# Curriculum Vitae Mustafa Avci, PhD

Athabasca University

**Applied Mathematics** 

Faculty of Science & Technology

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#### **Degrees**

- PhD Mathematics, Dicle University 2011
- MSc Mathematics, Dicle University 2007
- BSc Mathematics, Dicle University 2001

## **Professional Experience**

- Lecturer (Term), Department of Finance and Management Science, Edwards School of Business, University of Saskatchewan (2021/7 2022/6).
- Tutor, Faculty of Science and Technology, Athabasca University (2021-2022/7)
- Academic Expert, Faculty of Business, Athabasca University (2020-2022/7)
- Mathematics Facilitator (Online), Durham College (2020-2022)
- Assistant Professor (Limited Term), Department of Mathematics, Trent University (2020/8 2021/7).
- Instructor (Limited Term), Department of Science and Technology, Northwestern Polytechnic (2019/8 2020/4)
- Instructor (Sessional), Department of Finance and Management Science, Edwards School of Business, University of Saskatchewan (2019/5 2019/8).
- Postdoctoral Fellow, Department of Mathematics, Morgan State University (2014/9 2015/10).
- Associate Professor, Department of Economics and Administrative Sciences, Batman University (2013/3 2018/10).
- Instructor, Economics and Administrative Sciences Programs, Dicle University (2009/1 2013/3).

#### Research

#### Research Interests

- Analysis of variable exponent PDEs (Deterministic & Stochastic)
- Variable Lebesgue spaces
- Stochastic processes

## **Research Specialization Keywords**

Variable Exponent Lebesgue Spaces, Variational Methods, Nonlinear Analysis, Measure Theory, Operator Theory, PDEs, Stochastic PDEs, Stochastic Processes and Applications.

#### **Research In Progress**

- Generalized volatility models with state-dependent variable exponent drift and diffusion
- PDEs in variable Lebesgue and Sobolev spaces

#### **Research Funding (Awards & Grants)**

- External Funding Proposal: Applied for NSERC-Discovery Grants (Individual) Program 2025 Website
- Athabasca University Academic Research Fund-Publication Award (2025)
- Athabasca University Research Incentive Account (Grant No: 140111RIA, 2023-2026)
- International Postdoctoral Research Fellowship Program. Scientific and Technological Research Council of Turkey (TUBITAK) (Grant No: 1059B191400450, 12 months, 2014-2015). Website
- Dicle University Scientific Project Research Management (DUPAB) Grant (2007 - 2009) for the Research Project: The Solutions of Parabolic and Elliptic
  - Equations with Standard and Nonstandard Growth Conditions in the Variable Exponent Lebesgue-Sobolev Spaces.

#### Refereed Book & Book Chapters

- Nontrivial weak solutions of a quasilinear equation involving p-Laplace operator (as Author), in Advances in Mathematics and Computer Science Vol.2, 2019. ISBN 978-93-89562-00-2 (Print) ISBN 978-93-89562-01-9 (eBook). DOI: 10.9734/bpi/amacs/v2. Website
- A Closer Look at Boundary Value Problems (as Editor), 2020. Nova Science Publishers, Inc. ISBN: 978-1-53617-857-9. Website

# **Refereed Conference Proceedings**

• A new solution of some weighted problems for Riemann-Liouville and Weyl operators (with S. Ograş, R. Mashiyev) (2009), Proceedings of the 6th International ISAAC Congress, Ankara, Turkey, 13 - 18 August 2007. Website

#### **Refereed Journal Articles**

#### Published/Accepted

- 1. Existence and multiplicity of solutions for a discrete fourth-order boundary value problem (with M. Boroun, S. Heidarkhani), *Journal of Nonlinear Evolution Equations and Applications*. Accepted **(2025)**.
- 2. Three Solutions for a double-phase variable-exponent Kirchhoff problem, *Mathematics* 13(15) **(2025)**, 2462. Website
- 3. Singular p(x)-Laplacian equation with application to boundary layer theory, *Applicable Analysis* 104(13) **(2025)**, 2546–2566. Website
- 4. Existence results for a class of singular p(x)-Kirchhoff equations, *Complex Variables and Elliptic Equations* 70(7) **(2025)**, 1222–1253. Website
- 5. On a p(x)-Kirchhoff problem with variable singular and sublinear exponents, *Taiwanese Journal of Mathematics* 29(2) **(2025)**, 379–402. Website
- 6. On a p(x)-Kirchhoff-type equation with singular and superlinear nonlinearities, *Differential Equations and Dynamical Systems*, **(2024)**. Website
- 7. On an anisotropic  $p(\cdot)$ -Laplace equation with variable singular and sublinear nonlinearities, *Communications in Analysis and Mechanics* 16(3) **(2024)**, 554–577. Website
- 8. Multiple solutions for a class of p(x)-Kirchhoff-type equations (with S. Heidarkhani, A. Ghobadi), *Applied Mathematics E-Notes* 22 **(2022)**, 160–168. Website
- 9. Solutions of Ginzburg-Landau-type equations involving variable exponent, *Thai Journal of Mathematics* 20(1) **(2022)**, 369–384. Website
- 10. Critical points approaches to a nonlocal elliptic problem driven by p(x)-biharmonic operator (with S. Heidarkhani, S. Moradi), *Georgian Mathematical Journal* 29(1) **(2021)**, 55–69. Website
- 11. A Class of nonlocal elliptic equations in Orlicz-Sobolev spaces (with B. Suer, V. Turut), *Journal of Abstract and Computational Mathematics* 6(2) **(2021)**, 16–29. Website
- 12. On a nonlocal problem with indefinite weights in Orlicz-Sobolev space (with N. T. Chung), Communications of the Korean Mathematical Society 35(2) (2020), 517-532. Website
- 13. A variational approach to the existence of infinitely many solutions for difference equations (with M. K. Moghadam, S. Tersian), *Journal of New Research in Mathematics* 5(22) **(2020)**, 99–110.
- 14. A topological result for a class of anisotropic difference equations, Annals of the University of Craiova Mathematics and Computer Science Series 46(2) (2019), 328-343. Website

- 15. On some classes of nonlocal problems in Musielak–Sobolev spaces, *Southeast Asian Bulletin of Mathematics* 43 **(2019)**, 791–814.
- 16. Positive ground state solutions to a nonlocal singular elliptic problem, *Canadian Journal of Applied Mathematics* 1(1) **(2019)**, 1–14. Website
- 17. On a nonlocal problem involving a nonstandard nonhomogeneous differential operator (with B. Suer), *Journal of Elliptic and Parabolic Equations* 5(1) **(2019)**, 47–67. Website
- 18. On a Robin problem in Orlicz-Sobolev spaces (with K. Suslu), *TWMS Journal of Applied and Engineering Mathematics* 9(2) **(2019)**, 246–256. Website
- 19. Solutions to p(x)-Laplace type equations via nonvariational techniques, *Opuscula Mathematica* 38(3) **(2018)**, 291–305. Website
- 20. Multivalued elliptic operators with nonstandard growth (with A. Pankov), *Advances in Nonlinear Analysis* 7(1) **(2018)**, 35–48. Website
- 21. Existence results to a nonlinear p(k)-Laplacian difference equation (with M. K. Moghadam), *Journal of Difference Equations and Applications* 23(10) **(2017)**, 1652–1669. Website
- 22. On a nonlocal Neumann problem in Orlicz-Sobolev spaces, *Journal of Nonlinear Functional Analysis* 2017 **(2017)**, Article ID 42, 1-11. Website
- 23. Existence results for anisotropic discrete boundary value problems, *Electronic Journal of Differential Equations* 148 **(2016)**, 1-11. Website
- 24. On a nonlocal problem involving the generalized anisotropic  $p(\cdot)$ Laplace operator, *Annals of the University of Craiova Mathematics*and Computer Science Series 43(2) **(2016)**, 259–272. Website
- 25. Solutions to a system of p(x)-Kirchhoff discrete boundary value problems, *Nonlinear Studies* 23(4) **(2016)**, 665-674. Website
- 26. Existence of solutions for nonlocal problems in Sobolev-Orlicz spaces via Monotone method (with R. Mashiyev, N. T. Chung), *Electronic Journal of Mathematical Analysis and Applications* 4(1) **(2016)**, 63–73. Website
- 27. Positive periodic solutions of nonlinear differential equations system with nonstandard growth (with R. Ayazoglu), *Applied Mathematics Letters* 43 **(2015)**, 5–9. Website
- 28. Nontrivial solutions of discrete nonlinear equations with variable exponent (with A. Pankov), *Journal of Mathematical Analysis and Applications* 431 **(2015)**, 22–33. Website
- 29. Nontrivial weak solutions of a quasilinear equation involving p-Laplace operator, *British Journal of Mathematics & Computer Science* 6(2) **(2015)**, 112–118. Website
- 30. Existence of solutions for fourth-order elliptic equations of Kirchhoff type (with F. Wang, Y. An), *Journal of Mathematical Analysis and Applications* 409(1) **(2014)**, 140–146. Website
- 31. Existence of three solutions for a quasilinear elliptic equation involving the p(x)-Laplacian (with R. Mashiyev), *Sarajevo Journal of Mathematics* 10(23) **(2014)**, 1-13. Website
- 32. Existence and uniqueness of solutions of a nonlocal problem involving the p(x)-Laplacian (with R. Mashiyev), *Annals of the University of Craiova Mathematics and Computer Science Series* 41(1) **(2014)**, 30-37. Website

- 33. Existence results for a nonlocal problem involving the p(x)-Laplacian, Universal Journal of Applied Mathematics 2(3) (2014), 153–159. Website
- 34. Ni-Serrin type equations arising from capillarity phenomena with non-standard growth, *Boundary Value Problems* **(2013)**, Article 55, 1–18. Website
- 35. Existence and multiplicity of solutions for Dirichlet problems involving the p(x)-Laplacian, *Electronic Journal of Differential Equations* 14 **(2013)**, 1–9. Website
- 36. Existence of solutions for an elliptic equation with nonstandard growth (with R. Mashiyev, B. Cekic), *International Journal of Pure and Applied Mathematics* 86(1) **(2013)**, 131–139. Website
- 37. Solutions of a nonlocal elliptic problem involving p(x)-Kirchhoff-type equation, *Applied Mathematics* 3(2) **(2013)**, 56-60. Website
- 38. Existence and uniqueness of solutions for a quasilinear elliptic equation involving p-Laplacian (with R. Mashiyev), *International Journal of Differential Equations and Applications* 12(2) **(2013)**, 95–102. Website
- 39. Existence results for a nonlocal problem involving the p(x)-Laplacian, *Pure and Applied Mathematics Journal* 2(1) **(2013)**, 20–27. Website
- 40. Solutions of nonlocal (p<sub>1</sub>(x), p<sub>2</sub>(x))-Laplacian equations (with R. Mashiyev), *International Journal of Partial Differential Equations*, Vol. 2013, Article ID 364251, 7 pages. Website
- 41. Existence of weak solutions for a nonlocal problem involving the p(x)Laplace operator, *Universal Journal of Applied Mathematics* 1(3)
  (2013), 192-197. Website
- 42. Solutions of an anisotropic nonlocal problem involving variable exponent (with R. Mashiyev, B. Cekic), *Advances in Nonlinear Analysis* 2(3) **(2013)**, 325–338. Website
- 43. On an elliptic system of p(x)-Kirchhoff-type under Neumann boundary condition (with Z. Yucedag, R. Mashiyev), *Mathematical Modelling and Analysis* 17(2) **(2012)**, 161–170. Website
- 44. L^p(x)(\Omega)-estimates of vector fields and applications to magnetostatics problems (with B. Cekic, A. V. Kalinin, R. Mashiyev), *Journal of Mathematical Analysis and Applications* 389(2) **(2012)**, 838–851. Website
- 45. Existence and multiplicity of weak solutions for nonuniformly elliptic equations with nonstandard growth (with R. Mashiyev, B. Cekic, Z. Yucedag), *Complex Variables and Elliptic Equations* 57(5) **(2012)**, 579–595. Website
- 46. Existence and multiplicity of solutions of the p(x)-Kirchhoff type equation via genus theory (with B. Cekic, R. Mashiyev), *Mathematical Methods in the Applied Sciences* 34(14) **(2011)**, 1751–1759. Website
- 47. The Nehari manifold approach for a Dirichlet problem involving the p(x)-Laplacian (with R. Mashiyev, S. Ogras, Z. Yucedag), *Journal of the Korean Mathematical Society* 47(4) **(2010)**, 845-860.
- 48. Existence of solutions for a class of elliptic systems in  $\mathbb{R}^N$  involving the (p, q)-Laplacian (with S. Ogras, R. Mashiyev, Z. Yucedag), *Journal of Inequalities and Applications*, Article 612938 **(2008)**.

#### **Submitted**

- 1. Existence results for the Cox-Ingersoll-Ross model with variable exponent diffusion. Under review.
- 2. On the geometric Brownian motion with state-dependent variable exponent diffusion term. Under review.
- 3. Monotone operator methods for a class of nonlocal multi-phase variable exponent problems. Under review.
- 4. Existence and uniqueness results for a singular elliptic problem governed by an anisotropic  $(p(\cdot), q(\cdot))$ -Kirchhoff-type operator. Under review.
- 5. Anisotropic Singular Equation with  $(p(\cdot), q(\cdot))$ -Laplacian Operator and Hardy-type Potential.Under review.
- 6. A topological result for a singular double phase variable exponent problem. Under review.
- 7. Variational and nonvariational solutions for double phase variable exponent problems. Under review.
- 8. Nehari manifold approach for a singular multi-phase variable exponent problem. Under review.
- 9. Anisotropic Variable exponent Kirchhoff-type equation with double singularity (with B. Cekic, Z. Yucedag). Under review.
- 10. Singular Kirchhoff-Ginzburg-Landau-type equation with variable Exponent(with B. Cekic, Z. Yucedag). Under review.
- 11. On a p(x)-Kirchhoff Equation with double singularity exponent (with B. Cekic, Z. Yucedag). Under review.
- 12. Existence results for a class of double phase singular Kirchhoff-type equations with nonstandard growth (with A. Razani). Under review.

#### Work in progress

1. —

# Presentations (Invited Talks & Contributed Talks)

#### List

- 1. **A generalized stochastic volatility model**, Alberta Mathematics Dialogue, University of Calgary, May 1-2, 2025, Calgary, Canada.
- 2. Enhancing mathematical learning with interactive content and adaptive online assessments (with A. Beltaos, J. Greenwood-Lee), Alberta Mathematics Dialogue, University of Calgary, May 1-2, 2025, Calgary, Canada.
- 3. **The regularization method for multivalued elliptic PDEs with variable exponent**, International Conference on Applied Mathematics, University of Craiova, Craiova, Romania, 29–31 October 2020.
- 4. Variational approach for analysis of PDEs, Mathematics Colloquium, Grande Prairie Regional College, Science Department, February 2020, Grande Prairie, Canada.
- 5. Existence and uniqueness results for a Dirichlet problem in Orlicz-Sobolev spaces, International Conference on Mathematics and

- Mathematics Education (ICMME-2017), 11–13 May 2017, Şanlıurfa, Turkey.
- 6. Nontrivial solutions for a Dirichlet problem in Orlicz-Sobolev spaces, ICMME-2017, 11-13 May 2017, Sanliurfa, Turkey.
- 7. **Solutions of an anisotropic Kirchhoff problem involving variable exponent**, ICMME-2017, 11-13 May 2017, Şanlıurfa, Turkey.
- 8. **Solutions of Kirchhoff problem in anisotropic variable exponent spaces**, ICMME-2017, 11–13 May 2017, Şanlıurfa, Turkey.
- 9. **On some elliptic problems in Orlicz-Sobolev spaces**, International Health and Natural Sciences Conference (INHSC 2017), 19–21 October 2017, Antalya, Turkey.
- 10. Solutions to a nonlocal elliptic problem in Orlicz-Sobolev spaces, INHSC 2017, 19–21 October 2017, Antalya, Turkey.
- 11. Solutions of generalized anisotropic problems in variable exponent spaces, INHSC 2017, 19–21 October 2017, Antalya, Turkey.
- 12. A system of anisotropic discrete boundary value problems, International Engineering, Science and Education Conference, 1–3 December 2016, Diyarbakır, Turkey.
- 13. Existence of three solutions to a nonlinear difference equation involving p(k)-Laplace operator, International Engineering, Science and Education Conference, 1–3 December 2016, Diyarbakır, Turkey.
- 14. Variable Lebesgue spaces and variational approach, Morgan State University, Department of Mathematics, Mathematics Colloquium, November 2014, Baltimore, U.S.A.
- 15. Existence and uniqueness of an elliptic equation with p(x)-Laplace operator, XXVI. National Mathematics Symposium, 4-7 Sept, 2013, Dicle University, Diyarbakır, Turkey.
- 16. Power-type weighted Hardy and Hankel operators in variable exponent Morrey space, "Operators in General Morrey-Type Spaces and Applications" (Dedicated to the 70th Birthday of Prof. Victor I. Burenkov), Ahi Evran University, Kırşehir, Turkey, 20–27 May 2011.
- 17. Maximal and Riesz operators in weighted variable exponent Morrey space, same event, Ahi Evran University, Kırşehir, Turkey, 20–27 May 2011.
- 18. Existence of solutions for nonuniformly elliptic equations of **p(x)-Laplacian type**, 3rd International Conference on Differential Equations and Applications, Lviv, Ukraine, 3-6 November 2010.
- 19. **Existence of solutions for a p(x)-Laplacian in H(N)**, Workshop on Differential Equations and Applications, Pamukkale University, Denizli, Turkey, 18–20 April 2008.
- 20. A new solution of some weighted problems for the Riemann-Liouville and Weyl operators, 6th International ISAAC Congress, 13–18 August 2007, Middle East Technical University (METU), Ankara, Turkey.

# **Teaching**

#### **AU Teaching and Course Coordination**

- MATH 260 Calculus for Social Sciences and Economics (2022 present) (Supervising 1 tutor, 1 marker)
- MATH 366 Complex Variables I (2022 present) (Supervising 1 tutor)
- MATH 370 Applied Real Analysis (2022 present) (Supervising 1 tutor)
- MATH 376 Ordinary Differential Equations (2025 present) (Supervising 2 tutors)
- MATH 492 Special Study I (2022 present)
- MATH 493 Special Study II (2022 present)
- MATH 495 Mathematics Projects I (2022 present)
- MATH 496 Mathematics Projects II (2022 present)
- MATH 216 Computer-Oriented Approach to Statistics (2022 2025) (Supervised 3 tutors)

#### **AU Tutoring**

- MATH 376 Ordinary Differential Equations (2025 present)
- MATH 216 Computer-Oriented Approach to Statistics (2022—2025)
- MATH 365 Multivariable Calculus (2021—2022)
- MGSC 301 Statistics for Business and Economics I (2020 2022)
- MGSC 312 Statistics for Business and Economics II (2020 202)

# **AU Course Development and Revisions**

- MATH 415 Introduction to Measure and Integration (In Development, 2025 — present)
- MATH 426 Introduction to Stochastic Processes (In Development, 2025

   present)
- MATH 437 Introduction to Stochastic Calculus (In Development, 2025

   present)
- MATH 325 Linear Programming Development (In Production) (2024)
- MATH 216 Computer-Oriented Approach to Statistics Revision (2024)
- MATH 260 Calculus for Social Sciences and Economics Revision (2024)

#### **University of Saskatchewan Courses**

- COMM 121 Business Mathematics (2021/6 2022/7)
- COMM 207 Business Statistics II (2019/Summer)
- COMM 104 Business Statistics I (2019/Sipring)

## **Trent University Courses**

- MATH 1005H Applied Calculus (Lecture + Seminar) (2020-21/Fall & Winter & Spring)
- MATH 1110H Calculus I (Lecture + Seminar) (2020/Fall)
- MATH 2120H Calculus IV (Lecture + Seminar) (2021/Winter)
- MATH 4120H Mathematical Modelling I (Lecture + Lab) (2021/Winter)
- AMOD 5220H Mathematical Aspects of Modeling (Lecture + Lab) (2021/Spring)

#### **Durham College Courses**

- MATH 1185 Mathematics for Technology I (2021 2022)
- MATH 2150 Mathematics for Technology II (2020 2021)

#### **Northwestern Polytechnic Courses**

- ST 1510 Introduction to Applied Statistics I (Lecture + Lab) (2019/Fall & Winter)
- ST 2520 Introduction to Applied Statistics II (Lecture + Lab) (2020/ Winter)
- MA 1130 Elementary Calculus I (Lecture + Seminar) (2019/Fall)
- MA 1600 Higher Arithmetic (Lecture + Seminar) (2020/Winter)

#### Morgan State University Courses (USA)

• MATH 241 Calculus I (2015/Spring)

# Batman University Courses (Turkiye) (2013 — 2018)

- 05010303 Business Mathematics
- 05050407 Statistics
- 05010105 Calculus I
- 05010205 Calculus II
- 05010601 Research Methods and Techniques
- 02030306 Differential Equations
- 02030405 Engineering Mathematics
- 02010405 Applied Mathematics for Engineers
- 02040401 Applied Mathematics for Engineers: Numerical Methods
- 02010407 Numerical Analysis
- 01030301 Advanced Analysis I
- 01030401 Advanced Analysis II
- 01030302 Introduction to Topology
- 01030606 Vector Analysis
- 01030701 Functional Analysis I
- 01030809 Functional Analysis II
- 60070101 Functional Analysis and Applications I

- 60070111 Functional Analysis and Applications II
- 60070102 Advanced Real Analysis I
- 60070112 Advanced Real Analysis II
- 60070128 Variational Analysis I
- 60070135 Variational Analysis II
- 600701100 Specialization Course
- 600701101 Seminar
- 61090119 Numerical Methods
- 61090128 Business Statistics
- 61090201 Research Methods

#### Dicle University (Turkiye) (2009 - 2013)

- Business Mathematics
- Business Statistics
- Engineering Mathematics

#### **Supervision**

#### **AU Undergraduate Student Supervision**

- Rizwan Hamidi MATH 492 Special Study I. (2025/3 present) Project Title: Advanced Engineering Mathematics.
- Pascale Boudreau MATH 495 Mathematics Projects I. (2025/1 present)
  - Project Title: Application of the Fixed-point Theorems to the Solutions of Differential Equations.
- Amina Anna Mahamane Ousmane MATH 495 Mathematics Projects I. (2025/5 - 2025/6)
  - Project Title: Investigating the Effectiveness of Optimization Methods: Full-Batch Gradient Descent vs. Stochastic Gradient Descent for Training Regression Models on Housing Market Data.
- John Didiodato MATH 493 Special Study II. (2024/1 2024/5) Project Title: Mathematical Finance.
- Andre Leke Umambo MATH 495 Mathematics Projects I. (2023/7 2023/11)
  - Project Title: The Queuing System.
- Alexander van Dijk MATH 493 Special Study II. (2022/9 2022/12) Project Title: Introduction to Mathematical Finance.
- Mahin Khan MATH 492 Special Study I. (2024/7 2024/12) Project Title: Measure Theory and Lebesgue Integration.

#### Theses Supervised

- Berat Süer On Solutions of the Ginzburg-Landau-type Equation in Orlicz-Sobolev Spaces, M.Sc. Mathematics (Co-supervisor), Batman University, 2020.
- Kenan Süslü On Solutions of Nonlocal Equations in Orlicz-Sobolev Spaces, M.Sc. Mathematics, Batman University, 2017.

- İdris Teymur Coefficient Bounds for Subclasses of M-Fold Symmetric Bi-Univalent Functions, M.Sc. Mathematics (Co-supervisor), Batman University, 2017.
- Diyadin Keskin Approximation by Simple Functions in L^p Lebesgue Spaces, M.Sc. Mathematics (project-based, non-thesis), Batman University, 2016.
- İbrahim Eren Atalay Convex Functions and Inequalities in L^p Lebesgue Spaces, M.Sc. Mathematics (project-based, non-thesis), Batman University, 2016.
- Mehmet Nuri Tüzün, Bounded Linear Operators and Riesz Representation Theorem in L^p Lebesgue Spaces, M.Sc. Mathematics (project-based, non-thesis), Batman University, 2016.
- Mustafa Yılmaz, Approximation by Continuous Functions in L^p Lebesgue Spaces, M.Sc. Mathematics (project-based, non-thesis), Batman University, 2016.

#### **Service & Contributions**

## **AU Standing Committee Memberships**

- FST Faculty Council (2022 present)
- FST Undergraduate Program Council (2025 2028)
- Academic & Professional Development Fund Committee (APDF) (2025 2028)
- Academic Research Fund Committee (ARF) (2024 2027)
- GFC Academic Planning, Policy, and Standards Committee (APPSC) -(2024 - 2027)
- GFC Academic Research Committee (ARC)- (2024 2027)
- Academic & Professional Development Fund Committee Replacement term - (2023 - 2025)

#### **AU Ad Hoc Committee/Group Memberships**

- Research Information Management System (RIMS) Advisory Group (2023 2024)
- Tri-Agency Undergraduate Student Research Award Selection Committee (USRA) - (2025 - present)
- FGS Faculty Council Working Group: Research Software for Graduate Students and Faculty (2025 present)
- ARC CFI-JELF Expression of Interest Review Subcommittee (2025)
- Applied Math Program Advisory Committee (2025 present)
- Mobius Ladership Group (2024 present)
- Hiring Committee service-Assistant Professor Applied Math.
- Hiring Committee service-Tutor MATH 216
- Hiring Committee service-Tutor MATH 266
- Hiring Committee service-Tutor MATH 309
- Hiring Committee service-Tutor MATH 376
- Hiring Committee service-Tutor MATH 476
- Hiring Committee service-Tutor MATH 480
- Hiring Committee service-Tutor MATH 481

#### **Professional Activities**

#### **Service to Discipline**

• Canadian Mathematical Society, Member (2023/12 - present)

#### **Editorial Activities**

- Editorial Board Member Advances in Differential Equations and Control Processes (2025 present)
- Editorial Board Member Pure and Applied Mathematics Journal (2025 present)
- Topical Advisory Panel Member Axioms (2023 present)
- Editorial Board Member International Journal of Scientific and Innovative Mathematical Research (2018 present)
- Editorial Board Member American Journal of Applied Mathematics and Statistics (2015 present)
- Editorial Board Member Journal of Mathematical Sciences and Applications (2015 present)
- Editorial Board Member International Journal of Partial Differential Equations and Applications (2015 present)
- Editorial Board Member Universal Journal of Applied Mathematics (2015 present)
- Guest editor for the Special Issue: Advances in Stochastic Differential Equations: Theory, Computation and Applications in *Axioms* (2025/7 2026/12)
- Guest editor for the Special Issue: Differential Equations and Stochastic Processes: Trends and Challenges in *Mathematics* (2023/10 2024/11)
- Co-Guest editor for the Special Issue: Nonlinear and Variational Analysis and their Applications in *Journal of Function Spaces* (2020/1 -2020/12)

#### **Event Administration**

- Co-organizer Organized Session: Recent Developments in Stochastic Analysis, PDEs and Related Topics.
   Alberta Mathematics Dialogue (AMD), University of Calgary, May 1-2, 2025. Website
- Co-organizer Organized Session: Innovative Strategies in Online Learning Environments for Mathematics Education.
   Alberta Mathematics Dialogue (AMD), University of Calgary, May 1-2, 2025.

#### **Conference Committee Activities**

 Scientific Board Member, 4th International Engineering, Science and Education Conference (INESEC), November 6-8, 2019, Dicle University, Turkey.

- Scientific Board Member, 3rd International Engineering and Natural Sciences conference, Nov 14-17, 2018, Dicle University, Turkey.
- Scientific Board Member, 2nd International Natural and Health Science Conference (INHSC), October 19-21, 2017, Antalya, Turkey.
- Scientific Board Member, 1st International Engineering, Science and Education Conference (INESEC), December 1-3, 2016, Dicle University, Turkey.
- Session Chair, 1st International Engineering, Science and Education Conference (INESEC), December 1-3, 2016, Dicle University, Turkey.

## **Reviewer for Journals**

#### List

- 1. AMS Mathematical/MathSciNet Reviews (Reviewer) Website
- 2. Acta et Commentationes Universitatis Tartuensis de Mathematica
- 3. Acta Mathematica Scienta
- 4. Advances in Nonlinear Analysis
- 5. Afrika Matematika
- 6. AIMS Mathematics
- 7. Annals of the Alexandru Ioan Cuza University Mathematics
- 8. An International Journal of Optimization and Control: Theories & Applications
- 9. Applicable Analysis
- 10. Applied Mathematics E-Notes
- 11. AppliedMath
- 12. Arabian Journal of Mathematics
- 13. Asian Journal of Mathematics and Computer Research
- 14. Axioms
- 15. Boletim da Sociedade Paranaense de Matemática
- 16. Boundary Value Problems
- 17. Boletín de la Sociedad Matemática Mexicana
- 18. Bulletin of the Malaysian Mathematical Sciences Society
- 19. British Journal of Applied Science and Technology
- 20. Complex Variables and Elliptic Equations
- 21. Computation
- 22. Contemporary Mathematics
- 23. Discrete Dynamics in Nature and Society
- 24. Discrete and Continuous Dynamical Systems, Series S
- 25. Differential Equations and Dynamical Systems
- 26. Electronic Research Archive
- 27. Entropy
- 28. FILOMAT
- 29. Foundations
- 30. Fractal and Fractional
- 31. Georgian Mathematical Journal
- 32. Journal of Mathematics
- 33. Journal of Mathematical Physics
- 34. Journal of Nonlinear Mathematical Physics
- 35. Journal of Advances in Mathematics

- 36. Journal of Advances in Mathematics and Computer Science
- 37. Journal of Inequalities and Applications
- 38. Journal of Nonlinear Functional Analysis
- 39. Journal of Elliptic and Parabolic Equations
- 40. Journal of Pseudo-Differential Operators and Applications
- 41. Kragujevac Journal of Mathematics
- 42. Mathematics
- 43. Mathematical Methods in the Applied Sciences
- 44. Nonlinear Analysis
- 45. Numerical Algorithms
- 46. Proceedings of the Edinburgh Mathematical Society
- 47. Rocky Mountain Journal of Mathematics
- 48. Qualitative Theory of Dynamical Systems
- 49. SIAM Journal on Imaging Sciences
- 50. Symmetry
- 51. TWMS Journal of Applied and Engineering Mathematics
- 52. Zeitschrift für angewandte Mathematik und Mechanik
- 53. Zeitschrift für Analysis und ihre Anwendungen

## **Professional Development**

# **Continued Professional Development**

- Higher Education Teaching Certificate-Online Course by Harvard University Derek Bok Center for Teaching and Learning, Oct-Dec 2020.
- Orientation for Distance Education-the Centre for Professional and Part-time Learning Durham College, 2020.
- Valuing Diversity and Supporting Inclusivity-Virtual Workshop by Trent University, 2020.
- How to Deliver Experiential Learning in a Remote Course, Centre for Teaching & Learning, Trent University, 2020.
- Learning How to Increase Learner Engagement- Online Course by LinkedIn Learning, 2020.
- Flipping the Classroom-Online Course by Lynda.com, 2020.
- Teaching Online: Synchronous Classes-Online Course by Lynda.com, 2020.
- How to Engage your Students in a Virtual Environment-webinar by McGraw-Hill. 2020.
- Developing Your Course Syllabus-Online Course by The Gwenna Moss Centre for Teaching and Learning, University of Saskatchewan, 2020.
- Remote Teaching Essentials: Constructive Alignment in a Remote Context-Online Course by the Gwenna Moss Centre for Teaching and Learning, University of Saskatchewan, 2020.
- Teach Adult Learners in Higher Education-Online Course by Lynda.com, 2020.
- Educational Technology for Student Success-Online Course by Lynda.com, 2020.
- Communication in the 21st Century Classroom-Online Course by Lynda.com, 2020.

- Learning Microsoft Teams for Education-Online Course by Lynda.com, 2020.
- Foundations of Learning Management Systems (LMS)-Online Course by Lynda.com, 2020.
- Pedagogical Courses (with credit, taken during PhD), Dicle University, Diyarbakir, Turkey, 2011.
- The Certificate of Pedagogy Formation for Teachers, Dicle University, Diyarbakir, Turkey, 2001.

#### Tech (Research & Education) Skills

- Teaching in a variety of formats, including face-to-face, online, and hybrid/blended classrooms.
- Instructing/Teaching/ Conducting seminars and labs remotely (synchronously and asynchronously).
- Working with educational technologies and Learning Management Systems (LMS): Mobius, Blackboard, Canvas, Moodle, Google Classroom, Brightspace.
- Competent at: Python, MATLAB, SPSS.

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