

## Curriculum Vitae

- 1. Name Surname** : Charyyar Ashyralyyev  
**2. Date of birth:** : 22/09/1964  
**3. Title:** : Prof.Dr.  
**4. Education**

Degree	Field	University	Year
BSc+MSc	Department of Mathematics	Faculty of Mathematics and Mechanics, Novosibirsk State University, Novosibirsk, Russia	1986
Title "Problems related to calculation singular pencil matrices" Supervisor Prof. Dr. S.K.Godunov			
PhD	Department of Mathematics	Novosibirsk State University, Novosibirsk, Russia	1991
Title "Spline approximation of hydrodynamic problems with free boundary" Supervisor Prof. Dr. V.N.Monakhov			

## 5. Academic Titles

- Assist.Prof. Dr. : 1992-1994  
Assoc. Prof. Dr. : 1994-2015  
Prof. Dr : 2015- present

## 6. Supervised Master Theses and PhD Theses

### 6.1. Master Theses

1. Gülzipa Akyüz, 'Stability analysis of Bitsadze-Samarskii type overdetermined elliptic problem with Dirichlet conditions', Gumushane University, 2017
2. Aysel Çay, 'Well-posedness of Neumann type elliptic inverse problem with integral condition', Gumushane University, 2018
3. Beyza Öztürk, 'Some approximateons of complex-valued functions by finite differences', Gumushane University, 2018
4. Sedanur Efe, 'Some approximations of twodimensional potensial and singular integrals', Gumushane University, 2019
5. Suzan Karabey, 'Numerical solutions of Neumann type overdetermined multipoint mixed boundary value problems', Gumushane University, 2019
6. Pinar Akkan, 'Source identification problem with multi point nonlocal boundary condition for parabolic equation', Gumushane University, 2020
7. Ahmet Gönenç, 'Difference schemes for nonlocal reverse parabolic problem with second kind boundary and integral conditions', Gumushane University, 2021
8. Rükiye Açıkkel, 'Integral type nonlocal boundary value problem for parabolic equation', Gumushane University, planned graduation in 2023
9. Abdullah Necati Doğan, 'On source identification problem for fractional parabolic differential equation', Gumushane University, planned graduation in 2023

## 6.2. PhD Theses

1. Mutlu Dedeturk, Well-posedness of inverse problem for elliptic differential equation with overdetermination, Fatih University, 2015
2. Gülzıpa Akyüz, High Order Finite Difference Schemes for Inverse Elliptic Problems with Nonlocal Boundary Value Conditions, Gumushane University, 2021
3. Suzan Karabey, Well-posedness of Elliptic Source Identification Mixed Boundary Problems, Gumushane University, planned graduation in 2025

## 7. Publications

### 7.1. Papers published in internationally refereed journals (SCI, SSCI, Arts and Humanities)

1. C. Ashyralyev, On the stable difference scheme for source identification nonlocal elliptic problem, *Mathematical Methods in Applied Sciences*, doi: 10.1002/mma.8656, pp.1-12, 2022.
2. C. Ashyralyev, On the second order of accuracy stable difference scheme for integral type non-local elliptic source identification problem, *Computational and Applied Mathematics*, 41:179 , pp. 1-16, 2022.
3. A.Ashyralyev, C. Ashyralyev, On the stability of parabolic differential and difference equations with time-nonlocal condition, *Computational Mathematics and Mathematical Physics*, 62(6), pp. 994–1006, 2022.
4. A.Ashyralyev, A. Al Hammouri, C. Ashyralyev, On the absolute stable difference scheme for the space wise dependent source identification problem for elliptic telegraph equation, *Numerical Methods for Partial Differential Equations*, 37(2), pp. 962-986, 2021.
5. C.Ashyralyev, Stability of Rothe difference scheme for the reverse parabolic problem with integral boundary condition, *Mathematical Methods in Applied Sciences*, 43, pp. 5369–5379, 2020.
6. C.Ashyralyev, P.Akkan, Source identification problem with multi point nonlocal boundary condition for parabolic equation, *Numerical Functional Analysis and Optimization*, 41(16), pp. 1913-1935, 2020.
7. C.Ashyralyev, G.Akyüz, Finite Difference Method for Bitsadze-Samarskii Type Overdetermined Elliptic Problem with Dirichlet Conditions, *Filomat*, 32(3), pp. 859–872, 2018.
8. C.Ashyralyev G.Akyüz, M. Dedeturk, Approximate solution for an inverse problem of multidimensional elliptic equation with multipoint nonlocal and Neumann boundary conditions, *Electronic Journal of Differential Equations*, Vol. 2017, No. 197, pp. 1-16, 2017.
9. C.Ashyralyev, A fourth order approximation of the Neumann type overdetermined elliptic problem, *Filomat*, 31(4), pp. 967–980, 2017.

10. C.Ashyralyyev, Numerical solution to Bitsadze-Samarskii type elliptic overdetermined multipoint NBVP, *Boundary Value Problems*, 2017:74, pp. 1-22, 2017.
11. C.Ashyralyyev, Stability Estimates for Solution of Neumann Type Overdetermined Elliptic Problem, *Numerical Functional Analysis and Optimization*, 38(10), pp. 1226–1243 2017.
12. C.Ashyralyyev, M. Dedetürk, Approximation of the inverse elliptic problem with mixed boundary value conditions and overdetermination, *Boundary Value Problems*, 2015:51, pp. 1-15, 2015.
13. C.Ashyralyyev, Y.Akkan, Numerical solution to inverse elliptic problem with Neumann type overdetermination and mixed boundary conditions, *Electronic Journal of Differential Equations*, Vol. 2015, No. 188, pp. 1-15, 2015.
14. Ashyralyyev, High order of accuracy difference schemes for the inverse elliptic problem with Dirichlet condition, *Boundary Value Problems*, 2014:5, pp. 1-23, 2014.
15. Ashyralyyev, C. Ashyralyyev, On the problem of determining the parameter of an elliptic equation in a Banach space, *Nonlinear Analysis: Modelling and Control*, Vol. 19, No 3, pp. 350-366, 2014.
16. C.Ashyralyyev, High order approximation of the inverse elliptic problem with Dirichlet-Neumann conditions, *Filomat* 28:5, pp. 947–962, 2014.
17. C.Ashyralyyev, M.Dedetürk, Approximate solution of inverse problem for elliptic equation with overdetermination, *Abstract and Applied Analysis*, Volume 2013, Article ID 548017, pp. 1-11, 2013.
18. C. Ashyralyyev, O. Demirdag. The Difference Problem of Obtaining the Parameter of a Parabolic Equation. *Abstract and Applied Analysis*, Volume 2012, Article ID 603018, pp. 1-14, 2012.
19. C. Ashyralyyev, A. Dural and Y Sozen, Difference method for the reverse parabolic problem, *Abstract and Applied Analysis*, Volume 2012, Article ID 294154, pp. 1-17, 2012.

## **7.2. Papers published in other internationally refereed journals**

1. C.Ashyralyyev, A.Gönelç, Crank-Nicolson difference scheme for reverse parabolic nonlocal problem with integral and Neumann boundary conditions, *International Journal of Applied Mathematics*, 34(2), pp. 273-282, 2021.
2. C.Ashyralyyev, G.Akyüz, On fourth order accuracy stable difference scheme for a multi-point overdetermined elliptic problem, *Bulletin of the Karaganda University-Mathematics*, 102(2), pp. 45-53, 2021.
3. C.Ashyralyyev, The second order of accuracy difference scheme for reverse parabolic boundary value problem with integral condition, *Proceedings of the Institute of Mathematics and Mechanics, National Academy of Sciences of Azerbaijan*, 46 (2), pp. 346–359, 2020.
4. C. Ashyralyyev, A. Cay, Numerical solution to elliptic inverse problem with Neumann-type integral condition and overdetermination, *Bulletin of the Karaganda University-Mathematics*, 99(3), pp. 7-19, 2020.

5. A.Ashyralyev, C.Ashyralyev, V.G. Zvyagin, A note on well-posedness of source identification elliptic problem in a Banach space, *Bulletin of the Karaganda University-Mathematics*, 99(3), pp. 98-106, 2020.
6. C.Ashyralyev, S.Efe, Second order approximation two dimensional potential and singular integrals, *e-Journal of Analysis and Applied Mathematics*, 2019(1), pp. 68-83, doi:1.2478/ejaam-2019-0005, 2019.
7. C.Ashyralyev, B.Öztürk, Some approximations of second order derivatives complex-valued functions. *Bulletin of the Karaganda University-Mathematics*, 91(3), pp. 17-23, 2018.
8. C.Ashyralyev, Well-posedness of boundary value problems for reverse parabolic equation with integral condition. *e-Journal of Analysis and Applied Mathematics*, 2018(1), pp. 11-20, doi:1.2478/ejaam-2018-02, 2018.
9. C.Ashyralyev, M.Dedetürk, A finite difference method for the inverse elliptic problem with the Dirichlet condition, *Contemporary Analysis and Applied Mathematics*, Vol.1, No.2, pp. 132-155, 2013.

### 7.3. Papers in proceedings

1. C.Ashyralyev, A.Gönenç, Numerical solution of the nonlocal reverse parabolic problem with second kind boundary and integral conditions, *AIP Conference Proceedings*, Vol.2325, 020005, 2021.
2. C.Ashyralyev, G.Akyüz, Stability estimates for a third order of accuracy difference scheme elliptic overdetermined multi-point problem, *AIP Conference Proceedings*, Vol.2334 060011, 2021.
3. C.Ashyralyev, On stable difference scheme for identification elliptic problem with integral and second kind boundary condition, *AIP Conference Proceedings*, Vol.2334 060010, 2021.
4. A.Ashyralyev, C.Ashyralyev, V.G. Zvyagin, On well-posedness of source identification elliptic problem with nonlocal boundary conditions, *AIP Conference Proceedings*, Vol.2325, 020021, 2021.
5. A.Ashyralyev, C.Ashyralyev, A.Erdogan, A. Lukashov, M.Sadybekov, Preface: Fifth International Conference on Analysis and Applied Mathematics (ICAAM 2020) *AIP Conference Proceedings*, Vol.2325, 010001, 2021.
6. A.Ashyralyev, C. Ashyralyev, Preface of Numerical Functional Analysis, *AIP Conference Proceedings*, Vol.2183, 070001, 2019.
7. C.Ashyralyev, S. Karabey, Numerical Solution of Neumann Type Elliptic Overdetermined Multipoint Mixed Boundary Value Problem, *AIP Conference Proceedings*, Vol.2183, 070021, 2019.
8. C.Ashyralyev, B.Öztürk, Finite difference approximations of first order derivatives of complex-valued functions, *AIP Conference Proceedings*, Vol.1997, 020054, 2018.
9. C.Ashyralyev, A.Çay, Well-posedness of Neumann-type elliptic overdetermined problem with integral condition, *AIP Conference Proceedings*, Vol.1997, 020020, 2018.

10. C.Ashyralyyev, G. Akyüz, A third order of accuracy difference scheme for Bitsadze-Samarskii type elliptic overdetermined multi-point problem, AIP Conference Proceedings, Vol. 1997, 020003, 2018.
11. C.Ashyralyyev, M. Dedetürk, A third order of accuracy difference scheme for Dirichlet type overdetermined problem with mixed boundary value conditions, AIP Conference Proceedings, Vol. 1759, 020042, 2016.
12. C.Ashyralyyev, G. Akyüz, Stability estimates for solution of Bitsadze-Samarskii type inverse elliptic problem with Dirichlet conditions, AIP Conference Proceedings, Vol. 1759, 020129, 2016.
13. C.Ashyralyyev, Well-posedness of a fourth order of accuracy difference scheme for the Neumann type overdetermined elliptic problem, AIP Conference Proceedings, Vol. 1676, 020007, pp. 1-6, 2015.
14. C.Ashyralyyev, Inverse Neumann problem for an equation of elliptic type, AIP Conference Proceedings, Vol. 1611, pp. 46-52, 2014.
15. C.Ashyralyyev, M. Dedetürk, Approximation of the inverse elliptic problem with mixed boundary value conditions, AIP Conference Proceedings, Vol. 1611, pp. 25-29, 2014.
16. C.Ashyralyyev, Z. Cakir, Note on small singular values of sequences of matrices, AIP Conference Proceedings, Vol. 1611, pp. 167-171, 2014.
17. C.Ashyralyyev, Z. Cakir, Approximate solution of the two-dimensional singular integral equation, AIP Conference Proceedings, Vol. 1611, pp. 73-77, 2014.
18. C. Ashyralyyev, A.Dural, Y. Sozen, Finite difference method for the reverse parabolic problem with Neumann condition, AIP Conference Proceedings, Vol. 1470, pp.102-105, 2012.

#### **7.4. International books or sections in books**

1. C.Ashyralyyev, 2021. Identification elliptic problem with Dirichlet and integral conditions, Chapter in Springer Proceedings in Mathematics & Statistics, v. 351, Functional Analysis in Interdisciplinary Applications—II, pp. 63-73.
2. Edited by A.Ashyralyev, C.Ashyralyyev, A.S.Erdogan, A. Lukashov, M. Sadybekov, 2021. "Fifth International Conference on Analysis and Applied Mathematics" (ICAAM 2020). AIP Conference Proceedings, Vol. 2325.
3. Edited by H. Cakalli, LDR Kocinac, A. Ashyralyev, R. Harte, M. Dik, I.Canak, HS Kandemir, M. Tez, O. Gurtug, E.Savas, KU Akay, FC Ucgun, S. Uyaver, C. Ashyralyyev, SA Sezer, AD Turkoglu, OR Onvural, H: Sahin, 2021. Fourth International Conference of Mathematical Sciences (ICMS 2020) , AIP Conference Proceedings, Vol. 2334.
4. Edited by C.Ashyralyyev and E.Hincal, 2020. ABSTRACT Books of ICAAM 2020, Near East University, Nicosia (Lefkoşa), KKTC.
5. Edited by C.Ashyralyyev and E.Hincal, 2018. ABSTRACT Books of ICAAM 2018, Near East University, Nicosia (Lefkoşa), KKTC.
6. Edited by C.Ashyralyyev, Z.Cakir, D. Agirseven, 2014. ABSTRACT Books of ICAAM 2014, M. Auezov South Kazakhstan State University Shymkent, Kazakhstan.

## 7.5. Articles published in nationally-respected journals

1. C.Ashyralyev, Variation methods of the solution modifying mixed boundary problem for analytical function, *Dinamika Sploshnoi Sredy*, Vol. 96, Novosibirsk, Russia, pp. 9-21, 1990.
2. C.Ashyralyev, V.N. Monakhov, Iterative algorithm of solving of the two-dimensional singular integral equations, *Dinamika Sploshnoi Sredy*, Vol. 101, pp. 21-30, Novosibirsk, Russia, 1991.
3. C.Ashyralyev, Numerical algorithm of the solution axisymmetric problem of flow with free boundary. *Labour of the Conference Differential Equations and their Applications*. Ashgabat, pp. 11-18, 1993.
4. C. Ashyralyev, Numerical algorithm of the solution of plane problem of flow with any linear boundary *Labour of Institute Mathematics and Mechanics of Academy of Sciences Turkmenistan*, Ashgabat, Vol. 1, 144-156, 1994.
5. A.Ashyrov, C. Ashyralyev, Minimisation problem of cavitating flow, *Labour of Institute Mathematics and Mechanics of Academy of Sciences Turkmenistan*, Ashgabat, Vol. 1, pp. 137-144, 1994.
6. C. Ashyralyev, Spline-approximation of the solution variation problem. *Labour of Institute Mathematics and Mechanics of Academy of Sciences Turkmenistan*, Ashgabat, Vol. 3, pp. 105-108, 1995.
7. C. Ashyralyev, A. Ashyrov, Calculation of the plane problem of flows with minimal resistance, *Labour of Institute Mathematics and Mechanics of Academy of Sciences Turkmenistan*, Ashgabat, Vol. 3, pp. 108-111, 1995.
8. C. Ashyralyev, V.N. Burmistrova, Discretization of ill-posed problem for parabolic equation, *Labour of Institute Mathematics and Mechanics of Academy of Sciences Turkmenistan*, Ashgabat, Vol. 4, 1995.
9. C. Ashyralyev, S. Anyyeva, Iteration Algorithm for solution Dirichlet problem of elliptical system equations in complex plane, In: *Modelling of the extraction of gas location and applied problems of theoretical hydro-gas Dynamics*, Ylym, Turkmenistan, Ashgabat, pp. 100-110, 1998.
10. S.S.Batyrov, A.N.Muradov, A. Ashyralyev, Ch. Ashyralyev, I.I. Lurieva, D.Annamuhammedov, Numerical modelling of stabilisation of oil pressure in stratum, In: *Modelling of the extraction of gas location and applied problems of theoretical hydro-gas Dynamics*, Ylym, Turkmenistan, Ashgabat, pp. 110-117, 1998.
11. S.S.Batyrov, A.N.Muradov, A.Ashyralyev, Ch.Ashyralyev, I.I. Lurieva, D.Annamuhammedov, Algorithm for solution of back filtering problem in carbolantly collectors. In; *Modelling of the extraction of gas location and applied problems of theoretical hydro-gas Dynamics*, Ylym, Turkmenistan, Ashgabat, pp. 117-122, 1998.
12. S.S.Batyrov, A.N.Muradov, A.Ashyralyev, Ch.Ashyralyev, I.I. Lurieva, D.Annamuhammedov, Model of filtration oil in the lower permeable stratum and its solving using by difference schemes, Ylym, Turkmenistan, Ashgabat, 1999.
13. C. Ashyralyev, S.Anyeva, Numerical Algorithm for solution of mixed problem of elliptic system of Equation, Ylym, Turkmenistan, Ashgabat, pp. 50-58 pages, 1999.

14. C. Ashyralyev, A.N. Atayev, Numerical model of stream of fluid, Ylym, Turkmenistan, Ashgabat, pp. 101-105 pages, 2002.

## **7.6. Papers in national conference proceedings**

1. C. Ashyralyev, Numerical algorithm of the solution mixed boundary problem for analytical function. Abstract of the 7th All-Union School on theory differential equations for hydrodynamic problems, Barnaul, USSR, 1989.
2. C. Ashyralyev, Calculation plain cavitating flows with any linear boundary, in: Abstracts of the All-Union Conference on differential equations and optimal control, Ashgabat, USSR 1990.
3. C. Ashyralyev, Calculation cavitating flows with any boundary, in: Abstracts of the School of the Siberian Young Mathematics, Novosibirsk, USSR 1990.
4. C. Ashyralyev, Calculation some mixed boundary problem for analytical function, in: Abstracts of the 3rd Pontryagin's School on Optimal Control, Geometry and Analyses, Kemerovo, USSR 1990.
5. C. Ashyralyev, A.Ashyrov, Numerical algorithm of the solution plane optimization problem of flow with any linear cavitators. Abstracts of the Conference "Problems of the hydrodynamic", Ashgabat, Turkmenistan, 1993.
6. C. Ashyralyev, Spline approximation hydrodynamic problems with free boundary. Abstracts of the scientific-methodical conference of higher educational institutions of Turkmenistan: " Problems of computerisation of Higher Schools of Turkmenistan in the light of new policy in the field of Education, proclaimed by the president Saparmurat Turkmenbashi", Ashgabat: RIPO, Ilham, Turkmenistan .1994 .
7. C. Ashyralyev, Optimisation problem of flows with free boundary. Conference of young scientist of Turkmenistan, Ashgabat, Turkmenistan .1994.
8. C. Ashyralyev, Spline approximation in calculation twodimensional singular integral equations. Conference of young scientist of Turkmenistan, Ashgabat, Turkmenistan .1994.
9. C. Ashyralyev, Numerical algorithm of solution of the Dirichlet problem for quazilinear system of elliptic equations. Conference "Young scientists of Turkmenistan and modern direction of scientific investigations", Ashgabat, Turkmenistan, 1995.
10. C. Ashyralyev, Iteration method of solution of the mixed problem for kwazilinear system of elliptic equations. Conference "Young scientists of Turkmenistan and modern direction of scientific investigations", Ashgabat, Turkmenistan, 1995.
11. C. Ashyralyev, An estimation of the norm of some operator. Conference of young scientists, Ashgabat, Turkmenistan, 1996.
12. C. Ashyralyev, R.Reimbayev, Numerical calculation of solution of one difference scheme for parabolic equation, Conference of young scientists, Ashgabat, Turkmenistan, 1996.
13. C. Ashyralyev, I.I.Luryeva, A.N.Muradov, Calculation pressure on horizontal reservoirs. Scientific-technical conference of young scientists, Ashgabat, Turkmenistan, 1996.

14. C. Ashyralyev, S.Halbayev, Numerical solution of nonlocal boundary value problem, Amaly ylmy konferensiya, Turkmenabat, Ylym, Turkmenistan, 2009.

### 7.7. Other publications

1. A.Ashyralyev, C.Ashyralyev, The second order of accuracy difference schemes for integral type time-nonlocal parabolic problems, The 9th International Conference on Differential and Functional Differential Equations Moscow, Russia, June 28 – July 5, 2022.
2. C.Ashyralyev, Numerical solution of Neumann-type elliptic SIP with non-local integral and mixed boundary conditions, 6th International Conference of Mathematical Sciences (ICMS 2022) 20-24 July 2022, Maltepe University, Istanbul, Turkey.
3. A.Ashyralyev, H. Al-Hazaimeh, C.Ashyralyev, An approximation to the solution of the solution of the two dimensional source identification telegraph problem with Dirichlet condition, 6th International Conference of Mathematical Sciences (ICMS 2022) 20-24 July 2022, Maltepe University, Istanbul, Turkey.
4. C.Ashyralyev, Numerical solution to elliptic source identification problem with non-local integral condition, Satellite Conference “Numerical Functional Analysis - 2021” of ICAAM24-26 November, Isanbul
5. C.Ashyralyev, Note on the second order of accuracy difference scheme for source identification elliptic problem wih integral condition, International Conference «Modern Problems of Applied Mathematics and Information Technology al-Khwarizmi 2021» 15-17 November, 2021, Uzbekistan,Tashkent, Fergana
6. C.Ashyralyev, On numerical solution of inverse elliptic problem with non-local integral condition, International Conference "Mathematical Modeling, Inverse Problems and Big Data", 18-23 July 2021, Yakutsk, Russian Federation.
7. Ashyralyev, C.Ashyralyev, Highly accurate difference schemes for the integral type time-nonlocal problems for the parabolic equation, International Scientific and Practical Conference "Problems of Modern Fundamental and Applied Mathematics" , 04 June 2021, Almaty, Kazakhstan
8. C.Ashyralyev, Source identification problem for parabolic equation with nonlocal and second kind boundary conditions, Scientific Conference Science, technology and development of innovative technologies» dedicated to the 30th anniversary of Independence of Turkmenistan , 13 June 2021, Ashgabat, Turkmenistan.
9. Ashyralyev, C.Ashyralyev, On the differential and difference Basset problems, International Online Conference on Engineering and Natural Sciences (IOCENS21),06 July 2021, Gumushane, Turkey.
10. C.Ashyralyev, G.Akyüz, Numerical soluton of the fourth order accuracy difference scheme for multi point overdetermined boundary value problem for elliptic equation, International Online Conference on Engineering and Natural Sciences (IOCENS21),07 July 2021, Gumushane, Turkey.



11. A.Ashyralyev, C.Ashyralyev, Approximation of time-nonlocal parabolic problem in Hilbert space, 5th International Conference of Mathematical Sciences (ICMS 2021), 26 June 2021, Istanbul, Turkey.
12. C.Ashyralyev, G.Akyüz, Stability estimates for a third order of accuracy difference scheme elliptic overdetermined multi-point problem , Abstract Book of 4th International Conference of Mathematical Sciences (ICMS 2020), 17-21 June 2020, Maltepe University, Istanbul, p. 76.
13. C.Ashyralyev, On Stable Difference Scheme for Identification Elliptic Problem with Integral and Second Kind Boundary Conditions, Abstract Book of 4th International Conference of Mathematical Sciences (ICMS 2020), 17-21 June 2020, Maltepe University, Istanbul, p. 77.
14. C.Ashyralyev, A.Gönenç, Numerical solution of the reverse parabolic problem with integral and second kind boundary condition, Abstract Book of Fiffth International Conference on Analysis and Applied Mathematics (ICAAM), Near Earst University, 23-30 September 2020.
15. A.Ashyralyev, C.Ashyralyev, V.G. Zvyagin, On well-posedness of source identification elliptic problem with nonlocal boundary conditions, Abstract Book of Fiffth International Conference on Analysis and Applied Mathematics (ICAAM), Near Earst University, 23-30 September 2020.
16. A.Ashyralyev, C.Ashyralyev, Well-posedness of source identification problem for the elliptic equation in a Banach space, International Conference of Mathematical Sciences (ICMS 2019), 04 September - 08 September 2019, Maltepe University, Istanbul, Turkey.
17. C.Ashyralyev, S.Karabey, Numerical solution of Neumann type elliptic overdetermined multipoint mixed boundary value problem, International Conference of Mathematical Sciences (ICMS 2019), 04 September - 08 September 2019, Maltepe University, Istanbul, Turkey.
18. C.Ashyralyev, Gulzipa Akyuz, A third order of accuracy difference scheme for Bitsadze-Samarskii type multi-point overdetermined elliptic problem, (06.09.2018 - 09.09.2018 ) Fourth International Conference on Analysis and Applied Mathematics, ICAAM 2018 , 2018.
19. C.Ashyralyev, Aysel Çay, Well-posedness of Neumann-type elliptic overdetermined problem with integral condition (06.09.2018 -09.09.2018 ) Fourth International Conference on Analysis and Applied Mathematics, ICAAM 2018 , 2018.
20. C.Ashyralyev, Beyza Öztürk, Finite difference approximations of first order derivatives of complex-valued functions, (06.09.2018 -09.09.2018 ) Fourth International Conference on Analysis and Applied Mathematics, ICAAM 2018 , 2018.
21. C.Ashyralyev, Gulzipa Akyuz, Mutlu Dedeturk, Numerical solution of inverse problem for multidimensional elliptic equation with multipoint nonlocal and Neumann boundary conditions, International Conference on Mathematics and Mathematics Education (ICMME - 2017), Harran University, Şanlıurfa, 11-13 May 2017.
22. C.Ashyralyev, A third order of accuracy difference scheme for the Neumann type overdetermined elliptic problem, International Conference on Recent Advances in Pure and Applied Mathematics, Istanbul, Turkey, June 3-6,2015.

23. C.Ashyralyev, Well-posedness of a fourth order of accuracy difference scheme for the Neumann type overdetermined elliptic problem, International Conference on Advancements in Mathematical Sciences (AMS), November 5-7, Antalya, Turkey, 2015.
24. C.Ashyralyev, M.Dedeturk, The numerical solution of the inverse elliptic problem with Dirichlet-Neumann conditions, International conference on Recent trends in Algebra and Analysis with Applications, ICRTAAA-2014, Aligarh Muslim University, Aligarh, India, February, 2014.
25. C.Ashyralyev, Z.Cakir, Approximate solution of the two-dimensional singular integral equation, Second International Conference on Analysis and Applied Mathematics (ICAAM2014), Shymkent, Kazakhstan, September 11-13, 2014.
26. C.Ashyralyev, M.Dedeturk, Approximation of the inverse elliptic problem with mixed boundary value conditions, Second International Conference on Analysis and Applied Mathematics (ICAAM2014), Shymkent, Kazakhstan, September 11-13, 2014.
27. C.Ashyralyev, Inverse Neumann problem for an equation of elliptic type, Second International Conference on Analysis and Applied Mathematics (ICAAM2014), Shymkent, Kazakhstan, September 11-13, 2014.
28. C.Ashyralyev, Z.Cakir, Note on small singular values of sequences of matrices, The Algerian-Turkish Days on Mathematics, 12-14 September 2013, Istanbul, Turkey
29. C.Ashyralyev, High Order Approximation of the Inverse Elliptic Problem with Dirichlet-Neumann conditions, The Algerian-Turkish Days on Mathematics, 12-14 September 2013, Istanbul, Turkey
30. C.Ashyralyev, Higher Order of Accuracy Difference Scheme for the Inverse Elliptic Problem with Dirichlet condition, International Conference on Applied Analysis and Mathematical Modelling, 2-5 June 2013 (ICAAM 2013), Istanbul, Turkey
31. C.Ashyralyev, A fourth order of accuracy difference scheme for the inverse elliptic problem with overdetermination, International Conference "Differential Equations. Function Spaces. Approximation Theory" dedicated to the 105th anniversary of the birthday of Sergei L. Sobolev. Novosibirsk, Russia, August 18 - 24, 2013.
32. C. Ashyralyev, A.Dural, Y. Sozen, Finite Difference Method for The Reverse Parabolic Problem with Neumann Condition, First International Conference on Analysis and Applied Mathematics (ICAAM2012), 18-21 October, Gumushane, Turkey, 2012
33. C. Ashyralyev, Numerical Algorithm for Solving two dimensional Singular Integral Equation in the complex plane, International Conference on Applied Analysis and Algebra (ICAAA2011). 29-30 June and 1-2 July 2011, Istanbul, Turkey.
34. C. Ashyralyev, In framework of world standart in education, International Conference "Education, Science, sports and tourism in the Great Revival era", Ashgabat, Turkmenistan, 2008.
35. C. Ashyralyev, Information technologies for high education system, International Conference,, Turkmentel-2007", Ashgabat, Turkmenistan, 2007.
36. C. Ashyralyev, Numerical Solution of the Two-Dimensional Singular Integral Equation, XIII International Mathematics Simpozium, Turkey, Istanbul, 2000.
37. C. Ashyralyev, Numerical algorithm for approximately solving of fiterion problem in the lower permeable collectors. International Conference "Achievement and

Development of Mathematics in Framework of program «Kazakhstan in third millenium»”, Almaty, Kazakhstan, October 26-28, 2000.

38. C. Ashyralyev, S.Anyyeva, Numerical Algorithm for solving of mixed problem of quasilinear elliptic system of equations. 1<sup>st</sup> Int. Turkish World Mathematics Symposium, Elazig, Turkey, 1999.
39. C. Ashyralyev, Iteration algorithm of numerical solution of the multidimensional singular integral equations. International conference “Problems of mathematics and economical models of Turkmenistan”, Ashgabat, Turkmenistan, 1995.
40. C. Ashyralyev, Numerical algorithm of the calculation of the problem of stream fluid with minimal resistance, International Workshop on New computer technologies in control systems, Peleslavl-Zalesski, Russia, 1994.
41. C. Ashyralyev, Numerical algorithm of solution of the multidimensional singular integral equations, 4th International Colloquium on differential equations, Plovdiv, Bulgaria, 1994.

### **7.8. National textbooks and research books**

1. C.Ashyralyyev, Y.Akkan, Z.Çakır, A.Gokdogan, Çözümlü problemlerle kısmı diferensiyel denklemler, Gümüşhane Üniversitesi yayınları, 2014 (in turkish).
2. C.Ashyralyyev, S.Soltanov, G.Annakova. Programming Technologies, TAU, Ashgabat, 2012 (in turkmen).
3. C.Ashyralyyev, S.Soltanov. Computerized Data Analyses, TAU,Ashgabat, 2011 (in turkmen).
4. C.Ashyralyyev, M.Churiyev, S.Halbayev. English-Turkmen Dictionary of Computer Terms, TAU, Ashgabat, 2010.
5. C.Ashyralyev. Computer technologies, TDNG, Ashgabat, 2008 (in turkmen).
6. C.Ashyralyev, B.Atajanov. Computer science and information technologies for 9th class of secondary school, TDNG, Ashgabat, 2008 (in turkmen)
7. C.Ashyralyev, Computer technology,TDKP, Ashgabat, 2007 (in turkmen)
8. C.Ashyralyev, Numerical algorithms of the solution for singular integral equations and their applications in hydrodynamics, Ylym, Ashgabat, 1994 (in russian).

### **8. Projects**

1. TEMPUS project “Development of Agricultural Education in Cooperation with European Universities” (CD\_JEP\_25064-2004, 2005-2009, Local Coordinator).
2. TEMPUS project “Innovative Education for Sustainable Agro-Industrial and Rural Development in Turkmenistan” (CD\_JEP-26156-2005, Local Manager), 2006-2010.
3. TEMPUS project “Development of International Relations related to the Needs of the Higher Educational System of Turkmenistan (DoIT)” (158887-TEMPUS-1-2009-1-ES-TEMPUS-SMGR, Local Coordinator) 2010-2012.
4. Modeling the processes in exploration of gas deposits and applied problems of theoretical gas hydrodynamics, Project of the Higher Scientific Committee of Turkmenistan, Ashgabat, Turkmenistan (Manager), 1999-2000.

5. Numerical Methods for Modeling the Processes in Exploration of Gas Deposits and Applied Problems of Theoretical Gas Hydrodynamics, Supreme Council on science and technology under the President of Turkmenistan (Manager), 1997-1998.
6. Spline approximation for solving problems of flow around an incompressible axisymmetric fluid flow, Institute Mathematics and Mechanics Academy of Science Turkmenistan (Manager), 1992-1994

## **9. Administrative Affairs**

1. Türkmen Agricultural University, Head of Department of Computer Technologies, Aşgabat, Türkmenistan (1994-1997, 1999-2012)
2. Deputy Quality Coordinator of Gumushane University (2000-2022).

## **10. Membership in Scientific and Administrative Organizations**

1. Co-Chair of Sixth International Conference on Analysis and Applied Mathematics (ICAAM2022), Antalya, Turkey, 2022.
2. Member of Editorial Board of the Journal of New Results in Science, Tokat Gaziosmanpasa University (2021-present )
3. Gumushane University Journal of Science and Technology Institute, Editorial Advisory Board (2017-present) .
4. Member of Editorial Board of Pure and Applied Mathematics Journal (2015-2022).
5. Member of Editorial Board of Science Journal of Applied Mathematics and Statistics (2015-2022) .
6. Member of International Scientific Committee and Co-Organizer of Numerical Functional Analysis Section of Sixth International Conference of Mathematic Sciences (ICMS2022), 2022
7. Member of International Program Committee of International Conference Contemporary Mathematics and its Application Uzbekistan,Tashkent, 2021.
8. Member of International Program Committee of International Conference «Modern Problems of Applied Mathematics and Information Technology al-Khwarizmi 2021» Uzbekistan,Tashkent, Fergana, 2021.
9. Member of International Scientific Committee and Co-Organizer of Numerical Functional Analysis Section of Fifth International Conference of Mathematic Sciences (ICMS2021), 2021
10. Member of Program Committee of International Conference “Mathematical Modeling, Inverse Problems and Big Data”, Yakutsk, Russian Federation, 2021.
11. Member of Scientific Committee of International Online Conference on Engineering and Natural Sciences (IOCENS21), Gumushane, Turkey, 2021.
12. Member of International Organizing Committee of Fifth International Conference on Analysis and Applied Mathematics, Girne, Mersin 10, Turkey (ICAAM2020)
13. Member of International Scientific Committee and Co-Organizer of Numerical Functional Analysis Section of Fifth International Conference of Mathematic Sciences, Istanbul, June 17-20, 2020 (ICMS2020)

14. Member of International Organizing Committee of Fourth International Conference on Analysis and Applied Mathematics, Nicosia (Lefkoşa), Mersin 10, Turkey (ICAAM2018)
15. Editor of Section Mathematics, Trakya University Journal of Natural Sciences (2015-2016)
16. Member of International Organizing Committee of International Conference on Advancements in Mathematical Sciences (AMS), November 5-7, Antalya, Turkey, 2015
17. Second International Conference on Analysis and Applied Mathematics, Shymkent, Kazakhstan, September 11-13, 2014 (ICAAM2014)
18. Member of Organizing Committee of First International Conference on Analysis and Applied Mathematics, Gumushane, Turkey, October 18-21, 2012 (ICAAM2012)
19. Uluslararası derilerde hakemlikler
  - Turkish Journal of Mathematics (2019,2021,2022)
  - Hacettepe Journal of Mathematics and Statistics (2018)
  - An International Journal of Optimization and Control: Theories & Appl.(2018)
  - Inverse Problems (2015,2016,2017)
  - Filomat (2016,2017,2018)
  - Applied Mathematics and Computation (2017)
  - Mathematical Methods in the Applied Sciences (2017)
  - Measurement Science and Technology (2016)
  - Science Journal of Applied Mathematics and Statistics (2017)
  - Pure and Applied Mathematics Journal (2016)
  - Abstract and Applied Analysis (2013)
  - Advances in Difference Equations (2014)
  - Mathematical Modelling and Analysis (2014)
  - Applied Mathematics & Information Sciences (2015)
  - Bulletin of the Karaganda University (2018,2020)
  - AIP Conference Proceedings (2014-2016,2018-2022)
  - Gumushane University Journal of Science and Technology Institute (2017-2022)
20. Higher Education Expert of Turkmenistan (2010-2012)
21. Member of Educational and Methodical Commission of the Ministry of Education of Turkmenistan on Computer Science and Information Technologies
22. (1995-2000, 2008-2012)
23. Member of Organizing Committee of Mathematical Olympiads, Turkmenistan
24. (2002-2010)
25. Member of Organizing Committee of Computer Olympiads, Turkmenistan
26. (1998-2002, 2011)
27. Member of the Organizing Committee of Scientific and Methodical Conference, Ashgabat, Turkmenistan (1997)
28. Member of Organizing Committee of Conference of Young Scientists Turkmenistan (1996)
29. Member of Editorial Board of JOURNAL "Labour of Institute Mathematics and Mechanics of Academy of Sciences Turkmenistan", Ashgabat, Turkmenistan (1994-1995)
30. Member of the Organizing Committee of International Workshop on new computer technologies in control systems, Pereslavl-Zalesski, Russia (1994)
31. Member of the Organizing Committee of Conferences on Differential Equations and Their Applications (1993)

32. Member of the Special Committee of Examination on Ph.D Thesis, Ahgabat, Turkmenistan (1991-1993)

## 11. Awards

1. Best Young Researcher Award Turkmenistan (1994)
2. TUBITAK publication incentive award (13 adet, 2013-2021)

## 12. Graduate and Undergraduate Courses Given in the Past Two Years

Academic Year	Term	Course Code	Hours/Weekly		Number of Students
			Theoretical	Practical	
2020-2021	Fall	MATMSEC201 Matrix Analysis	3	0	4
		MATMSEC311 Linear Programming	3	0	6
		MATM5061 Theory of Partial Differential Equations	3	0	23
		MATM6021 Integral Equations and their applications	3	0	1
		MATM 5010 Specialization Course	4	0	2
	Spring	MATM5044 Integral transform methods and their applications	3	0	19
		MATM6050 Approximation Theory	3	0	2
		MATM234 Differential Equations II	4	0	7
		MATMSEC404 Integral Equations	3	0	10
		MATM 5010 Specialization Course	2	0	29
2021-2022	Fall	MATMSEC201 Matrix Analysis	3	0	5
		MATMSEC311 Linear Programming	3	0	3
		MATM233 Differential Equations I	4	0	6
		MATM5061 Theory of Partial Differential Equations	3	0	8
		MATM6029 Banach Uzaylarında Pozitif Operatörler	3	0	2
		MATM 5010 Specialization Course	4	0	4
	Spring	MATM5044 Integral Equations and their applications	3	0	10
		MATM6050 Approximation Theory	3	0	2
		MATM238 Matlab ile Numerical Methods	3	2	5
		MATM234 Differential Equations II	4	0	3
MATM 5010 Specialization Course		4	0	4	