, 85 (6-7), 701-716.
- 23 (SCI) Shakhmurov V. B., Embedding and maximal regular differential operators in Sobolev-Lions spaces, *Acta Mathematica Sinica*, 22(5) 2006, 1493-1508.
- 24 (SCI) Shakhmurov V. B., Nonlinear abstract boundary value problems in vector-valued function spaces and applications, *Nonlinear Analysis Series A: Theory, Method & Applications*, v. 67(3) 2006, 745-762.
- 25 (SCI) Shakhmurov V. B., Maximal B-regular boundary value problems with parameters, *J. Math. Anal. Appl.* 320, (2006), 1-19.
- 26 (SCI) ) Shakhmurov V. B., Degenerate differential operators with parameters, *Abstract and Applied Analysis*, 2007 , V. 2006, 1-27
- 27 (SCI) ) Shakhmurov V. B, Embedding theorems in B-spaces and applications, *Chinese Annals of Mathematics, Ser. B*, v.29, no 1, 2008.
- 28 (SCI) Shakhmurov V. B. (with Agarwal R., O' Regan, D.), Separable anisotropic differential operators in weighted abstract spaces and applications, *J. Math. Anal. Appl.* 2008, 338, 970-983.
- 29 (SCI) Shakhmurov V. B., Carleman estimates and unique continuation property for the anisotropic differential operator equations, *Science in China, Ser. A: Mathematics*, 2008, v. 51, no 7, 1215-1231.

- 30 (SCI) Shakhmurov V. B. (with Shahmurov R.), Maximal B-regular integro-differential equations, Chinese Annals of Mathematics, 30B(1), 2008, 39-50.
- 31 (SCI) Shakhmurov V. B., Embedding and separable differential operators in Sobolev-Lions type spaces, Mathematical Notes, 2008, v. 84, no 6, 906-926.
- 32 (SCI) Shakhmurov V. B. (with Agarwal R), Linear and nonlinear Degenerate Boundary Value Problems in Besov Spaces, Mathematical and Computer Modelling, V. 49, Issues 5-6, 2009, 1244-1259
- 33 (SCI) Shakhmurov V. B. (with) Agarwal R.), Multipint problems for degenerate abstract differential equations, Acta Mathematica Hungarica,123 (1-2), 2009, 65-89.
- 34 (SCI) Shakhmurov V. B. (with Agarwal R., O' Regan, D.), B-Separable boundary value problems in Banach-valued function spaces, Applied Mathematics and Computation, V. 210, Issue 1, 2009, P. 48-63.
- 35 (SCI) Shakhmurov V. B.( with Shahmurova A.), Nonlinear abstract boundary value problems atmospheric dispersion of pollutants, Nonlinear Analysis, Real World Applications, v.11 (2) 2010, 932-951. DOI: [10.1016/j.nonrwa.2009.01.037](https://doi.org/10.1016/j.nonrwa.2009.01.037)
- 36 (SCI) Shakhmurov V. B. (with) A. Favini and Ya. Yakubov), Regular boundary value problems for complete second order elliptic differential-operator equations in UMD Banach spaces, Semigroup form, V. 79 (1), 2009, 22-54
- 37 (SCI) Shakhmurov V. B. ( with R. Shahmurov), Sectorial operators with convolution term, Mathematical Inequalities and Applications, V.13 no.2, 2010, 387-404
- 38 (SCI) Shakhmurov V. B, Compact embedding in Besov spaces and B-separable elliptic operators, Science in Chine, Series A: Mathematics, V.53, no 4,1067-1084, 2010.
- 39 (SCI) Shakhmurov V. B. (with Agarwal R., O' Regan, D.), Higher order nonlinear degenerate differential operator equations, Applied Mathematics Letter, v.22(10), 2009, 1556-1561
- 40 (SCI) Shakhmurov V. B, Abstract capacity of regions and compact embedding with applications, Acta Mathematica Scientia, V.31, no1, 2011, 49-67.
- 41 (SCI) Shakhmurov V. B.(with Agarwal R., O' Regan, D.), Uniform separable differential operators with parameters, Journal of Franklin Institute, 2010, V. 347 no1, 2-16.
- 42 (SCI) Shakhmurov V. B., Maximal regular abstract elliptic equations and applications, Siberian Mathematical Journal, V.51, No 5, 935-948, 2010
- 43 (SCI) Shakhmurov V. B., Linear and nonlinear abstract equations with parameters, Nonlinear Analysis, Theory, Method and Applications, 2010, v. 73, 2383-2397
- 44 (SCI) Shakhmurov V. B, Regular degenerate separable differential operators and applications, Potential Analysis, 2011, v.35, no.3, 201-212

- 45 (SCI) Shakhmurov V. B., Separable anisotropic elliptic operators and applications, *Acta Mathematica Hungary*, 131, ( 3 ), 2011, 208-229.
- 46 (SCI) Shakhmurov V. B. (with Agarwal R., O' Regan, D.), Degenerate anisotropic differential operators and applications, *Boundary value problems*, 2011 V. 2011, 27p.
- 47 (SCI) Shakhmurov V.B., Anisotropic elliptic equations with VMO coefficients, *Applied Mathematics and Computation*, 2011, 218, 1057-1062 .
- 48 (SCI) Shakhmurov V. B. (with Sahmurova), Singular perturbation degenerate problems occurring in atmospheric dispersion of pollutants, *Applied Mathematics and Computation* 218 (3), 1052-1056, 2011.
- 49 (SCI) Shakhmurov V. B. (with Sahmurova, A.), Degenerate anisotropic parabolic problems occurring atmospheric dispersion of pollutants, *Proceeding AIP*, 1389, 2011, 629-631.
- 50 (SCI) Shakhmurov V.B., Free boundary value problems for abstract elliptic equations and applications, *Chinese Annals of Mathematics, Ser.B*, 2011 v. 32 (5), 749-770.
- 51 (SCI) Shakhmurov V.B., Carleman estimates and unique continuation for abstract elliptic equations, *Proceeding AIP*, 1389, 632-634, 2011.
- 52 (SCI) Shakhmurov V. B, Estimates of approximation numbers for embedding operators and applications, *Acta Mathematica Sinica, English Series*, 2012, V. 28, (9), 1883-1896. doi:10.1007/s10114-012-9547-y
- 53 (SCI) Shakhmurov V.B ., Embedding operators in vector-valued weighted Besov spaces and applications, *Journal of Function spaces and Applications*, 2012 v. 2012. DOI :<http://dx.doi.org/10.1155/2012/819321>
- 54 (SCI) Shakhmurov) V. B , Optimal regular differential operators with VMO Coefficients, *AIP Conf. Pr.* 1504, 2012, 1269-1274.
- 55 (SCI) Shakhmurov V. B., Carleman estimates and unique continuation for abstract elliptic equations, *Boundary Value Problems*, 2012, 2012-46, <https://doi.org/10.1186/1687-2770-2012-46>.
- 56 (SCI) Shakhmurov V. B.( with A. Sahmurova), Parabolic problems with parameters arising in evolution model for phytromediation, *AIP Conf. Pr.* 1504, 2012, 1265-1268.
- 57 (SCI) Shakhmurov V.B. (with Aida Sahmurova) Singular degenerate problems occurring in atmospheric dispersion of pollutants, *Operator Theory: Advances and applications*, v. 236, 2014, 455-461.



- 58 (SCI) Shakhmurov V.B., (with Aida Sahmurova), Parabolic Problems with Parameter Occuring in Environmental Engineering, AIP, 2012 V.1470,
- 59 (SCI) Shakhmurov V. B, Sahmurova A., Separable Convolution Equations Occurring in Atmospheric Dispersion of Pollutants, AIP, 2012, Volume: 1479.
- 60 (SCI) Shakhmurov V. B., Parameter dependent Navier-Stokes like problem, AIP, v. 1470, p. 259-261, 2013.
- 61 (SCI) Shakhmurov V. B., Carleman estimates and unique continuation property for elliptic operators, Mathematical Inequalities & Applications, V.16 (3), 2013, 873-885. DOI: [10.1063/1.3636810](https://doi.org/10.1063/1.3636810)
- 62 (SCI) Shakhmurov V. B., B-Separable Anisotropic Convolution Operators and Applications, Georgian Mathematical Journal, 2013, V. 20, no1, 129-149. DOI: [10.1515/gmj-2013-0005](https://doi.org/10.1515/gmj-2013-0005)
- 63 (SCI) Shakhmurov V.B., Singular degenerate boundary value problems and applications, Applied Mathematic Letter, 2013 (26), 87-90. [10.1016/j.aml.2012.03.037](https://doi.org/10.1016/j.aml.2012.03.037)
- 64 (SCI) Shakhmurov V.B., Linear and nonlinear abstract elliptic equations with VMO coefficients and applications, Fixed Point Theory and Applications 2013, 2013: 6. DOI: [10.1186/1687-1812-2013-6](https://doi.org/10.1186/1687-1812-2013-6)
- 65 (SCI) Shakhmurov V.B., Nonlocal Novier-Stokes problem with small parameter, Boundary Value Problems, 2013, V. 2013-107. DOI: [10.1186/1687-2770-2013-107](https://doi.org/10.1186/1687-2770-2013-107)
- 66 (SCI) Shakhmurov V.B., Optimal regular differential operators with variable coefficients and applications, Fixed Point Theory and Applications, 2013 , 2013: 42. DOI: [10.1186/1687-1812-2013-42](https://doi.org/10.1186/1687-1812-2013-42)
- 67 (SCI) Shakhmurov V.B. ( with A. Sahmurova), Singular degenerate problems occurring in biosorption process, Boundary Value Problems, 2013, V. 2013.30 (1).
- 68 (SCI) Shakhmurov V.B. (with A. Sahmurova), Abstract parabolic problems with parameter and application, Applied mathematics and Computation, 2013, V. 219, (17), 9561-9571 ). DOI: [10.1186/1687-2770-2013-30](https://doi.org/10.1186/1687-2770-2013-30)
- 69 (SCI) Shakhmurov V.B. (with I. Ekinici), Linear and nonlinear convolution elliptic equations, Boundary Value Problems, 2013, 2013:211, DOI: [10.1186/1687-1812-2013-6](https://doi.org/10.1186/1687-1812-2013-6)
- 70 (SCI) Shakhmurov V.B., Parameter dependent Stokes problems in vector-valued spaces and applications, Boundary Value Problems, 2013, V. 2013-172. DOI: [10.1186/1687-2770-2013-172](https://doi.org/10.1186/1687-2770-2013-172)
- 71 (SCI) Shakhmurov V.B. (with A. Sahmurova), Abstract elliptic operators appearing in atmospheric dispersion, Boundary Value Problems, 2014 V.2014:43. DOI :10.1186/1687-2770-2014-116.
- 72 (SCI) Shakhmurov V.B., Stokes operators with variable coefficients, Boundary Value Problems 2014, V. 2014:86 DOI: [10.1186/1687-2770-2014-86](https://doi.org/10.1186/1687-2770-2014-86)

- 73 (SCI) Shakhmurov V.B., Anisotropic differential operators with parameters and applications, Ukrainian Mathematical Journal, 2014, no.7, p. 985-1002. • DOI <https://doi.org/10.1007/s11253-014-0997-5>.
- 74 (SCI) Shakhmurov V.B. (with A.Ozer) Maximal regularity properties of Agranovich-Vishik type abstract elliptic operators in the half-plane, Journal of inequalities and applications, 2014, V.2014:233. • DOI: [10.1186/1029-242x-2014-233](https://doi.org/10.1186/1029-242x-2014-233)
- 75 (SCI) Shakhmurov V.B., Stokes equations with small parameters in half plane, Computers and Mathematics with Applications, 67, 2014, 91-115. DOI: [10.1016/j.camwa.2013.10.016](https://doi.org/10.1016/j.camwa.2013.10.016)
- 76 (SCI) Shakhmurov V.B., Singular degenerate differential operators and applications, Math.Slovaca 65(2015), No.6, 1-24. DOI: <https://doi.org/10.1515/ms-2015-0096>
- 77 (SCI) Shakhmurov V.B., Separable convolution-elliptic operators with parameters, Form . Math. 2015, 27(6), 2637-2660. DOI: <https://doi.org/10.1515/forum-2013-0101>
- 78 (SCI) Shakhmurov V.B., *Linear and nonlinear abstract differential equations of high order, Open mathematics (Cent.Euro.Math.) (2015) 13, 471-488.* DOI: 10.1515/math-2015-0044
- 79 (SCI) Shakhmurov V.B., Nonlocal abstract Navier-Stokes problem, Nonlinear Analysis, Real World Applications, 2015, 26, 15-43. DOI: [10.1016/j.nonrwa.2015.03.011](https://doi.org/10.1016/j.nonrwa.2015.03.011)
- 80 (SCI) V. B. Shakhmurov, Embedding operators of Sobolev spaces with variable exponents and applications, Analysis Mathematica, 41(2015), 273--297. DOI: [10.1007/s10476-015-0303-2](https://doi.org/10.1007/s10476-015-0303-2)
- 81 (SCI) Shakhmurov V.B. (with H. Musayev), Separability properties of convolution-differential operator equations in weighted  $L_p$  spaces, Appl. Math. 2015, 14(2). DOI <https://doi.org/10.1007/s11253-018-1458-3>
- 82 (SCI) Shakhmurov V.B., Abstract elliptic equations with VMO coefficients in half plane, Mediterranean Journal of Mathematics, 2015, V.25, 1-21. • DOI <https://doi.org/10.1007/s00009-015-0599-y>
- 83 (SCI) Veli Shakhmurov, Abstract elliptic equations with integral boundary conditions and applications, Chinese Annals of Mathematics, 201(3B), 2016, 1-18. DOI: [10.1007/s11401-016-0948-6](https://doi.org/10.1007/s11401-016-0948-6)
- 84 (SCI) Shakhmurov V.B., Separable differential operators and applications, Journal of Moscow Math. Soc., 16 (2), 2016, 299-321. DOI: [10.1016/j.jmaa.2006.05.007](https://doi.org/10.1016/j.jmaa.2006.05.007)
- 85 (SCI) Shakhmurov V.B., Linear and nonlinear degenerate abstract differential equations with small parameters, Banach journal mathematical analysis, 10 (2016)(1), 147-168. DOI: [10.1215/17358787-3345071](https://doi.org/10.1215/17358787-3345071)
- 86 (SCI) Shakhmurov V.B. (with H. Musayev), Regularity properties of degenerate convolution-elliptic equations, Boundary Value Problems, 2016, 2016-50. • DOI <https://doi.org/10.1186/s13661-016-0555-1>
- 87 (SCI) Shakhmurov V.B., The Cauchy problem for generalized abstract Boussinesq equations, Dynamic systems and applications, 25, (2016), 109-122. • DOI <https://doi.org/10.1007/s13324-018-0265-1>
- 88 (SCI) Shakhmurov V.B., Nonlocal problems for Boussinesq equations, Nonlinear Analysis TMA, 142 (2016) 134-151. DOI <https://doi.org/10.1007/s13324-018-0265-1>
- 89 (SCI) Shakhmurov V.B. (with A. Sahmurova), Degenerate parabolic equations

appearing in atmospheric dispersion of pollutants, *Electronic Journal of Qualitative Theory of Differential Equations (EJQTDE)*, 119(2017), 1-16. •

DOI: [10.14232/ejqtde.2016.1.119](https://doi.org/10.14232/ejqtde.2016.1.119)

- 90 (SCI) Shakhmurov V.B. (with H. Musayev), Maximal regular convolution-differential equations in weighted Besov Spaces, *Appl.Comput.Math.*,v.16, N.2, 2017.  
**MR3699485** 34G10 (45J05)
- 91 (SCI) Shakhmurov V.B.,( with A. Sahmurova), Mixed problems for degenerate abstract parabolic equations and applications, *Carpathian Journal of Mathematics* 34(2)(2018), 247-254.  
[arXiv:1707.01374](https://arxiv.org/abs/1707.01374)
- 92 (SCI) Shakhmurov V.B. (with H. Musayev) , Maximal regular convolution elliptic equations in weighted Besov Spaces, *Ukr. Math. Journal*, (2018) (69), 1607-1630. DOI <https://doi.org/10.1007/s11253-018-1458-3>
- 93 (SCI) Shakhmurov V.B.,Regularity properties of Schrödinger equations in vector-valued spaces and applications, *Forum Mathematics*, *Forum Mathematicum* 31 (1), 149-166 DOI: <https://doi.org/10.1515/forum-2018-0083>.
- 94 (SCI) Shakhmurov V.B.,(with A. Ragusa), Embedding of vector-valued Morrey spaces and separable differential operators, *Bulletin of Mathematical Sciences* 2018, <https://doi.org/10.1007/s13373-018-0129>.
- 95 Shakhmurov V.B., Separability properties of singular degenerate abstract differential operators and applications, *Rocky Mountain J. Math.* Volume 49, Number 5 (2019), 1647-1666 DOI: [10.1216/RMJ-2019-49-5-1647](https://doi.org/10.1216/RMJ-2019-49-5-1647)
96. (SCI) Shakhmurov V.B. ( with R. Shahmurov), The Cauchy problem for Boussinesq equations with general elliptic part, *Journal Analysis and Math. Physis, Analysis and Mathematical Physics* (2019) 9:1689–1709. DOI <https://doi.org/10.1007/s13324-018-0265-1>
97. (SCI) Shakhmurov V.B., Nonlocal problems for abstract differential equations and applications, *Moscow Mathematical Journal* (20)1, 2020, 1{26.
- 98 (SCI) Shakhmurov V.B, Linear and nonlinear degenerate differential operators and applications, *Nonlinear Analysis* 191 (2020) 1116332019.
- 99 (SCI) Shakhmurov V. B., Fractional abstract elliptic equations Inequalities & Applications, 2019 Accepted
- 100 (SCI) Shakhmurov v.B., Hardy type unique continuation properties for abstract Schrödinger equations and applications, *Electronic journal of qualitative theory of differential equations*, *Electron. J. Qual. Theory Differ. Equ.* 2019, No. 97, 1-27. DOI: <https://doi.org/10.14232/ejqtde.2019.1.97>.



## 7.2. International refereed other journal publications:

1. Shakhmurov V. B., Coercive solvability of boundary value problems for partial differential-operator equations of some class, Doklady Akademii Nauk Azerbaican SSR, (6), 1978, 3-7.
2. Shakhmurov V. B. (with Yakubov S. Y.), The embedding and trace theorems in the anisotropic space of vector-functions, Doklady Akademii Nauk Azerbaican SSR, (11), 1977, 15-18
3. Shakhmurov V. B., Coercive solvability of boundary value problems for elliptic differential-operator equations, (1905-79), BINITI, 1979.
4. Shakhmurov V. B., Coercive solvability of boundary value problems for differential-operator equations on  $R$ , Manuscript (1684-90), BINITI, 1980.
5. Shakhmurov V. B., The Fredholm properties of general boundary value problems for differential-operator equations in partial derivatives, Izvestiya Akademii Nauk Azerbaican SSR, Mat. (2) 1981, 32-36.
6. Shakhmurov V. B., The completeness of the system of eigen and adjoin vectors of nonlocal boundary value problems for quasi elliptic differential-operator equations in partial derivatives, Proceeding of Theory operators in function spaces, Baku, 202-209, 1982.
7. Shakhmurov V. B., Theorems about an isomorphism general boundary value problems for differential-operator equations in Banach spaces, ( 3799-27 ), VINITI, 1982.
8. Shakhmurov V. B., The completeness of the systems of eigen and adjoint vectors of boundary value problems for elliptic differential operator equations in partial derivatives, Izvestiya Akademii Nauk Azerbaican SSR, (1) 1983, 21-28.
9. Shakhmurov V. B., Fredholm properties of general boundary value problems of elliptic equations with nonselfedjoint operator coefficients, Doklady Akademii Nauk Azerbaican SSR, (7) 1983.
10. Shakhmurov V. B., Fredholm properties of general boundary value problems for quasi elliptic equations with operator coefficients depending on variables, Doklady Akademii Nauk Azerbaican SSR, (8) 1983, 7-10.
11. Shakhmurov V. B., Theorems of on nuclearity of embedding operators in abstract anisotropic spaces, Doklady Akademii Nauk Azerbaican SSR, (11), 1984.
12. Shakhmurov V. B., The coercive solvability of boundary value problems for degenerating differential-operator equations, Doklady Akademii Nauk Azerbaican SSR, (12), 1984.
13. Shakhmurov V. B. (with K. Kerimov), Coercive solvability of boundary value problems for differential-operator equations on  $R_+$ , Manuscript (1685-90), BINITI, 1985.
14. Shakhmurov V. B., Coercive boundary problems for degenerated equations in the half space, Izvestiya Akademii Nauk Azerbaican SSR (6), 1985, 8-11.
15. Shakhmurov V. B., Coercive boundary value problems for degenerating equations

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16.Shakhmurov V. B., The embedding theorems for class of vector –functions, Doklady Akademii Nauk Azerbaican SSR, (4), 1987.

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24.Shakhmurov V. B. ( with A. Zayed), Fractional Wigner and Ambiguity functions, Fractional calculus and applied analysis, 6(4), 2003, 473-490.

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31. Shakhmurov V.B. ( with A. Sahmurova), Degenerate abstract parabolic equations and applications, Communications in Mathematical Analysis, (2015) 18 (2), 15–35.

New submitted papers:

Shakhmurov V.B,

- |     |                            |         |   |   |   |
|-----|----------------------------|---------|---|---|---|
| 1)  | <a href="#">1709.09547</a> | math.AP | <a href="#">Multipoint Cauchy problem for nonlinear wave equations in vector-valued spaces</a>                |    | Y |
| 2)  | <a href="#">1707.04492</a> | math.AP | <a href="#">Nonlocal Cauchy problems for wave equations and applications</a>                                  |    | Y |
| 3)  | <a href="#">1707.01771</a> | math.AP | <a href="#">Regularity properties of singular degenerate abstract differential equations and applications</a> |    | Y |
| 4)  | <a href="#">1707.01376</a> | math.AP | <a href="#">Singular degenerate problems and applications</a>   |   | Y |
| 5)  | <a href="#">1707.01374</a> | math.AP | <a href="#">Mixed problems for degenerate abstract parabolic equations and applications</a>                   |  | Y |
| 6)  | <a href="#">1706.07226</a> | math.AP | <a href="#">Regularity properties of nonlinear Schrödinger equations in vector-valued spaces</a>              |  | Y |
| 7)  | <a href="#">1706.00814</a> | math.AP | <a href="#">Free boundary value problems for abstract elliptic equations and applications</a>                 |  | Y |
| 8)  | <a href="#">1706.00813</a> | math.AP | <a href="#">The Cauchy problem for operator-Boussinesq equations</a>  |  | Y |
| 9)  | <a href="#">1706.00812</a> | math.AP | <a href="#">Operator-valued multipliers in vector-valued weighted Besov spaces and applications</a>           |  | Y |
| 10) | <a href="#">1706.00811</a> | math.AP | <a href="#">Differential operators in exterior domain and application</a>                                     |  | Y |
| 11) | <a href="#">1706.00810</a> | math.AP | <a href="#">Singular perturbation for abstract elliptic equations and application</a>                         |  | Y |

[1706.00809](#)    [1706.00809](#) [1706.00809](#)

|     |                            |         |  |  |   |
|-----|----------------------------|---------|--|--|---|
|     |                            |         | <br> | Y  |   |
| 13) | <a href="#">1706.00808</a> | math.FA | <a href="#">Multipliers and embedding operators with application to abstract differential equations</a>  | <br>     | Y |
| 14) | <a href="#">1706.00807</a> | math.AP | <a href="#">Hardy's uncertainty principle and unique continuation properties for abstract Schrödinger equations</a>  | <br>     | Y |
| 15) | <a href="#">1706.00806</a> | math.AP | <a href="#">Morgan type uncertainty principle and unique continuation properties for abstract Schrödinger equations</a>  | <br>     | Y |
| 16) | <a href="#">1706.00805</a> | math.AP | <a href="#">Separability properties of singular degenerate abstract differential operators and applications</a>  | <br>     | Y |
| 17) | <a href="#">1706.00803</a> | math.AP | <a href="#">Pseudo-differential operators in vector-valued spaces and applications</a>   | <br>    | Y |
| 18) | <a href="#">1706.00802</a> | math.AP | <a href="#">Navier-Stokes problems in half space with parameters</a>   | <br> | Y |
| 19) | <a href="#">1705.09091</a> | math.FA | <a href="#">Embedding operators in Sobolev-Lions spaces and applications</a>   | <br> | Y |

20) <https://arxiv.org/submit/2126388> On the dynamics of a cancer tumor growth model with multiphase structure.

21. <https://arxiv.org/submit/2241790>, Multipoint Cauchy problem for Schrödinger type equations with general elliptic part;

22. <https://arxiv.org/submit/2241796>, Multipoint Cauchy problem for abstract Schrödinger equations and applications.

22. <https://arxiv.org/submit/2535547>, The integral Cauchy problem for generalized Boussinesq equations with general leading parts

23. <https://arxiv.org/submit/2218667>, The dynamics of a cancer tumor growth with multiphase structure and chemotherapy treatment model.

24) <https://arxiv.org/submit/2241814> The dynamics of a cancer tumor growth with multiphase structure and chemotherapy treatment model,



- 25) <https://arxiv.org/submit/2420307> Multipoint Cauchy problem for Schrödinger type equations with general elliptic part
26. <https://arxiv.org/submit/2526862> Integral type Cauchy problems for wave equations
27. <https://arxiv.org/submit/2526850> Nonlocal Cauchy problems for abstract wave equations and applications.
28. <https://arxiv.org/submit/2589522>, The local and global dynamics of a general cancer tumor growth model with multiphase structure.
29. <https://arxiv.org/submit/2596266>, Existence local and global solution of multipoint Cauchy problem for nonlocal nonlinear equations.
30. <https://arxiv.org/submit/2599285>, Multipoint Cauchy problem for nonlocal nonlinear equations.
31. <https://arxiv.org/submit/2632202>, The existence and uniqueness for Cauchy problem for nonlocal abstract wave equations.
32. <http://arxiv.org/abs/1906.00085>, **Unique continuation properties for Schroedinger operators in Hilbert spaces.**
33. <http://arxiv.org/abs/1906.00083> **Unique continuation properties for abstract Schroedinger equations and applications.**
34. <https://arxiv.org/submit/2811326>, The Cauchy problem for nonlocal abstract Schrodinger equations.
35. <https://arxiv.org/submit/2811513>, The regularity properties of nonlocal abstract wave equations
36. <https://arxiv.org/submit/2872135>, Paley-Wiener type unique continuation properties for abstract Schrodinger equations and applications
37. <https://arxiv.org/submit/2891432> Abstract elliptic and parabolic equations in Morrey spaces and applications.
38. <https://arxiv.org/submit/2896205>, High order Navier-Stokes type problems with parameters in half space and applications.
39. <https://arxiv.org/submit/2923682>, Fractional abstract differential equations and applications
40. Separability properties of fractional abstract differential equations and applications , <https://arxiv.org/submit/2948792>.

41. The boundary controllability for abstract wave equations and its applications  
<https://arxiv.org/submit/2981905>.
42. Nonlocal fractional differential equations and applications,  
<https://arxiv.org/submit/2983660>.
43. (with M. Kurulay) Nonlocal fractional elliptic equations and applications,  
<https://arxiv.org/submit/2987299/view>.
44. Regularity properties of nonlocal fractional differential equations in Besov spaces and applications, <https://arxiv.org/submit/3048287>.
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<https://arxiv.org/submit/3069317>

### 7.3. International Conference Presentations & Proceedings

- 1 Isomorphism theorems for boundary value problems in  $L_p$  Mater.1. Resp. Science Conf. Azerb. Baku,1978
- 2 Normal solvability of general boundary value problems Mater.Inter.Confer."Theor.Operator.in Function spaces, Minski,1978
- 3 About one nonelliptic boundary value problems Mater. Resp. Konf. Inst. Math. Azerb. Baku1981, p.395-397
- 4 Embedding theorems in abstract spaces and applications, Proceed. Forth. Math. Conference, 1983, p. 261-264
- 5 Embedding theorems in Banach-valued function spaces and applications, International conference Function spaces, Differential operators, Nonlinear analysis, Slovak, 24.06-29.06.1988, Czechoslovak Republic, Prague
6. Separable differential operators in anisotropic functional spaces, Embedding of differentiable functions and linear and nonlinear Differential operators, 1989, Baku, Bilgeh
- 7 Embedding theorems in Banach-valued Liouville- Sobolev Spaces and their applications, International conference Function spaces, Differential operator devoted 90 yearth of S M .Nikolskii 1995, Moscow

- 8 Embedding theorems in abstract B- spaces and their applications, Proceed. Resp. Math. Conference, 1993
- 9 Theorems on compactness of embedding operators in abstract anisotropic spaces, 1994
- 10 Coercive boundary value problems for strongly degenerate differential-operator equations in Banach-valued function spaces, Proceed. Resp. Math. Conference, 1997
- 11 Embedding theorems and applications International conference of function spaces, Differential operators, devoted 75 yearth birthday of L.D. Kuderyavtsev, 1998, Moscow
- 12 A fractional discrete lattice of Gabor expansion IEE Signal processing and applications, SIU-2000 SF-611-616
- 13 A fractional discrete Gabor transformations !EEE, the 26-th Conf.an Acoustic ICASSP-2001, Salt.Lake.City, Utah. 2001
- 14 Embedding theorems in Banach-valued function spaces and their applications to coercive boundary value problems InternationalConference Function spaces, Differential operators, Nonlinear analysis Devoted 65 yearth birthday of H.Triebel, Germany, Göttingen, 2001
- 15 Coercive boundary value problems for regular degenerate equations 4-th International Conference Dynamical systems and applications, Atlanta, Georgia, 2003,USA, 21-24
- 16 Embedding operators and maximal regularity for differential-Operator equations in Banach-valued function spaces, International Workshop on Sampling Theory and Applications, Stroble, Salzburg, Austria, 26.5.2003-3.06.2003
- 17 Maximal regular boundary value problems in Banach-valued Weighed spaces International workshop on differential equations and Its applications, 15-17 09.2004, Istanbul
- 18 Embedding operators in Banach-valued function spaces and applications International conference Function spaces, Differential operators, Nonlinear analysis, Svartka, 27.05-2.06.2004, Czech Republic, Prague
- 19 Embedding operators in Banach-valued Besov spaces and optimal B-regular boundary value problems, International Conference SampTa05 ( Sampling theory and applications), 10-15. 07. 2005, Samsun, Turkey
- 20 Regular and Singular degenerate boundary value problems, International conference Differential and Difference Equations, 1-5. 08. 2005, Florida, Melbourne, USA
- 22 Separable degenerate differential operators with parameters, International conference Operator theory, Analysis and Mathematical Physics ( OTAMP-2006), 15-22 06 2006, Lund, Sweden
- 23 Embedding theorems in weighted vector-valued spaces and applications, International conference Function spaces, Differential operators, Nonlinear analysis, Baky, 1988

- 24 Maximal regular elliptic-convolution equations, Conference on Boundary Value Problems. Mathematical Models in Engineering, Biology and Medicine.  
September 16-19, 2008, Santiago de Compostela, Spain
- 25 NONLINEAR PARABOLIC BOUNDARY VALUE PROBLEMS MODELLING ATMOSPHERIC DISPERSION OF POLLUTANTS, 6th European Conference on Elliptic and Parabolic Problems Serapo, Gaeta, Italy., 25-30 0.5.2009
- 26 SEPARABLE ABSTRACT ELLIPTIC EQUATIONS WITH PARAMETERS AND APPLICATIONS, 6th European Conference on Elliptic and Parabolic Problems, Serapo, Gaeta, Italy., 25-30 0.5.2009
- 28 SOME SPECTRAL PROPERTIES OF LINEAR OPERATORS IN UMD SPACES AND APPLICATIONS, International conference of Mathematical Sciences 4-10 .8. 2009, Istanbul Maltepe ECTRAL PROPERTIES OF LINEAR OPERATORS IN UMD SPACES AND
- 29 ANISOTROPIC ELLIPTIC EQUATIONS WITH VMO COEFFICIENTS AND APPLICATIONS, International Congress in Honour of Professor H. M. Srivastava on his 70th Birth Anniversary” between August 18-21, 2010.
- 30 ANISOTROPIC ELLIPTIC EQUATIONS WITH VMO COEFFICIENTS AND APPLICATIONS, International Congress in Honour of Professor H. M. Srivastava on his 70th Birth Anniversary” between August 18-21, Bursa, 2010.
- 31 PARABOLIC PROBLEMS WITH PARAMETERS ARISING IN EVOLUTION MODEL FOR PHYTOREMEDIATION, 8th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2010), Island of Rhodes, Greece the Hotel Rodos Palace, 19-25 September 2010
- 32 OPTIMAL REGULAR DIFFERENTIAL OPERATORS WITH VMO COEFFICIENTS AND APPLICATIONS, 8th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2010), Island of Rhodes, Greece the Hotel Rodos Palace, 19-25 September 2010.
- 33 SINGULAR DEGENERATE SEPARABLE DIFFERENTIAL OPERATORS AND APPLICATIONS, Operators in Morrey-Type spaces and Applications, (OMTSA-2011) dedicated to 70th Birthday of professor Victor I. Burenkov, 20-27 may 2011, Kirshehir, Turkey.
- 34 Carleman estimates and unique continuation properties for abstract elliptic operators, The 24.th international Conference of Jangeon Mathematical Society, july 20-23, 2011 Konya, Turkey.
- 35 ( with Aida Sahmurova) Abstract anisotropic parabolic problems with parametyers and applications, The 24.th international Conference of Jangeon Mathematical Society, july 20-23, 2011 Konya, Turkey.
- 36 SEPARABLE DIFFERENTIAL OPERATORS IN BANACH SPACES AND

APPLICATIONS, IWOTA 2011 3-9. 08. 2011, Universite of Sevilla

- 37 SINGULAR DEGENERATE PROBLEMS OCCURRING IN ATMOSPHERIC DISPERSION OF POLLUTANTS, IWOTA 2011 3-9. 08. 2011, Universite of Sevilla
- 38 Carleman estimates and unique continuation for abstract elliptic equations, 9th International Conference of Numerical Analysis and Applied Mathematics, ICNAAM 2011, Halidiki, Greece, 19-25 September.
- 39 Degenerate anisotropic parabolic problems occurring atmospheric dispersion of pollutants, 9th International Conference of Numerical Analysis and Applied Mathematics, ICNAAM 2011, Halidiki, Greece, 19-25 September.
- 40 Linear and nonlinear abstract elliptic equations with VMO coefficients and applications, International Conference on applied analysis and algebra (ICAAA2012), Yıldız Technical University, Putra University of Malaysia, and Fatih University will be held on 20-24 June Istanbul, Turkey.
- 41 Parameter dependent Navier-Stokes like problem, ICNAAM 2012, 19-25.09.2012 Greece, Kos.
- 42 Parabolic Problems with Parameter Occuring in Environmental Engineering, ICNAAM 2012, 19-25.09. 2012 Greece, Kos.
- 43 Optimal regular operators with variable coefficients and applications, International Congress in Honour of Professor Hari M. Srivastava, 23-26 08. 2012 in the Auditorium at the campus of Uludag University, Bursa-TURKEY.
- 44 Singular degenerate problems occuring biosorption process, International Congress in Honour of Professor Hari M. Srivastava, 23-26 08. 2012 in the Auditorium at the campus of Uludag University, Bursa-TURKEY.
- 45 Linear and nonlinear degenerate problems in Banach spaces, International conference on theory, method and applications of nonlinear equations, 17-21.12.2012, Kingsville, Texas, USA.
- 46 (with Aida Sahmurova) Nonlocal Navier-Stokes problems with small parameters, International conference on theory, method and applications of nonlinear equations, 17-21.12.2012 , Kingsville, Texas, USA.
- 47 Stokes operators with variable coefficients and applications, International Conference on applied analysis and algebra (ICAAA2013), Yıldız Technical University, Putra University of Malaysia, and Fatih University will be held on 2-5 June Istanbul, Turkey.
- 48 Abstract elliptic operators appearing in atmospheric dispersion of pollutants (with Aida Sahmurova) International Conference on applied analysis and algebra (ICAAA2013), Yıldız Technical University, Putra University of Malaysia, and Fatih University will be held on 2-5 June Istanbul.
- 49 (with Aida Sahmurova) Linear and nonlinear degenerate equations appearing in atmospheric dispersion of pollutants, International Conference , Anatolian Communications in Nonlinear Analysis 2013, 3-6.08.2013, Bolu.

- 50 Abstract Navier-Stokes problems and applications, International Conference , Anatolian Communications in Nonlinear Analysis 2013, 3-6.08.2013, Bolu.
- 51 (with Asuman Mert Ozer) Maximal regularity properties of Agranovich-Vishik type abstract elliptic operators on half plane, International Conference , Anatolian Communications in Nonlinear Analysis 2013, 3-6.08.2013, Bolu.
- 52 Maksimal regularity properties of degenerate abstract evolution equations and applications, Conference "Recent trends in nonlinear evolution equations", 3-8 april, 2016 , Marseille, France.
- 53 Unique continuation properties for abstract Schrödinger equations and applications, 3rd International Conference on Pure and Applied Science, Dubai, 3-6.02. 2017
- 54 The dynamics of a tumor growth model with multiphase structure, 22nd World Multiconference on Systemics, Cybernetics and Informatics (WMSCI 2018), to be held in Orlando, USA, on July 8-11, 2018.

#### 7.4. Books / Chapters of Books

1. Linear Algebra 1999, Istanbul, Papatya
2. Applications of Linear Algebra 2000, Istanbul, Papatya.
3. Linear Algebra and Applications 2009, Istanbul Okan University.
- 4 . Modern linear algebra and applications, 2014, Istanbul Okan University

7.5...Shakhmurov V. B.(with H. Demir), A rectangular time-frequency lattice of Gabor Expansion, Journal Of Electrical and Electronics (2),2002, 541-545. Articles published in nationally journals:

#### 8. Projects in İstanbul University

- |    |   |                   |
|----|---|-------------------|
| 1. | Multi wavelets transformations and applications                                   | BYP-55/23012003   |
| 2  | Boundary value problems for regular degenerate differential Operator equations    | BYP-537/24112004  |
| 3  | Embedding theorems in Banach-valued function spaces                               | UDP-227/18022004  |
| 4  | Regular and singular degenerate Boundary value problems in Banach- valued spaces. | UDP-543/17062005  |
| 5  | Embedding operators and Maximal regular differential operators.                   | BYP-7941710022005 |
| 6  | Separable anisotropic differential operators with parameters and applications     | UDP-748/11052006  |

- |    |  |                    |
|----|--|--------------------|
| 7  | Maximal B-regular boundary value problems with parameters                                    | BYP-39/30102006    |
| 8. | Separable anisotropic differential operators and applications                                | BYP-1133/2.05.2007 |
| 9  | Embedding and maximal regular differential operators in Sobolev-Lions spaces                 | BYP-1134/2.05.2007 |
| 10 | Nonlinear abstract boundary value problems in vector-valued function spaces and applications | BYP-1135/2.05.2007 |

9. Administrative Duties-

10. Memberships in Scientific and Professional Organizations:

Editor of the following journals:

1. Boundary Value Problems, USA, Springer;
2. Journal of abstract differential equations and applications, USA, Math. Research. Publ.;
3. Mathematics and statistics, USA, Harizon Research Publishing;
4. Applied Mathematics, TWMS

11. .Awards: 2012 year Science price of Okan University; Have got the different awards from İstanbul University, Okan University and TUBITAK with respect to published paper in SCI journals for 1997-2017 years.

12. Fill in the below table for the undergraduate and graduate level courses you have given in the last two years

| Akademik Yıl | Dönem           | Dersin Adı                            | Haftalık Saati |          | Öğrenci Sayısı |
|--------------|-----------------|---------------------------------------|----------------|----------|----------------|
|              |                 |                                       | Teorik         | Uygulama |                |
| 2016         | <b>Güz</b>      | Fund., Math.<br>Temel Mat.<br>Mat.113 |                |          | 250            |
|              | <b>İlkbahar</b> | Mat.114,<br>Math.114<br>Mat.216       |                |          | 270            |
| 2017         | <b>Güz</b>      | Fund., Math.<br>Temel Mat.<br>Mat.113 |                |          | 240            |
|              | <b>İlkbahar</b> | Mat.114,<br>Math.114<br>Mat.216       |                |          | 260            |

