Haydar ALICI

Prof. Dr.

Harran University,
Department of Mathematics,
63050, Şanlıurfa, TURKEY
+90 414 318 35 99
+90 414 318 34 64
haydara@harran.edu.tr

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Education

2004 – 2010 **PhD**, *Middle East Technical University*, Department of Mathematics

Thesis Title A General Pseudospectral Formulation of a Class of Sturm-Liouville Systems.

Supervisor Prof. Dr. Hasan Taşeli

2001 – 2003 **MSc**, *Middle East Technical University*, Department of Mathematics

Thesis Title Pseudospectral Methods for Differential Equations: Application to the Schrödinger Type Eigenvalue Problems.

Supervisor Prof. Dr. Hasan Taşeli

1996 – 2001 **BSc**, *Middle East Technical University*, Department of Mathematics Education

1996 – 2001 **Double Major**, *Middle East Technical University*, Department of Mathematics

Employment History

June 2022 – **Prof. Dr.**, *Harran University*, Department of Mathematics, 63050, Şanlıurfa, TURKEY.

2016 – 2022 **Assoc. Prof. Dr.**, *Harran University*, Department of Mathematics, 63050, Şanlıurfa, TURKEY.

2011 – 2016 **Assist. Prof. Dr.**, *Harran University*, Department of Mathematics, 63050, Şanlıurfa, TURKEY.

2010 – 2011 **Dr.**, *Harran University*, Department of Mathematics, 63050, Şanlıurfa, TURKEY.

2005 – 2010 **Res. Asst.**, *Middle East Technical University*, Department of Mathematics, 06531, Ankara, TURKEY.

2002 – 2005 **High School Mathematics Teacher**, *Turkish Ministry of National Education*, Ankara, TURKEY.

Awards & fellowships

July 2016 –July 2017 **Postdoctoral fellowship**, *The Scientific and Technological Research Council of Turkey (TÜBİTAK 2219)*, Purdue University, IN, USA.

Feb. 2005 –Feb. 2009 **Doctoral fellowship**, *The Scientific and Technological Research Council of Turkey (TÜBİTAK 2211/A)*, Middle East Technical University, Ankara, TURKEY.

July 2008 **Financial support for scientific activities abroad**, *The Scientific and Technological Research Council of Turkey (TÜBİTAK 2224/A)*, 13th International Congress on Computational and Applied Mathematics, July 7–11, 2008, Ghent University, Ghent, BELGIUM.

Projects

July 2021 –July 2022 **TÜBİTAK–1002 Project, Project Number: 121F090**, *Numerical solution of the acoustic scattering problem from an ellipse-like obstacles by using spectral methods*, principle investigator.

Participated Scientific Activities

1. 2nd Ankara Mathematics Days, June 14–15, 2007, Atılım University, Ankara, TURKEY.
2. 6th International ISAAC (International Society for Analysis, its Applications and Computation) Congress, August 13-18, 2007, Middle East Technical University, Ankara, TURKEY.
3. 13th International Congress on Computational and Applied Mathematics, July 7–11, 2008, Ghent University, Ghent, BELGIUM.
   - Pseudospectral methods for solving an equation of hypergeometric type with a perturbation.
4. 4th Ankara Mathematics Days, June 4–5, 2009, Middle East Technical University, Ankara, TURKEY.
5. 24th National Mathematics Symposium, September 7–10, 2011, Uludağ University, Bursa, TURKEY.
   - Unification of Stieltjes-Calogero type relations for the zeros of classical orthogonal polynomials.
6. 26th National Mathematics Symposium, September 4–7, 2013, Dicle University, Diyarbakır, TURKEY.
   - Laguerre pseudospectral methods for the radial Schrödinger equation.
7. International Conference on Current Trends and Challenges in Numerical Solution of Partial Differentials Equations, July 7-8, 2017, Purdue University, IN, USA.
8. 30th National Mathematics Symposium, September 6–9, 2017, Atılım University, Ankara, TURKEY.
   - Highly Accurate Pseudospectral Approximations of the Prolate Spheroidal Wave Equation for Any Bandwidth Parameter and Zonal Wavenumber.

Refereeing for Scientific Journals

- Advances in Difference Equations
- Computers & Mathematics with Applications
- Computer Physics Communications
- Çankaya University Journal of Science and Engineering
- Hacettepe Journal of Mathematics and Statistics
- Journal of Computational and Applied Mathematics
- Turkish Journal of Mathematics and Computer Science

Supervision

Emre SANIR **MSc**, *Gaussian quadrature rule of integration*, Department of Mathematics, Harran University, 63050, Şanlıurfa, TURKEY, June 2021.

M. Salih DAL **MSc**, *Numerical solution of the angular Mathieu equation by Chebyshev pseudospectral methods*, Department of Mathematics, Harran University, 63050, Şanlıurfa, TURKEY, December 2017.

Hülya AYTAR **MSc**, *Numerical solution of the spheroidal wave equation by using pseudospectral methods*, Department of Mathematics, Harran University, 63050, Şanlıurfa, TURKEY, December 2017.

Language Skills

- Turkish: Native speaker
- English: Fluent (KPDS-2010: 94/100 pts., YDS-2013: 81.25/100 pts., YDS-2018: 85/100 pts., YDS-2023: 93,75/100 pts.)

Computer Skills

- Office programs, LaTeX
- Fortran, Matlab, GNU Octave, Mathematica

Publications

[12] **H. Alıcı**, *Explicit general solution of the squared secant potential and some consequences*, Ramanujan J., 62 (1), (2023), 111-140, https://doi.org/10.1007/s11139-023-00748-8

[11] **H. Alıcı, T. Tanriverdi**, *General solution of the Schrödinger equation for some hyperbolic potentials*, Few-Body Syst., 61 (4), (2020), 1–11. , https://doi.org/10.1007/s00601-020-01575-z

[10] **H. Alıcı, T. Tanriverdi**, *General solution of the Schrödinger equation for some trigonometric potentials*, J. Math. Chem., 58 (5), (2020), 1041–1057., https://link.springer.com/article/10.1007/s10910-020-01120-7

[9] **H. Alıcı**, *The Laguerre Pseudospectral Method for the Two-Dimensional Schrödinger Equation with Symmetric Nonseparable Potentials*, Hacet. J. Math. Stat., 49 (2), (2020), 539–552., https://doi.org/10.15672/hujms.459593

[8] **H. Alıcı, J. Shen**, *Highly efficient and accurate spectral approximation of the angular Mathieu equation for any parameter values q*, J. Math. Study, 51 (2), (2018), 131–149., https://doi.org/10.4208/jms.v51n2.18.02

[7] **H. Alıcı, J. Shen**, *Highly Accurate Pseudospectral Approximations of the Prolate Spheroidal Wave Equation for Any Bandwidth Parameter and Zonal Wavenumber*, J. Sci. Comput., 71 (2), (2017), 804–821., https://link.springer.com/article/10.1007/s10915-016-0321-7

[6] **H. Alıcı, H. Taşeli**, *Unification of Stieltjes-Calogero type relations for the zeros of classical orthogonal polynomials*, Math. Method. Appl. Sci., 38 (14), (2015), 3118–3129., https://doi.org/10.1002/mma.3285

[5] **H. Alıcı**, *The Hermite Pseudospectral Method for the Two-Dimensional Schrödinger Equation with Nonseparable Potentials*, Comput. Math. Appl., 69 (6), (2015), 466–477., https://doi.org/10.1016/j.camwa.2015.01.002

[4] **H. Alıcı, H. Taşeli**, *Laguerre pseudospectral methods for the radial Schrödinger equation*, Appl. Numer. Math., 87, (2015), 87–99., https://doi.org/10.1016/j.apnum.2014.09.001

[3] **H. Alıcı, H. Taşeli**, *Pseudospectral methods for solving an equation of hypergeometric type with a perturbation*, J. Comput. Appl. Math., 234, (2010), 1140–1152., https://doi.org/10.1016/j.cam.2009.06.004

[2] **H. Taşeli, H. Alıcı**, *The Laguerre pseudospectral method for the reflection symmetric Hamiltonians on the real line*, J. Math. Chem., 41, (2007), 407–416., https://doi.org/10.1007/s10910-006-9083-z

[1] **H. Taşeli, H. Alıcı**, *The scaled Hermite-Weber basis in the spectral and pseudospectral pictures*, J. Math. Chem., 38, (2005), 367–378., https://doi.org/10.1007/s10910-005-5826-5