

CURRICULUM VITAE

PERSONAL DATA

Name	Fahir Talay Akyildiz
Nationality	Turkish
Position	Professor
E-Mail	fakyildiz@imamu.edu.sa
Phone	0542571468

EDUCATION

Year	Academic Degree	Institution
1993	PhD	University of Wales/United Kingdom
1988	MSc	19 Mayis University/Turkey
1982	B.Sc	Ankara University/Turkey

WORK EXPERIENCE

Period	Position	Address
2017-	Professor	Imam Mohammad Ibn Saud Islamic University (IMSIU)/KSA
2012-2017	Professor	Gaziantep University/Turkey
2015-2016	Professor	BIUST/Bostwana
2008-2012	Associate Professor	Khalifa University/UAE
1993-2008	Assistant-Associate Professor	19 Mayis University /Turkey
2004-2005	Visiting Associate Professor	Northern Illinois University/USA
2001-2002	Visiting Assistant Professor	University of Pittsburgh/USA

RESEARCH INTERESTS

Applied Mathematics, Numerical Analysis, Mathematical Biology, Applied Analysis

PUBLICATIONS

67- FS Alshammari, FT Akyildiz, MA Khan, A Din, P Sunthrayuth, A Stochastic Mathematical, Model for Understanding the COVID-19 Infection Using Real Data, Symmetry 14 (12), 2521.

66- F. Talay Akyildiz & Fehaid Alshammari, A NEW ANALYSIS OF GALERKIN LEGENDRE SPECTRAL METHODS FOR COUPLED HYPERBOLIC/PARABOLIC SYSTEM ARISING IN UNSTEADY MHD FLOW OF MAXWELL FLUID AND NUMERICAL SIMULATION, Applied Numerical Mathematics Volume 176, June 2022, Pages 83-103 (impact factor: 2.468)

65- Fehaid Salem Alshammari, F. Talay Akyildiz, Global stability for novel complicated SIR epidemic models with nonlinear recovery rate and transfer from infectious to susceptible to analyze the transmission of Covid-19 and impact of vaccine, Journal of Function Space Volume 2021, 21.10.2021(impact factor: 1.748)

64-Fehaid Salem Alshammari and F.Talay Akyildiz, Numerical Computation of system of semilinear elliptic equations arising in laminar forced convection of a nanofluid, paper under review, Computational and Applied Mathematics under review

63-F. Talay Akyildiz and Fehaid Salem Alshammari, Complex mathematical SIR model for spreading of COVID-19 virus with Mittag-Leffler kernel, Advances in Difference Equations (2021) 2021:319. (impact factor: 2.039)

62-F. Talay Akyildiz, Dennis A Siginer EXACT SOLUTION OF THE START-UP ELECTROSMOTIC FLOW OF GENERALIZED MAXWELL FLUIDS IN TRIANGULAR MICRODUCTS, Journal of Fluid Engineering, OCTOBER 2021, Vol. 143 (impact factor: 2.039)

61- Fehaid Salem Alshammari and F.Talay Akyildiz, PSEUDO SPECTRAL SOLUTION OF EXTENDED GRAETZ PROBLEM FOR COMBINED PRESSURE-DRIVEN AND ELECTROSMOTIC FLOW IN A TRIANGULAR MICRO-DUCT,

Computers & Mathematics with Applications, Volume 80, Issue 5, 1 September 2020, Pages 990-1008(impact factor: 3.476)

60- F Talay Akyildiz, Abeer FA AlSohaim and Nurhan Kaplan, Electro-osmotic and Pressure-Driven Flow in an Eccentric Microannulus, Zeitschrift für Naturforschung A, 2019(impact factor: 1.432)

59- F Talay Akyildiz, Dennis A Siginer, Laminar Forced Convection in Transversely Corrugated Microtubes, Journal of Heat Transfer, 2019(impact factor: 3.458)

58-Dennis A Siginer, F Talay Akyildiz and Mhamed Boutaous, Unsteady gaseous Poiseuille slip flow in rectangular microchannels, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 14 June 2019(impact factor: 1.627)

57-F. Talay Akyildiz, Dennis A. Siginer and M'hamed Boutaous, Unsteady Flow of Power Law Fluids With Wall Slip in Microducts, Journal of Fluids Engineering, Vol. 141,AUGUST 2019(impact factor: 1.915).

56- Dennis A Siginer, F Talay Akyildiz and Mhamed Boutaous, Thermally Developing Heat Transfer With Nonlinear Viscoelastic and Newtonian Fluids With Pressure-Dependent Viscosity, Journal of Heat Transfer, Vol. 140, OCTOBER 2018 (impact factor: 3.458)

55- F Talay Akyildiz and K Vajravelu, Galerkin-Chebyshev Pseudo Spectral Method and a Split Step New Approach for a Class of Two dimensional Semi-linear Parabolic Equations of Second Order, Applied Mathematics and Nonlinear Sciences, Volume 3: Issue 1, Pages 255-264, 2018

54- Fahir Talay Akyildiz and Dennis Siginer, Exact solution for forced convection gaseous slip flow in corrugated microtubes, International Journal of Heat and Mass Transfer, Volume 112, September 2017, Pages 553-558) (impact factor: 2.522)

53-Fahir Talay Akyildiz and Dennis Siginer, A note on the steady flow of Newtonian fluids with pressure dependent viscosity in a rectangular duct, International Journal of Engineering Science, Volume 104, July 2016, Pages 1-4 (impact factor: 2.291)

52- F Talay Akyildiz, Dennis A Siginer, K Vajravelu, Robert A Van Gorder, Erratum to: Natural convection heat transfer of a viscous fluid in a vertical porous channel, J Eng Math (2016) 96:211–212

- 51- Alip Mohammed, Dennis Siginer and F. TalayAkyildiz, Eigenvalues of holomorphic functions for the third-boundary condition with general coefficient, Quarterly Applied Mathematics 73 (2015), 553-574 (impact factor: 0.593)
- 50-FahirTalayAkyildiz, Salih Tatar and SuleymanUlusoy, Existence and uniqueness for a nonlinear inverse reaction-diffusion problem with a nonlinear source in higher dimensions, Mathematical Methods in the Applied Sciences, Article first published online: 21 MAR 2013, DOI: 10.1002/mma.2765 (impact factor: 0.877)
- 49-Fahir Talay Akyildiz, Jiri Neustupa and Dennis Siginer, A Steady Weak Solution of the Equations of Motion of a Viscous Incompressible Fluid through Porous Media in a Domain with a Non-Compact Boundary, ACTA APPLICANDAE MATHEMATICAE Volume :119 Issue: 1. Pages: 23- 42 . DOI: 10.1007 /s10440-011-9659-x Published: JUN 2012. (impact factor: 0.702)
- 48- F. Talay Akyildiz, Dennis A. Siginer and K. Vajravelu, Natural Convection and heat transfer of Newtonian fluid in a vertical porous channels and second order nonlinear systems , Journal of Engineering Mathematics, pp. 1–11, 2011. (impact factor: 1.069)
- 47- M. Şahin, Necati Olgun and F. Talay Akyildiz, Generalized Caratheodory Extension Theorem on Fuzzy Measure Space, ABSTRACT AND APPLIED ANALYSIS Article Number: 260457 DOI: 10.1155/ 2012/ 260457 Published: 2012. (impact factor: 1.274)
- 46- F. Talay Akyildiz, Dennis A. Siginer, Fully developed laminar slip and no-slip flow in rough microtubes , paper accepted by ZAMP (The Journal of Applied Mathematics and Physics), Zeitschrift fur Angewandte Mathematik und Physik, vol. 62, no. 4, pp. 741–748, 2011. (impact factor: 1.214)
- 45- F. TalayAkyildiz, Dennis A. Siginer, Discussion: "Effect of Corrugated Roughness on Developed Laminar Flow in Microtubes," (Duan, Z. and Muzychka, Y. M., 2008, ASME Trans. J. Fluids Eng., 130, p. 031102), JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME, vol. 134, no. 8, August, 2012 (impact factor: 0.939)
- 44- F. Talay Akyildiz, Dennis A. Siginer, Huseyin Kaplan, Spectral Approximation for a Nonlinear Partial Differential Equation Arising in Thin Film Flow of a Non-Newtonian Fluid Communications in Nonlinear Science and Numerical Simulation, vol. 17, no. 1, pp. 35–44, 2012 (impact factor: 2.659)

43- F.T. Akyildiz, M.E. Koksal, N. Kaplan, Spectral approximation of an Oldroyd Liquid draining down a porous vertical surface, paper accepted by DDNS (Discrete Dynamics in Nature and Society), (2011) Article ID 285809, 19 pages doi:10.1155/2011/285809 , DDNS (Discrete Dynamics in Nature and Society). (impact factor: 0.882)

42- F Talay Akyildiz, Hamid Bellout, KuppalapalleVajravelu, Robert A. Van Gorder, Existence results for third order nonlinear boundary value problems arising in nano boundary layer fluid flows over stretching surfaces Original Research Article Nonlinear Analysis: Real World Applications, Nonlinear Analysis: Real World Applications, Volume 12, Issue 6, December 2011, Pages 2919-2930 (impact factor: 2.338)

41- F. Talay Akyildiz and Dennis A. Siginer, Forced Convection in Porous-Saturated Ducts of Rectangular, Journal of Porous media, Volume 14, Issue 1, 2011, Pages 81-90. (impact factor: 0.467)

40- F. Talay Akyildiz ,Dennis A. Siginer and LyesKhezzar, ENERGY LOSSES AND HEAT TRANSFER ENHANCEMENT IN TRANSVERSALLY CORRUGATED PIPES .International Journal of Heat and Mass Transfer, vol. 54, no. 15-16, pp. 3801-3806, 2011 (impact factor: 2.522)

39-F Talay Akyildiz, Dennis A. Siginer, Spectral approximation for drainage of an elastico-viscous liquid and error analysis, Numerical Methods for Partial Differential Equations Volume 28, Issue 2, pages 492–505, March 2012. (impact factor: 1.057)

38- H. Kaplan and F.Talay Akyildiz, On Statistical Convergence and Statistical Cauchy Sequences, International Journal of Mathematics and Computation, Volume 10, Number M11, 2011, pages 79-83

37- Robert A. Van Gorder, K. Vajravelu, F Talay Akyildiz , Existence and uniqueness results for a nonlinear differential equation arising in viscous flow over a nonlinearly stretching sheet , Applied Mathematics Letters, Volume 24, Issue 2, February 2011, Pages 238-242. (impact factor: 1.48)

36- F .Talay Akyildiz, Dennis A. Siginer, Existence results and numerical simulation of magnetohydrodynamic viscous flow over a shrinking sheet with suction, Mathematical and Computer Modelling, Volume 52, Issues 1-2, July 2010, Pages 346-354. (impact factor: 2.02)

- 35- F Talay Akyildiz, Dennis A. Siginer, K. Vajravelu, Robert A. Van Gorder, Analytical and numerical results for the Swift–Hohenberg equation, *Applied Mathematics and Computation*, Volume 216, Issue 1, 1 March 2010, Pages 221-226. (impact factor: 1.6)
- 34- F.Talay Akyildiz, Hamid Bellout, Brinkman equation for a corrugated pipe using a spectral–Galerkinmethod , *Computers & Mathematics with Applications*, Volume 59, Issue 8, April 2010, Pages 2443-2451. (impact factor: 1.996)
- 33- F. Talay Akyildiz, Dennis A. Siginer, Galerkin–Legendre spectral method for the velocity and thermal boundary layers over a non-linearly stretching sheet, *Nonlinear Analysis: Real World Applications*, Volume: 11 Issue: 2 Pages: 735-741 Published: APR 2010. (impact factor: 2.338)
- 32- F. Talay Akyildiz, Dennis A. Siginer, K. Vajravelu, J. R. Cannon and Robert A. Van Gorder, Similarity solutions of the boundary layer equations for a nonlinearly stretching sheet, *Mathematical Methods in the Applied Sciences* Volume: 33 Issue: 5 Pages: 601-606 Published: March 30 2010. (impact factor: 0.877)
- 31- Robert A. Van Gorder ,K. Vajravelu and F. Talay Akyildiz, Solutions to the Brinkman-Forchheimer momentum equation for a unidirectional flow over a rectangular domain *Int. J. of Fluid Mechanics Research*, DOI: 10. 1615, Vol.36. i6.60, November 2009
- 30- Robert A. Van Gorder, K. Vajravelu, F. TalayAkyildiz, Viscoelastic Stresses in the Stagnation Flow of a Dilute Polymer Solution, *Journal of Non-Newtonian Fluid Mechanics*, Volume 161, Issue: 1-3 Pages: 94-100 Published: SEP 2009. (impact factor: 1.944)
- 29- F. Talay Akyildiz, K. Vajravelu, R.N. Mohapatra, Erik Sweet, Robert A. Van Gorder, Implicit differential equation arising in the steady flow of a Sisko fluid , *Applied Mathematics and Computation*, Volume 210, Issue 1, 1 April 2009, Pages 189-196. (impact factor: 1.6)
- 28- F.T. Akyildiz,Laguerre spectral approximation of Stokes first problem for third grade fluid, *Nonlinear Analysis: Real World Applications*, Volume 10, Issue 2, April 2009, Pages 1029-1041. (impact factor: 2.338)

- 27-F.T. Akyildiz ,K. Vajravelu and S.-J. Liao, A New method for homoclinic solutions in ordinary differential equations, Chaos, Solitons& Fractals, Volume 39, Issue 3, 15 February 2009, Pages 1073-1082. (impact factor: 1.503)
- 26- Emin Kasap, F. Talay Akyildiz and Keziban Orbay, A generalization of surfaces family with common spatial geodesic, Applied Mathematics and Computation, Volume 201, Issues 1-2, 15 July 2008, Pages 781-789. (impact factor: 1.6)
- 25- F. Talay Akyildiz, K. Vajravelu, Magnetohydrodynamic flow of A viscoelastic fluid, Physics Letters A, Volume 372, Issue 19, 5 May 2008, Pages 3380-3384. (impact factor: 1.626)
- 24- F. Talay Akyildiz, K. Vajravelu and H. Ozekes, Fourier-Galerkin Domain Truncation of Stokes Problem For Oldroyd Four-Constant Liquis, Computers & Mathematics with Applications, Volume 55, Issue 11, June 2008, Pages 2452-2457. (impact factor: 1.996)
- 23-F.T. Akyildiz, Stokes' first problem for a Newtonian fluid in a non-Darcian porous half-space And Laguerre-Galerkin method, Mathematical Methods in the Applied Sciences, volume 30 Issue 17, Pages 2263 – 2277,2007. (impact factor: 0.877)
- 22-F.T. Akyildiz and K. Vajravelu, Orthogonal cubic spline collocation method for the nonlinear parabolic equation arising In non-Newtonian fluid flow, Applied Mathematics and Computation, Volume 189, Issue 1, 1 June 2007, Pages 462-471. (impact factor: 1.6)
- 21-F.T. Akyildiz, Nonlinear Damped Wave Equation Arising in Viscoelastic Fluid Flows., Applied Mathematics Letters, Volume 20, Issue 4, April 2007, Pages 396-400. (impact factor: 1.48)
- 20- F. Talay Akyildiz and K. Vajravelu ,Existence, uniqueness, and quasilinearization results for nonlinear differential equations arising in viscoelastic fluid flow ,Differential Equations and NonLinear Mechanics Volume 1 (2006), Article ID 71717
- 19- F.T. Akyildiz ,H. Bellout and K. Vajravelu, Diffusion of Chemically Reactive Species in a Porous Medium over a Stretching Sheet, Journal of Mathematical analysis and applications 320 (2006) 322–339. (impact factor: 1.119)

- 18- Emin Kasap and F. Talay Akyildiz, Surfaces with common geodesic in Minkowski 3-space, Applied Mathematics and Computation 177 (2006) 260–270. (impact factor: 1.6)
- 17- E. Kasap, M. Yapici and F.T Akyildiz, A numerical study for computation of geodesic curves Applied Mathematics and Computation, , Volume 171, Issue 2, Pages 1206-1213,2005 (impact factor: 1.6)
- 16- F.T. Akyildiz and H. Bellout, Chaos in the thermal convection of a Newtonian fluid with a temperature dependent viscosity , Applied Mathematics and Computation, Volume 162, Issue 3, 25 March 2005, Pages 1103-1118. (impact factor: 1.6)
- 15- F.T. Akyildiz,H. Bellout and K. Vajravelu, An exact solution for the third grade fluid between eccentric cylinders, INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS, Volume 39, Issue 10, December 2004, Pages 1571-1578). (impact factor: 1.463)
- 14- F.T. Akyildiz and H. Bellout, Greatz Problem extended for dipolar fluid, INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER , Volume 47, Issues 12-13, June 2004, Pages 2747-2753). (impact factor: 2.522)
- 13- F.T. Akyildiz and H. Bellout, Viscoelastic Lubrication with Phan-Thein -Tanner fluid(PTT), JOURNAL OF TRIBOLOGY-TRANSACTIONS OF THE ASME, 126, April 2004 ,Issue 2,pp 288-291). (impact factor: 0.897)
- 12- F.T. Akyildiz, On the dispersion of a solute in poiseuille flow of a third- grade fluid in a channel, INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS 38,1553(2003). (impact factor: 1.463)
- 11- F. T. Akyildiz, Dispersion of a Solute in a Poiseuille flow of a viscoelastic fluid, INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE 40, 859(2002).(impact factor: 2.291)
- 10- F. T. Akyildiz, A note on the flow of a third grade fluid between heated Parallel plates, INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS,36,349(2001) . (impact factor: 1.463)

- 9- F. T. Akyildiz, Flow of a Viscoelastic fluid between heated parallel plates, International Journal of Appl. Math. 2,39(2000)
- 8- F. T. Akyildiz, Longitudinal and Torsional oscillations of rods in a viscoelastic fluids, RHEOLOGICA ACTA 37,508(1998). (impact factor: 1.781)
- 7- H. Demir and F. T. Akyildiz, Unsteady Thermal convection of a Non-Newtonian Fluid, INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE , 38,1923(2000). (impact factor: 2.291)
- 6- H. Demir and F. T. Akyildiz, The Singularities near the corner of a Viscoelastic fluid in a 2D cavity, Mathematical & Computational Applications 4,104(1999).
- 5- F. T. Akyildiz, H. Demir and V.S. Erturk , Peristaltic Flow of a Third Grade Fluid in a Planar Channel, Mathematical & Computational Applications, 4, 39 (1999).
- 4- F. T. Akyildiz, A note on the flow of a film of Non-Newtonian fluid, INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS, 33, 1061(1998). (impact factor: 1.463)
- 3- F. T. Akyildiz and R. S. Jones, The generations of steady flow in a rectangular duct, RHEOLOGICA ACTA 32,499(1993). (impact factor: 1.781)
- 2- F. Talay Akyıldız and A. Turan Gürkanlı, Some Properties weighted space of $L^1_w \cap L^2_w$, Ondokuz Mayıs University Science Journal, 1 (3) , (1989), (69-79).
- 1- F. T. Akyildiz, R. S. Jones and K. Walters, On the spring-dashpot representation of linear viscoelastic behaviour, RHEOLOGICA ACTA 29,482(1990). (impact factor: 1.781)