



Abdullah Özbekler

Curriculum Vitae, December 27, 2017

Contact Information

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Education

1999-2005 **PhD**, *Middle East Technical University*, Ankara, Turkey, Mathematics.
1996-1999 **MS**, *Middle East Technical University*, Ankara, Turkey, Mathematics.
1991-1995 **BS**, *Middle East Technical University*, Ankara, Turkey, Mathematics Education.

MS Thesis

Title *On Blow Up of Solutions of Second Order Nonlinear Parabolic Equations*
Supervisors Prof. Dr. A. Okay Çelebi & Prof. Dr. Varga Kalantarov
Theme Partial Differential Equations

PhD Thesis

Title *Sturmian Comparison Theory for Impulsive Differential Equations*
Supervisor Prof. Dr. Ağacık Zafer
Theme Impulsive Differential Equations

Experience

- 2017 **Prof. Dr.**, *Atilim University*, Mathematics, Ankara, Turkey.
- 2012–2017 **Assoc. Prof. Dr.**, *Atilim University*, Mathematics, Ankara, Turkey.
- **Visiting Researcher (September 2014–September 2015)**: Post-doctoral fellowship by The Scientific and Technological Research Council of Turkey (TUBITAK) to perform a research in Texas A&M University-Kingsville, Kingsville, TX, USA.
- 2006–2012 **Assist. Prof. Dr.**, *Atilim University*, Mathematics, Ankara, Turkey.
- **Visiting Researcher (September 2011–December 2011)**: Post-doctoral fellowship from Masaryk University, Faculty of Science, Department of Mathematics and Statistics, Brno, Czech Republic.
- 2004–2006 **Lecturer**, *Atilim University*, Mathematics, Ankara, Turkey.
- 1996–2004 **Research Assistant**, *Middle East Technical University*, Mathematics, Ankara, Turkey.

Research Area

- Differential & Integral Equations
- Impulsive Differential Equations
- Differential Inequalities
- Dynamic Equations
- Functional Differential Equations
- Difference Equations


Research Subjects



- Sturmian & Leighton type comparison theorems, Wirtinger type inequalities
- (Super/Sub)-half-linear and Emden-Fowler type (non)impulsive differential equations
- Sturmian theory for parabolic impulsive differential equations
- Oscillation theory for functional (delay) differential equations
- Existence of (non)principal solutions and its applications
- Oscillation theory in dynamic equations
- Hartman & Lyapunov type inequalities
- Oscillation of discrete or impulsive Volterra equations



Awards & Fellowships

- 2014 Post-doctoral fellowship award by The Scientific and Technological Research Council of Turkey (TUBITAK) to perform a research in Texas A&M University-Kingsville, Kingsville, TX, USA.
- 2012 Year 2012, METU Prof. Dr. Mustafa N. PARLAR Education and Research Foundation, Research Encouragement Award.
- 2011 Post-doctoral fellowship from Masaryk University, Faculty of Science, Department of Mathematics and Statistics, Brno - Czech Republic.
- 2007 Best PhD. Thesis Award of the Year 2005–2006, Middle East Technical University.

Computer skills

Basic Mathematica 

Intermediate HTML, OpenOffice  , Microsoft Windows 

Advanced L^AT_EX, ODE-Architect  , Maple 

Memberships

2005–Present Turkish Mathematical Association

Languages

Turkish Mother tongue

English Advanced

Teaching Ability

- Advanced Calculus
- Ordinary Differential Equations
- Partial Differential Equations
- Impulsive Differential Equations
- Functional Differential Equations
- Complex Calculus
- Linear Algebra
- Applied Mathematics
- Dynamical Systems
- Analytic Geometry

Lectured Courses

- Advanced Calculus
- Differential Equations
- Partial Differential Equations
- Discrete Mathematics & Combinatorics
- Theory of Ordinary Differential Equations
- Analytic Geometry
- Linear Algebra
- Applied Mathematics
- Dynamical Systems & Chaos
- Introduction to Theoretical Aspects of Ordinary Differential Equations

Graduate Student Supervision

Sibel Doğru PhD, “Asymptotic Integration of Impulsive Differential Equations”, Middle East Technical University, January 2017. (as Co-Supervisor)

Kübra Uslu PhD, “Sturmian Theory for Impulsive Partial Differential Equations”, Abant İzzet İşler Baysal University. (Started at September 2016)

Editorial

ACM	Applied and Computational Mathematics
HJMS	Hacettepe Journal of Mathematics and Statistics
TJANT	Turkish Journal of Analysis and Number Theory
TJM	Turkish Journal of Mathematics, 2015–2016

Reviewing

zbMATH	Zentralblatt Math
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Refereeing

• Scientific Journals.

- Abstract and Applied Analysis
- Advances in Difference Equations
- Analysis
- Applications and Applied Mathematics
- Applied Mathematics and Computation
- Applied Mathematics Letters
- Boundary Value Problems
- Bulletin of the Malaysian Mathematical Sciences Society
- Bulletin of Mathematical Analysis and Applications
- Cogent Mathematics
- Computers and Mathematics with Applications
- Differential Equations and Applications
- Electronic Journal Differential Equations
- Electronic Journal of Qualitative Theory of Differential Equations
- European Physical Journal
- Hacettepe Journal of Mathematics and Statistics
- International Journal of Dynamical Systems and Differential Equations
- Journal of Inequalities and Applications
- Journal of King Saud University Science
- Journal of Mathematical Analysis and Applications
- Mathematica Slovaca
- Mathematical and Computer Modelling
- Mathematical Methods in Applied Sciences
- Punjab University Journal of Mathematics
- Science China Mathematics
- SpringerPlus
- Turkish Journal of Mathematics

• Conference Proceedings.

- Proceedings of 6th ISAAC (Ankara - Turkey 2007)
- Proceedings of 7th ICNAAM* (Rethymno - Greece 2009)

Collaborators

- Ravi P. Agarwal** Department of Mathematics, Texas A&M University-Kingsville, 700 University Blvd., Kingsville, TX 78363-8202, USA.
E-mail: agarwal@tamuk.edu, URL: www.tamuk.edu/math/faculty/agarwal.html
- Erbil Çetin** Department of Mathematics, Ege University, 35100 Bornova, İzmir, Turkey.
E-mail: erbil.cetin@ege.edu.tr, URL: sci.ege.edu.tr/~math
- Ondrej Döslý** Department of Mathematics and Statistics, Faculty of Science, Masaryk University, Kotlarska 2, CZ-61137, Brno, Czech Republic.
E-mail: dosly@math.muni.cz, URL: www.math.muni.cz/~dosly
- Roman Simon Hilscher** Department of Mathematics and Statistics, Faculty of Science, Masaryk University, Kotlarska 2, CZ-61137, Brno, Czech Republic.
E-mail: hilscher@math.muni.cz, URL: www.math.muni.cz/~hilscher
- James S.W. Wong** Department of Mathematics, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong.
E-mail: jsw@chinneyhonkwok.com
- Ağacık Zafer** Department of Mathematics, Middle East Technical University, Çankaya 06531, Ankara, Turkey.
E-mail: zafer@metu.edu.tr, URL: www.metu.edu.tr/~zafer

Publications

A. SCI and SCI-E:

- A₂₃ A. Özbekler, *Sub-linear oscillations via nonprincipal solutions*, Mathematical Reports. (Accepted)
- A₂₂ A. Özbekler, *On the oscillation of discrete Volterra equations with positive and negative nonlinearities*, Journal of Integral Equations & Applications. (Accepted)
- A₂₁ A. Özbekler, *Sturmian comparison theory for half-linear and nonlinear differential equations via Picone identity*, Filomat **31** (2017), no. 5, 1185–1194.
- A₂₀ Ravi P. Agarwal, E. Çetin and A. Özbekler, *Lyapunov type inequalities for second-order forced dynamic equations with mixed nonlinearities on time scales*, Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM, **111** (2017) 231–246.
- A₁₉ Ravi P. Agarwal, A. Özbekler, *Lyapunov type inequalities for mixed nonlinear Riemann-Liouville fractional differential equations with a forcing term*, J. Comput. Appl. Math. **314** (2017) 69–78.
- A₁₈ Ravi P. Agarwal, A. Özbekler, *Lyapunov type inequalities for n th order forced differential equations with mixed nonlinearities*, Commun. Pure Appl. Anal. **15** (2016) 2281–2300.
- A₁₇ A. Özbekler, *On the oscillation of Volterra integral equations with positive and negative nonlinearities*, Math. Methods Appl. Sci. **39** (2016) 1388–1394.
- A₁₆ Ravi P. Agarwal, A. Özbekler, *Lyapunov type inequalities for second order forced mixed nonlinear impulsive differential equations*, Appl. Math. Comput. **282** (2016) 216–225.
- A₁₅ Ravi P. Agarwal, A. Özbekler, *Lyapunov type inequalities for second order sub and super-half-linear differential equations*, Dynam. Syst. Appl. **24** (2015) 211–220.
- A₁₄ Ravi P. Agarwal, A. Özbekler, *Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations*, Appl. Math. Comput. **265** (2015) 456–468.
- A₁₃ A. Özbekler, *Picone type formula for half-linear impulsive differential equations with discontinuous solutions*, Math. Methods Appl. Sci. **38** (2015) 1592–1600.
- A₁₂ Ravi P. Agarwal, A. Özbekler, *Lyapunov type inequalities for even order differential equations with mixed nonlinearities*, J. Inequal. Appl. **2015** (2015):142, 1–10.
- A₁₁ A. Özbekler, *Sturmian theory for second order differential equations with mixed nonlinearities*, Appl. Math. Comput. **259** (2015) 379–389.
- A₁₀ O. Došlý, A. Özbekler and R. Simon Hilscher, *Oscillation criterion for half-linear differential equations with periodic coefficients*, J. Math. Anal. Appl. **393** (2012) 360–366.
- A₉ A. Özbekler, A. Zafer, *Nonoscillation and oscillation of second-order impulsive differential equations with periodic coefficients*, Appl. Math. Lett. **25** (2012) 294–300.

- A₈ A. Özbekler, James S.W. Wong and A. Zafer, *Forced oscillation of second-order nonlinear differential equations with positive and negative coefficients*, Appl. Math. Lett. **24** (2011) 1225–1230.
- A₇ A. Özbekler, A. Zafer, *Oscillation of solutions second order mixed nonlinear differential equations under impulsive perturbations*, Comput. Math. Appl. **61** (2011) 933–940.
- A₆ A. Özbekler, A. Zafer, *Picone type formula for non-selfadjoint impulsive differential equations with discontinuous solutions*, Electron. J. Qual. Theory Differ. Equ. (2010), No. 216, 1–12.
- A₅ A. Özbekler, A. Zafer, *Principal and nonprincipal solutions of impulsive differential equations with applications*, Appl. Math. Comput. **216** (2010) 1158–1168.
- A₄ A. Özbekler, A. Zafer, *Interval criteria for forced oscillation of super-half-linear differential equations under impulse effect*, Math. Comput. Modelling **50** (2009) 59–65.
- A₃ A. Özbekler, A. Zafer, *Forced oscillation of super-half-linear impulsive differential equations*, Comput. Math. Appl. **54** (2007) 785–792.
- A₂ A. Özbekler, A. Zafer, *Picone's formula for linear non-selfadjoint impulsive differential equations*, J. Math. Anal. Appl. **319** (2006) 410–423.
- A₁ A. Özbekler, A. Zafer, *Sturmian comparison theory for linear and half-linear impulsive differential equations*, Nonlinear Anal.(TMA) **63** (2005) 289–297.

B. Other Refereed Journals:

- B₃ A. Özbekler, A. Zafer, *Wong's oscillation theorem for second-order delay differential equations*, J. Math. Sciences **222** (2017), no 3, 304–311.
- B₂ Ravi P. Agarwal, A. Özbekler, *Lyapunov type inequalities for second-order differential equations with mixed nonlinearities*, Analysis **36** (2016) 245–252.
- B₁ A. Özbekler, A. Zafer, *Leighton-Coles-Wintner type oscillation criteria for half-linear impulsive differential equations*, Adv. Dyn. Syst. Appl. **5** (2010) 205–214.

C. International Conference Proceedings:

- C₃ A. Özbekler, A. Zafer, *Forced oscillation of second-order impulsive differential equations with mixed nonlinearities*, Differential and Difference Equations, Springer Proceedings in Mathematics and Statistics **47** (2013), 183–195.
- C₂ A. Özbekler, A. Zafer, *Second-order oscillation of mixed nonlinear dynamic equations with several positive and negative coefficients*, in: "Dynamical Systems, Differential Equations and Applications", Proceedings of the 8th AIMS Conference on Dynamical Systems, Differential Equations and Applications" (Dresden, 2010), W.Feng, Z.Feng, M.Grasselli, A.Ibragimov, X.Lu, S.Siegmund, and J.Voigt, editors, Discrete and Continuous Dynamical Systems, Supplement 2011, Pages 1167-1175. American Institute of Mathematical Sciences (AIMS), Springfield, MO, 2011.

C₁ A. Özbekler, *Oscillation criteria for second order nonlinear impulsive differential equations*, Further Progress in Analysis, Proceedings of the 6th International ISAAC* Congress, (Ankara-TURKEY, August-2007) eds. H.G.W. Begehr, A.O. Celebi and R.P. Gilbert, World Scientific, pp. 545, 2009.

D. Notes:

D₁ A. Özbekler, *A proposed geometry problem*, Pi Mu Epsilon Journal, Problem Department Section (Spring 2012), Prb. no: 1255.

Conferences, Workshops & Seminars

- 2017 “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, December 20, 2017, Hacettepe University, Ankara, Turkey.
- TREPAM*2017, “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations” July 31 - August 4 2017, “1 Decembrie 1918” University of Alba Iulia, Alba Iulia, Romania.
 - 8th WDEA* 2017, “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, June 2-4 2017, Dokuz Eylül University, İzmir, Turkey.
 - 18th International Conference DSMSI* 2017, “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations” May 24-26 2017, National Committee of Ukraine by Theoretical and Applied Mechanics, Taras Shevchenko National University of Kyiv, Ukraine.
- 2016 “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, December 8, 2016, METU, Ankara, Turkey.
- “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, December 1, 2016, Bilkent University, Ankara, Turkey.
 - “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, May 2016, Atilim University, Ankara, Turkey.
 - “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, May 11, 2016, Ankara University, Turkey.
 - 11. Ankara Mathematics Days (11. AMG*), “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, May 26-27, 2016, Ankara University, Turkey.
 - O.D.Equations Brno2016 on the occasion of the 60th birthday of Professor Ondřej Došlý, “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, June 6-8, 2016, Faculty of Science, Masaryk University, Brno, Czech Republic.
 - ICAMA*2016 in the Memory of Professor Gusein Sh. Guseinov (Hüseyin Şirin Hüseyin), “Sturmian theory for second-order differential equations with mixed nonlinearities”, July 11-13, 2016, Atilim University, Ankara, Turkey.

- ICAA*2016, “Sturmian theory for second-order differential equations with mixed nonlinearities”, July 12-15, 2016, Ahi Evran University, Kirsehir, Turkey.
- 2015 The 9th DEDS*, “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, May 14-16, 2015, Texas A&M University-Commerce, University Center Dallas, Dallas, TX, USA.
- “Disconjugacy via Lyapunov and Vallée-Poussin type inequalities for forced differential equations”, April 8, 2015, Texas A&M University-Kingsville, Department of Mathematics, TX, Kingsville, USA.
- 2014 International Congress in Honour of Professor Ravi P. Agarwal, “Nonprinciple solutions and extensions of Wong’s oscillation criteria to forced second-order impulsive and delay differential equations”, June 2014, Uludag University, Bursa, Turkey.
- ICNDDE* 2014, “Sturmian theory for second order differential equations with mixed nonlinearities”, May 2014, Side, Antalya, Turkey.
 - “Sturmian theory for second order differential equations with mixed nonlinearities”, April 30, 2014, Ankara University, Turkey.
- 2013 DSS*, “Sturmian theory for second order differential equations with mixed nonlinearities”, November 30, 2013, METU*, Ankara, Turkey.
- “Nonprinciple solutions and Wong’s type oscillation criteria for forced second-order impulsive and delay differential equations”, October 2013, Atilim University, Ankara, Turkey.
 - 6th WDEA* 2013, “Wong’s type oscillation theorem for second-order delay differential equations”, September 2013, Izmir University of Economics, Izmir, Turkey.
 - 26. National Mathematics Symposium (26. UMS*), “A Wong type oscillation theorem for second-order delay differential equations via nonprincipal solutions”, September 2013, Dicle University, Diyarbakir, Turkey.
 - The 12th IWDSA*, “Forced oscillation of second-order delay differential equations via nonprinciple solution”, August 12-14, 2013, Atilim University, Ankara, Turkey.
 - 8. Ankara Mathematics Days (8. AMG*), “Forced oscillation of second-order delay differential equations via nonprinciple solution”, June 13-14, 2013, Cankaya University, Ankara, Turkey.
 - 16th International Conference DSMSI* 2013, “Forced oscillation of second-order delay differential equations via nonprinciple solution” May 2013, Department of Complex System Modeling, Faculty of Cybernetics, Taras Shevchenko National University of Kiev, Ukraine.
 - “Forced oscillation of second-order delay differential equations via nonprinciple solution”, April 2013, Hacettepe University, Ankara, Turkey.
 - DSS*, “Forced oscillation of second-order delay differential equations”, April 2013, METU*, Ankara, Turkey.
 - “Forced oscillation of second-order delay differential equations by means of nonprinciple solutions”, April 2013, Cankaya University in Ankara, Turkey.
- 2012 The 11th IWDSA*, “Oscillation criterion for half-linear impulsive differential equations with periodic coefficients”, June 2012, Çankaya University in Ankara, Turkey.

- 2011 “Nonprincipal solutions of impulsive differential equations with applications and recent developments”, November 2011, Masaryk University in Brno, Czech Republic.
- 8th ISAAC, “A nonoscillation criterion for half-linear impulsive differential equations with periodic coefficients”, Aug 2011, Peoples’ Friendship University of Russia, in Moscow, Russia.
- 2010 8th AIMS*, ICDSDEA, “Forced oscillations of super-linear and sub-linear differential equations with positive and negative coefficients”, May 2010, Technical University of Dresden, in Dresden, Germany.
- 2009 ISAAC*, “Principal and non-principal solutions of impulsive differential equations with applications”, July 2009, Imperial College in London, UK.
- DSS*, “On principal and non-principal solutions of second order differential equations”, May 2009, METU*, Ankara, Turkey.
- 2008 DSS*, “Interval criteria for forced oscillation of super-half-linear differential equations under impulse effect”, November 2008, METU*, Ankara, Turkey.
- ADES*, “Forced oscillation of second order linear and half-linear difference equations”, February 2008, METU*, Ankara, Turkey.
- 2007 ISAAC*, “Oscillation criteria for second order non-linear impulsive differential equations”, August 2007, METU*, Ankara, Turkey.
- 2006 ADES*, “Picone’s formula for linear non-selfadjoint impulsive differential equations”, June 2006, ATU*, Ankara, Turkey.
- 2005 The First International Workshop on Dynamic Equations on Time Scales, June 2005, Bahcesehir University, Istanbul, Turkey.
- ADES*, Part I: “Picone’s formula for linear impulsive differential equations”, Part II: “Picone’s formula for linear non-selfadjoint impulsive differential equations”, February 2005, METU*, Ankara, Turkey.
- 2002 ADES*, “Sturmian-Leighton type comparison theory for linear and half-linear impulsive differential equations”, March 2002, GU*, Ankara, Turkey.
- 2000 Days of Applied Mathematics, June 2000, ZKU*, Zonguldak, Turkey.
- 1998 Days of Applied Mathematics, November 1998, SU*, Sakarya, Turkey.

ADES*: Ankara Differential Equations Seminars, **METU***: Middle East Technical University, **ATU***: Atilim University, **GU***: Gazi University, **HU***: Hacettepe University, **SU***: Sakarya University, **ZKU***: Zonguldak Karaelmas University, **ISAAC***: International Society for Analysis its Applications and Computation, **DSS***: Dynamical Systems Seminars, **AIMS***: American Institute of Mathematical Sciences, **IWDSA***: International Workshop on Dynamical Systems and Applications, **ICNAAM***: International Conference of Numerical Analysis and Applied Mathematics, **DSMSI***: Dynamical System Modeling and Stability Investigations, **UMS***: Ulusal Matematik Sempozyumu, **AMG***: Ankara Matematik Günleri, **WDEA***: International Workshop on Differential Equations and Applications, **ICNDDE***: International Conference on Nonlinear Differential and Difference Equations: Recent Developments and Applications, **DEDS***: International Conference on Differential Equations and Dynamical Systems, **ICAMA***: International Conference on Applied Mathematics and Analysis, **ICAA***: International Conference on Analysis and its Applications, **TREPAM***: Recent Trends in Pure and Applied Mathematics.