

PERSONAL INFORMATION

Address : Manisa Celal Bayar University, Faculty of Arts & Science, Department of Mathematics,
Muradiye Campus, 45140, Yunusemre-Manisa/TURKEY.

E-mail : sinan.deniz@cbu.edu.tr

Telephone : (+90) 0236 201 32 27

EDUCATION

Ph.D. : Applied Mathematics, Manisa Celal Bayar University, 2018.

M.Sc. : Applied Mathematics, Manisa Celal Bayar University, 2014.

B.Sc. : Department of Mathematics (Eng), Fatih University (Full Scholarship), 2012.

ACADEMIC EXPERIENCE

Research Assistant at Manisa Celal Bayar University, September 2012 to present

RESEARCH AREAS

- Asymptotic and Computational Methods for ODEs and PDEs
- Semi-Analytical and Numerical Methods
- Complex Function Theory
- Perturbation Techniques
- Mathematical Modeling
- Numerical Analysis
- Integral Equations
- Stability Theory.

INTERNATIONAL RESEARCH AND PUBLICATIONS

1. Bildik, N., **Deniz, S.**, Applications of Taylor collocation method and Lambert W function to the systems of delay differential equations, *Turkish Journal of Mathematics and Computer Sciences*, Volume 1(1): pp. 1-13, 2013. Article ID 20130033.
2. **Deniz, S.**, Bildik, N., Comparison of Adomian decomposition method and Taylor matrix method in solving different kinds of partial differential equations, *International Journal of Modelling and Optimization*, Volume 4(4): pp.292-298, 2014.
3. Bildik, N., **Deniz, S.**, Implementation of Taylor collocation and Adomian decomposition method for systems of ordinary differential equations, *AIP Conf. Proc.*, 1648, 370002 (2015).
4. Bildik, N., **Deniz, S.**, Comparison of solutions of systems of delay differential equations using Taylor collocation method, Lambert W function and variational iteration method, *Scientia Iranica. Transaction D, Computer Science & Engineering and Electrical Engineering*, Volume 22(3): pp.1052-1058, (2015).
5. Bildik, N., **Deniz, S.**, Modified Adomian decomposition method for solving Riccati differential equations, *Review of the Air Force Academy*, Volume 3(30): pp. 21-26, 2015.
6. Bildik, N., **Deniz, S.**, On the asymptotic stability of some particular differential equations, *International Journal of Applied Physics and Mathematics*, Volume 5(4): pp. 252-258, 2015.
7. **Deniz, S.**, Bildik, N., Application of Adomian decomposition method for singularly perturbed fourth order boundary value problems, *AIP Conf. Proc.*, 1738, 290017 (2016).
8. Bildik, N., **Deniz, S.**, The use of Sumudu decomposition method for solving Predator-Prey Systems, *Mathematical Sciences Letters*, Volume 5(3): pp. 285-289, (2016).
9. Bildik, N., **Deniz, S.**, Modification of perturbation-iteration method to solve different types of nonlinear differential equations, *AIP Conf. Proc.*, 1798, 020027 (2017).
10. **Deniz, S.**, Bildik, N., Applications of optimal perturbation iteration method for solving nonlinear differential equations, *AIP Conf. Proc.*, 1798, 020046 (2017).
11. Bildik, N., Tosun, M., **Deniz, S.**, Euler matrix method for solving complex differential equations with variable coefficients in rectangular domains, *International Journal of Applied Physics and Mathematics* Volume 7(1): pp. 69-78, (2017).
12. **Deniz, S.**, Bildik, N., Sezer, M., A note on stability analysis of Taylor collocation method, *Celal Bayar University Journal of Science*, Volume 13 (1), pp. 149-153, (2017).
13. Bildik, N., **Deniz, S.**, A new efficient method for solving delay differential equations and a comparison with other methods, *The European Physical Journal Plus*, Volume 132: 51, (2017).
14. **Deniz, S.**, Optimal perturbation iteration method for solving nonlinear heat transfer equations, *Journal of Heat Transfer-ASME*, Volume 139:37,074503-1, (2017).
15. **Deniz, S.**, Bildik, N., A new analytical technique for solving Lane - Emden type equations arising in astrophysics, *Bulletin of the Belgian Mathematical Society – Simon Stevin*, Volume: 24(2), 305-320, (2017).
16. Bildik, N., **Deniz, S.**, A practical method for analytical evaluation of approximate solutions of Fisher's equations, *ITM Web of Conferences*, Volume 13, Article Number: 01001, (2017).

17. **Deniz, S.**, Bildik, N., Optimal perturbation iteration method for Bratu-type problems, *Journal of King Saud University – Science* , Volume 30(1), 91-99, (2018).
18. Bildik, N., Açıık., A, **Deniz, S.**, A New Approach to Fuzzy Differential Equations using Logarithmic Mean, *Journal of Fuzzy Set Valued Analysis*, Volume 2018, No. 1, pp. 10-21, (2018).
19. Bildik, N., **Deniz, S.**, New analytic approximate solutions to the generalized regularized long wave equations, *Bulletin of the Korean Mathematical Society*, Volume 55, No. 3, pp. 749-762, (2018).
20. Bildik, N., **Deniz, S.**, Comparative Study between Optimal Homotopy Asymptotic Method and Perturbation-Iteration Technique for Different Types of Nonlinear Equations, *Iranian Journal of Science and Technology Transactions A: Science*, Volume 42, No. 2, pp. 647-654, (2018).
21. Bildik, N., **Deniz, S.**, Solving the Burgers' and regularized long wave equations using the new perturbation iteration technique, *Numerical Methods for Partial Differential Equations*, (In Press), (2018).
22. Bildik, N., **Deniz, S.**, New approximate solutions to electrostatic differential equations obtained by using numerical and analytical methods, *Georgian Mathematical Journal*, (In Press), (2018).
23. Bildik, N., **Deniz, S.**, New approximate solutions to the nonlinear Klein-Gordon equations using perturbation iteration techniques and a comparison with other methods, *Discrete and Continuous Dynamical Systems Series S*, (In Press), (2018).
24. Bildik, N., **Deniz, S.**, New optimal perturbation iteration method with a convergence control parameter, (Submitted).
25. Bildik, N., **Deniz, S.**, A note on the stability analysis of the time-fractional variable order Klein-Gordon equation, (Submitted).

INTERNATIONAL PROCEEDINGS

1. **Deniz, S.**, Bildik, N., "A solution for predator - prey systems using the Sumudu decomposition method", Progress in Difference Equations (PODE 2014), 21-24 May 2014, İzmir University of Economics, İzmir-TURKEY
2. **Deniz, S.**, Bildik, N., "Comparison of Adomian decomposition method and Taylor matrix method in solving different kinds of partial differential equations", The 3rd International Conference on Pure and Applied Mathematics (ICPAM 2014), 18-19 July 2014 , Madrid-SPAIN.
3. Bildik, N., **Deniz, S.**, "Implementation of Taylor Collocation and Adomian Decomposition Method for Systems of Ordinary Differential Equations ", 12th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2014), 22-28 September 2014, Rodos Palace Otel, Rhodes-GREECE.
4. Bildik, N., **Deniz, S.**, "A note on the asymptotic stability of some particular equations", Workshop on Integral Geometry and Inverse Problems, 27-28 March 2015, Bülent Ecevit University, Zonguldak-TURKEY.
5. Bildik, N., **Deniz, S.**, "A Solution for Riccati Differential Equation by Modified Decomposition Method", International Conference On Applied Analysis And Mathematical Modeling(ICAAMM 2015), 8-12 June 2015, Yıldız Technical University, İstanbul-TURKEY.
6. Bildik, N., **Deniz, S.**, "On the Asymptotic Stability of Some Particular Differential Equations", The 4th International Conference on Pure and Applied Mathematics (ICPAM 2015), 16-17 July 2015 , Roma-ITALY.

7. **Deniz, S., Bildik, N.,** "Application of Adomian Decomposition Method for Singularly Perturbed Fourth Order Boundary Value Problems", 13th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2015), 23-29 September 2015, Rodos Palace Otel, Rhodes-GREECE.
8. Bildik, N., **Deniz, S.,** "Optimal Homotopy Asymptotic Method to Solve Nonlinear Electrostatic Differential Equations", International Conference on Mathematics and Mathematics Education (ICMME-2016), 12-14 May 2016, Fırat University, Elazığ-TURKEY.
9. Bildik, N., **Deniz, S.,** "Perturbation - Iteration Technique and Optimal Homotopy Asymptotic Method for solving Nonlinear Equations ", International Conference on Mathematics and Mathematics Education (ICMME-2016), 12-14 May 2016, Fırat University, Elazığ-TURKEY.
10. Bildik, N., **Deniz, S.,** "Modification of Perturbation-Iteration Method to solve different types of nonlinear differential equations ", International Conference in Nonlinear Problems in Aviation and Aerospace (ICNPAA 2016), 5-8 July 2016, La Rochelle-FRANCE.
11. **Deniz, S., Bildik, N.,** "Applications of Optimal Perturbation Iteration Method for solving Nonlinear Differential Equations ", International Conference in Nonlinear Problems in Aviation and Aerospace (ICNPAA 2016), 5-8 July 2016, La Rochelle-FRANCE.
12. **Deniz, S., Bildik, N.,** "An Improvement to the Perturbation Iteration Technique for Solving Klein-Gordon Equations ", International Conference on Mathematics and Mathematics Education (ICMME-2017), 11-13 May 2017, Harran University, Şanlıurfa- TURKEY.
13. Bildik, N., **Deniz, S.,** "A Note on the Convergence of the Perturbation Iteration Method ", International Conference on Mathematics and Mathematics Education (ICMME-2017), 11-13 May 2017, Harran University, Şanlıurfa-TURKEY.
14. **Deniz, S., Bildik, N.,** "A new reliable treatment of the Lane - Emden type equations ", International Conference on Computational Mathematics and Engineering Sciences-(CMES2017), 20-22 May 2017, Istanbul-TURKEY.
15. Bildik, N., **Deniz, S.,** "Optimal perturbation iteration method for solving delay differential equations ", International Conference on Computational Mathematics and Engineering Sciences-(CMES2017), 20-22 May 2017, Istanbul-TURKEY.
16. Bildik, N., **Deniz, S.,** "A New Semi - Analytical Method for Solving Nonlinear Differential Equations", International Conference on Applied Analysis and Mathematical Modelling (ICAAMM 2017), 3-7 July 2017, Istanbul-TURKEY.

NATIONAL PROCEEDINGS

1. **Deniz, S., Bildik, N.,** "Gecikmeli Diferansiyel Denklemler Sisteminin Taylor Sıralama, Varyasyonel İterasyon ve Lambert Fonksiyonu ile Çözümlerinin Karşılaştırılması ", 12. Matematikçiler Derneği Sempozyumu-HACETTEPE , 23-25 Mayıs 2013, Ankara-TÜRKİYE.
2. **Deniz, S., Bildik, N.,** "Farklı Tipteki Adi Diferansiyel Denklem Sistemlerinin Adomian Ayrışım ve Taylor Sıralama Metotları Kullanılarak Çözümlerinin Karşılaştırılması" ,13. Matematik Sempozyumu, 15-17 Mayıs 2014, Karabük Üniversitesi, Karabük-TÜRKİYE.
3. Bildik, N., **Deniz, S.,** "Farklı Tipteki Kısmi Diferansiyel Denklemlerin Adomian Ayrışım ve Taylor Sıralama Metotları Kullanılarak Çözümlerinin Karşılaştırılması",13. Matematik Sempozyumu, 15-17 Mayıs 2014, Karabük Üniversitesi, Karabük-TÜRKİYE.

4. Tosun,M., Bildik, N., **Deniz, S.**, “Sıralama Yöntemi ile Yüksek Mertebeden Lineer Karmaşık Diferansiyel Denklemlerin Euler Operasyonel Matrisine Göre Çözümü”,14. Matematik Sempozyumu, 14-16 Mayıs 2015,Niğde Üniversitesi, Niğde-TÜRKİYE.
5. Bildik, N., **Deniz, S.**, “Bazı Özel Diferansiyel Denklemlerin Asimptotik Kararlılığı Üzerine”, 14. Matematik Sempozyumu, 14-16 Mayıs 2015, Niğde Üniversitesi, Niğde-TÜRKİYE
6. **Deniz, S.**, Bildik, N., “Dördüncü Mertebeden Singüler Perturbe Edilmiş Sınır Değer Problemlerinin Sayısal Çözümü Üzerine”, 14. Matematik Sempozyumu, 14-16 Mayıs 2015, Niğde Üniversitesi, Niğde-TÜRKİYE

INTERNATIONAL & NATIONAL CONFERENCE PARTICIPATION

1. 12. Matematikçiler Derneği Sempozyumu, 23-25 Mayıs 2013, Hacettepe Üniversitesi, Ankara-TÜRKİYE
2. 13. Matematik Sempozyumu, 15-17 Mayıs 2014, Karabük Üniversitesi, Karabük-TÜRKİYE
3. Progress in Difference Equations (PODE 2014), 21-24 May 2014, İzmir University of Economics, İzmir-TURKEY
4. The 3rd International Conference on Pure and Applied Mathematics (ICPAM 2014), 18-19 July 2014 , Madrid-SPAIN.
5. 12th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2014), 22-28 September 2014, Rodos Palace Otel, Rhodes-GREECE.
6. 14. Matematik Sempozyumu, 14-16 Mayıs 2015, Niğde Üniversitesi, Niğde-TÜRKİYE
7. 13th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2015), 23-29 September 2015, Rodos Palace Otel, Rhodes-GREECE.
8. International Conference in Nonlinear Problems in Aviation and Aerospace (ICNPAA 2016), 5-8 July 2016, La Rochelle-FRANCE.
9. International Conference on Mathematics and Mathematics Education (ICMME-2017), 11-13 May 2017, Harran University, Şanlıurfa-TURKEY.
10. International Conference on Computational Mathematics and Engineering Sciences-(CMES2017), 20-22 May 2017, İstanbul-TURKEY.

REFEREE ACTIVITIES

1. The European Physical Journal – Plus (SCI)
2. Mathematical Methods in the Applied Sciences (SCI)
3. Journal of Applied Mathematics and Computing (SCI)
4. Transactions on Modeling and Computer Simulation (SCI)
5. Journal of Computational and Applied Mathematics (SCI)

6. Neural Computing and Applications (SCI)
7. Kuwait Journal of Science (SCI-Expanded)
8. International Journal of Biomathematics (SCI-Expanded)
9. International Journal of Applied and Computational Mathematics
10. Journal of King Saud University - Science
11. Punjab University Journal of Mathematics
12. TWMS J. App. Eng. Math.

SCHOLARSHIPS & AWARDS

1. OSYM Full Scholarship, Fatih University (2009-2012).
2. TUBITAK- BİDEB 2228 National MS Scholarship, 2012-2014.
3. TUBITAK- BİDEB 2211 National Ph.D Scholarship, 2014-2018.
4. Celal Bayar University, Dissertation Award, 2015.
5. TUBITAK Publication Encouragement Award (2015).
6. TUBITAK Publication Encouragement Award (2017).

EDITORIAL BOARD MEMBER

1. International Journal of Applied Mathematics and Theoretical Physics (2016-)

TECHNICAL COMMITTEE ACTIVITIES

1. The 7th International Conference on Pure and Applied Mathematics (ICPAM 2018), Budapest/HUNGARY, July 10-13, 2018.