# Curriculum Vitae

# Mustafa Avci — Curriculum Vitae

## Degrees

- PhD Mathematics, Dicle University
- MSc Mathematics, Dicle University--2007
- BSc Mathematics, Dicle University--2005

## Professional Experience

- Lecturer (Term), Department of Finance and Management Science, Edwards School of Business, University of Saskatchewan (2021/7 - 2022/6).
- Assistant Professor (Term), Department of Mathematics, Trent University (2020/8 - 2021/7).
- Instructor (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 Programmes, Dicle University (2009/1 - 2013/3).

## Teaching

## AU Teaching and Course Coordination

- MATH 260 Calculus for Social Sciences and Economics (2022 — p)
- MATH 366 Complex Variables I (2022 — p)
- MATH 370 Applied Real Analysis (2022 — p)
- MATH 376 Ordinary Differential Equations (2025 — p)
- MATH 492 Special Study I (2022 — p)
- MATH 493 Special Study II (2022 — p)
- MATH 495 Mathematics Projects I (2022 — p)
- MATH 496 Mathematics Projects II (2022 — p)
- MATH 216 Computer-Oriented Approach to Statistics (2022 — 2025).

## AU Tutoring

- MATH 376 Ordinary Differential Equations (2025 — p)

- 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 — p)
- MATH 426 Introduction to Stochastic Processes (In Development, 2025 — p)
- MATH 437 Introduction to Stochastic Calculus (In Development, 2025 — p)
- MATH 325 Linear Programming — Development (In Production) (2024)
- MATH 216 Computer-Oriented Approach to Statistics — Major Revision (2024)
- MATH 260 Calculus for Social Sciences and Economics — Minor 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 (Turkey) (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 (Turkey) (2009 — 2013)

- Business Mathematics
- Business Statistics
- Engineering Mathematics

## 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.

## 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

## 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

## Papers (click to see the lists)

▸ **Published / Accepted**
▸ **Submitted**
▸ **In preparation**

## Presentations & Talks

▶ **List**

# Supervision

# AU Undergraduate Student Supervision

- Rizwan Hamidi - MATH 492 Special Study I. (2025/3 - )
  Project Title: Advanced Engineering Mathematics.
- Pascale Boudreau - MATH 495 Mathematics Projects I. (2025/1 - )
  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 - )
- 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 - )
- FGS Faculty Council Working Group: Research Software for Graduate Students and Faculty - (2025 - )
- ARC CFI-JELF Expression of Interest Review Subcommittee (2025)
- Applied Math Program Advisory Committee - (2025 - )
- Mobius Ladership Group - (2024 - )
- 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 - )

## Editorial Activities

- Editorial Board Member - Advances in Differential Equations and Control Processes (2025 - )
- Editorial Board Member - Pure and Applied Mathematics Journal (2025 - )
- Topical Advisory Panel Member - Axioms (2023 - )
- Editorial Board Member - International Journal of Scientific and Innovative Mathematical Research (2018 - )
- Editorial Board Member - American Journal of Applied Mathematics and Statistics (2015 - )
- Editorial Board Member - Journal of Mathematical Sciences and Applications (2015 - )
- Editorial Board Member - International Journal of Partial Differential Equations and Applications (2015 - )
- Editorial Board Member - Universal Journal of Applied

Mathematics (2015 - )
- 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 Commitee 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**

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