

## Turgut Akyürek

Name	Turgut	
Family	AKYÜREK	
Title	Dr.	
Date of Birth	23-04-1959	
Place of Birth	Nevsehir/Turkey	
Nationality	Republic of Turkey	
Marital Status	Married	
Phone	(90-312) 2331303	
E-mail	<a href="mailto:turgutakyurek@cankaya.edu.tr">turgutakyurek@cankaya.edu.tr</a>	

	Page
1. Education.....	2
2. Professional Experience .....	2
3. Memberships .....	3
4. Publications .....	4
a. Theses.....	4
b. Publications (Science Citation Index).....	4
c. Publications ( <i>Symposium</i> ).....	5
d. Publications ( <i>Other</i> ).....	5
e. Submitted Seminar Papers .....	6
5. Projects .....	6
6. Activities as Book / Journal Reviewers/Organizing Committee Memberships .....	7
7. Interest Areas.....	8
8. Languages.....	9
9. Computer Skills.....	10
10. Lectures Given.....	10
11. Special Training Taken.....	11
12. Award and Scholarship.....	11
a. Award (General) .....	11
b. Award (Projects) .....	11
c. Scholarship.....	12

## 1. Education

Degree	School	Date	Point	Honor
Ph.D.	Mechanical Engineering, Middle East Technical University, Ankara, Turkey	1986-1991	3.50/4.00	+
M.Sc.	Mechanical Engineering, Boğaziçi University, Istanbul, Turkey	1982-1984	3.44/4.00	+
B.Sc.	Mechanical Engineering, Boğaziçi University, Istanbul, Turkey	1980-1982	3.10/4.00	+
B.Sc.	Military Academy, Land Forces Command, Ankara, Turkey	1976-1980	3.93/4.00	7 <sup>th</sup> in 914
High School	Kuleli Military High School, Land Forces Command, Istanbul, Turkey	1973-1976	9.81/10.0	2 <sup>nd</sup> in 825

## 2. Professional Experience

Position	Address	Dates
Instructor	Mechanical Engineering Dept., Çankaya University, Ankara, Turkey	2011-
Guest Instructor Acting Chairman	Mechanical Engineering Dept., Gazi University, Ankara, Turkey Turkish Standards Institution, Defense Standards & Engineering Standards Preparation Groups, Acting Chairman, Ankara, Turkey	2007-2010
Guest Instructor	Defense Sciences Institute, Land Forces Military Academy, Ankara, Turkey	2007-2008
Program Manager	Chief of Weapon, Ammunition & Rocket Section, Technical Affairs Department, Ministry of Defense, Ankara, Turkey	2006-2007
Chief of Department and Instructor	Mechanical Engineering Department, Military Academy, Land Forces Command, Ankara, Turkey	2005-2006
Program Manager	Chief of Weapon Systems & Ammunition Section, Technical and Project Management Department, Land Forces Command, Ankara, Turkey	2004-2005
Planning Manager	Chief of Planning Section, Technical and Project Management Department, Land Forces Command, Ankara, Turkey	2001-2004
SPGMO Turkish Representative	Stinger Project Group Management Office (SPGMO), Defense Procurement & Technology Department (BWB), Koblenz, Germany	1998-2001
Project Manager	Research, Development & Technology Dept., Ministry of National Defense, Ankara, Turkey	1996-1998

International Relations Coordinator and Project Manager	Research, Development & Technology Dept., Ministry of National Defense, Ankara, Turkey	1990-1996
Visiting Researcher	National Research Council (NRC), National Aeronautical Establishment (NAE), Ottawa, Canada	1989-1990
International Relations Coordinator	Research, Development & Technology Dept., Ministry of National Defense, Ankara, Turkey	1988-1989
Chief of Department and Instructor	Mechanical Engineering Department, Military Academy, Land Forces Command, Ankara, Turkey	1986-1988
Teaching Instructor	Mechanical Engineering Department, Military Academy, Land Forces Command, Ankara, Turkey	1984-1986

### 3. Memberships

Cankaya University Mechanical Engineering Department, Committee on Committee on Education Program, Member	2019-
Cankaya University Mechanical Engineering Department, Committee on National and International Relations (ERASMUS inclusive), Coordinator	2016-
Cankaya University Mechanical Engineering Department, Committee on University and Industry Cooperation, Committee Member	2016-2019
American Society of Mechanical Engineers (ASME)	2013-
Cankaya University Mechanical Engineering Department, Course Coordinator	2011-
Cankaya University Mechanical Engineering Department, Committee on Summer Practice, Committee Member	2011-2018
Cankaya University Mechanical Engineering Department, Committee on Research Assistantship Exams, Committee Member	2011-2019
Weapon Systems and Technologies Panel, Turkish Ministry of National Defense	2014-2016
Cankaya University, 8th Engineering and Technology Symposium, 14-15 April 2015, Ankara, Organization Committee	2015-2015
Cankaya University, 6th Engineering and Technology Symposium, 25-26 April 2013, Ankara, Advisory Board and Assessment Committee	2013-2013
Cankaya University, 5th Engineering and Technology Symposium, 26 April 2012, Ankara, Session Chairman	2012-2012
Turkish Standards Institution, Engineering & Defense Standards Preparation Groups, Vice Chairman, Ankara	2008-2009
SAVTEK 2008, Defense Sciences Congress, 26-28 June 2008, METU, Ankara, Academic Board	2008-2008
Turkish Standards Institution, Defense Standards Preparation Group, Vice Chairman, Ankara	2007-2008

2 <sup>nd</sup> Defense Applications Modeling and Simulation Conference (USMOS 2007), Program Committee, METU, Ankara	2007-2007
NATO CNAD AC 326	2006-2007
NATO CNAD AC 327	2006-2007
3 <sup>rd</sup> Defense Technologies Congress, Academic Board, METU, Ankara	2006-2006
NATO CNAD NAAG LG4 SG2 Accuracy, Ballistics and Explosives	2004-2005
Military Academy, 1 <sup>st</sup> Defense Sciences Promotion Award, Selection Board	2003-2004
Stinger Project Group Management Office	1998-2001
Turkish Standardization Institute, Naval Group	1994-1995
WEAG, EUCLID, CEPA 3, RTP 3.4 Composite Materials for Hypersonic Missiles, Project Management Group Chairman	1992-1994
WEAG, EUCLID, CEPA 3, RTP 3.1 Aeronautical Application Technologies, Project Management Group	1991-1995
WEAG, Panel II, CEPA 3 Advanced Materials Steering Committee	1990-1998
WEAG Panel II Turkish National Coordinator	1990-1998
NATO AGARD Turkish National Coordinator	1990-1996
NATO AGARD Structures and Materials Panel	1990-1998
Turkish Standardization Institute Ship Construction Permanent Special Committee	1990-1991
NATO AGARD Turkish National Coordinator	1988-1989

## 4. Publications

### a. Theses

Akyurek, Turgut	Damage Tolerance Life Estimation Of Critical Parts Of A Fighter Aircraft	Doctoral Dissertation, Middle East Technical University, 1-393, 1991
Akyurek, Turgut	Fatigue Crack Growth Life Prediction And Analysis	Master Thesis, Boğaziçi University, 1-121, 1984

### b. Publications (Science Citation Index)

Akyürek, Turgut	Analysis and Simplified Modeling of Simulation of Tests for Medium-duty Truck Collision with Twin Anti-ram Bollards	International Journal of Crashworthiness, 2019 <a href="https://doi.org/10.1080/13588265.2019.1626530">https://doi.org/10.1080/13588265.2019.1626530</a>
Akyürek, Turgut; Bilir, Ö.Gündüz	A Survey Of Fatigue Crack Growth Life Estimation Methodologies	Engineering Fracture Mechanics 42, 5, 797-803, 1992.
Akyürek, Turgut; Bilir, Ö.Gündüz	A Critique On Fatigue Crack Growth Life Estimation Methodologies	International Journal of Fatigue 14, 1, 30-34, 1992

**c. Publications (Symposium)**

Akyürek, Turgut	Assessment of the Use of AutoCAD in Mechanical Engineering Technical Drawing Education	8. Mühendislik ve Teknoloji Sempozyumu Bildiriler Kitabı, Çankaya Üniversitesi, 69-75, 2015
Akyürek, Turgut	OSTİM Örnekleme İncelemesi Çerçevesinde Bir Bölgesel Sanayileşme Modeli Önerisi	Makine İmalat Teknolojileri Kongresi MATİT 2013, Bildiriler Kitabı, TMMOB Makine Mühendisleri Odası, 204-211, 2013
Akyürek, Turgut	Hasar Toleransında Parametrik Analiz – Devir Sayma Tekniğinin Etkisi	5. Mühendislik ve Teknoloji Sempozyumu Bildiriler Kitabı, Çankaya Üniversitesi, 217-220, 2012
Akyürek, Turgut	Neyi Yerli Üretelim – Mevcut Uygulamaya İlişkin Değerlendirme ve Öneriler	SAVTEK 2004 Savunma Teknolojileri Kongresi Bildirileri, 433-441, 2004
Akyürek, Turgut	Kara Kuvvetleri Modernizasyon Projelerinin Teknolojik Değerlendirmesi	Kara Harp Okulu Bilim ve Teknoloji Paneli, 2002
Batmaca, Semsî; Akyürek, Turgut	Araştırma-Geliştirme (Ar-Ge) Sorunları	TSK Güçlendirme Vakfı-MSB Savunma Sanayii İlişkileri Paneli Bildirileri, 33-66, 1994
Akyürek, Turgut; Bilir, Ö.Gündüz	Yorulma Çatlağı İlerlemesi Tahmin Metodolojileri Üzerinde Bir İnceleme	3. Ulusal Kırılma Konferansı Bildirileri, 69-82, 1991

**d. Publications (Other)**

Akyürek, Turgut	Assessment of the Use of AutoCAD in Mechanical Engineering Technical Drawing Education	Çankaya University Journal of Science and Engineering, Volume 14, No. 1, 42-98, 2017
Akyürek, Turgut	Hasar Toleransında Parametrik Analiz – Devir Sayma Tekniğinin Etkisi	Çankaya University Journal of Science and Engineering, Volume 10, No. 1, 91-100, 2013
Akyürek, Turgut	Support Program for the Structures and Materials Panel – Support to Greece, Portugal and Turkey 1982-1997	NATO AGARD R, 40-46, 1997
Akyürek, Turgut	TTCP-HTP 3 Collaborative Exercise: Validation Of Crack Growth Models By Comparison With Crack Growth Test Results - Cracks IV Program	National Research Council Canada, NAE, Ltr-St-1757, 1990

Akyürek, Turgut	TTCP-HTP 3 Collaborative Exercise: Validation Of Crack Growth Models By Comparison With Crack Growth Test Results - Crkgro Program	National Research Council Canada, NAE, Ltr-St-1781, 1990
Akyürek, Turgut	TTCP-HTP 3 Collaborative Exercise: Validation Of Crack Growth Models By Comparison With Crack Growth Test Results - Fastran Program	National Research Council Canada, NAE, LTR-ST-1782, 1990
Akyürek, Turgut	TTCP-HTP 3 Collaborative Exercise: Validation Of Crack Growth Models By Comparison With Crack Growth Test Results - Cracks IV, Crkgro And Fastran Programs	National Research Council Canada, NAE, LTR-ST-1788, 1990

### e. Submitted Seminar Papers

Defence Industry: What should be manufactured domestically?	Cankaya University, Faculty of Engineering and Architecture, Ankara	03.04.2011
A Comparative Analysis of Damage Tolerance Life Estimation Methodologies Used in Aerospace Industry	Middle East Technical University, Ankara, Turkey	21.12.1994

## 5. Projects

Autonomous UAV Design	Supervisor, Graduation project	2018-2019
Design of a Subsonic Wind Tunnel	Supervisor, Graduation project sponsored by ÇANKAYA UNIVERSITY	2017-2018
Design of 6 component Mount and Balance System for a Wind Tunnel	Supervisor, Graduation project sponsored by ÇANKAYA UNIVERSITY	2017-2018
Design of a Test Setup that can measure frictional torque of different kinds of bearings under controlled parameters	Supervisor, Graduation project sponsored by ORS	2016-2017
Fatigue Life Test System Design for Excavator Digging Apparatus	Supervisor, Graduation project sponsored by HİDROMEK	2015-2016
Design of Light or Soon Activated Handle-Free Door Opening Mechanism of Fully Integrated Dishwasher	Supervisor, Graduation project sponsored by ARÇELİK	2014-2015
CNC Machine for Door Machining	Project Observer on behalf of KOSGEB	2014
Unmanned Autonomous Forklift	Project Observer on behalf of KOSGEB	2012-2013
Pressurized Vapor Activated Wiper Pump	Project Referee on behalf of KOSGEB	2012
Various Weapon, Ammunition, Rocket and Missile Projects	Technical Services Department, Ministry of National Defense, Ankara, Turkey	2006-2007

Modernization of Technical Sciences Department Laboratories	Military Academy, Land Forces Command, Ankara, Turkey	2005-2006
Various Weapon Systems and Ammunition Projects	Technical and Project Management Department, Land Forces Command, Ankara, Turkey	2004-2005
Stinger Missile Coproduction	Stinger Project Group Management Office (SPGMO), Defense Procurement & Technology Department (BWB), Koblenz, Germany	1998-2001
Meeting the Defense Industry Requirements Domestically	Research, Development & Technology Dept., Ministry of National Defense, Ankara, Turkey	1996-1998
Composite Materials for Hypersonic Missiles (RTP 3.4)	Turkish-French & German common project, Project Manager, Research, Development & Technology Dept., Ministry of National Defense, Ankara, Turkey	1992-1994
Aeronautical Application Technologies (RTP 3.1)	Turkish-German-French-Dutch-Italian-Portuguese common project, Research, Development & Technology Dept., Ministry of National Defense, Ankara, Turkey	1991-1995
M113 Armored Personnel Carrier Modernization	Turkish-Pakistani-Egyptian-Jordanian common project, Research, Development & Technology Dept., Ministry of National Defense, Ankara, Turkey	1990-1991
A Comparative Analyses of the Fatigue Codes used by Aeronautical Industries	National Research Council (NRC), National Aeronautical Establishment (NAE), Ottawa, Canada	1989-1990

## 6. Activities as Book / Journal Reviewers/Organizing Committee Memberships

Book Reviewer	Engineering Mechanics: Statics in SI Units, 14 <sup>th</sup> Edition, Russell Hibbeler, Pearson	2016, 2019
Journal Reviewer	Journal of Reinforced Plastics and Composites, jrp.sagepub.com	2014
Journal Reviewer	Universal Journal of Mechanical Engineering, www.hrpub.org	2014-
Organizing Committee Member / Paper Reviewer	8 <sup>th</sup> Engineering and Technology Symposium, Çankaya University, Ankara	2015
Paper Reviewer in Symposium	6 <sup>th</sup> Engineering and Technology Symposium, Çankaya University, Ankara	2013

Paper Reviewer in Symposium	5 <sup>th</sup> Engineering and Technology Symposium, Çankaya University, Ankara	2012
Academic Board Membership / Paper Reviewer	SAVTEK 2008, Defence Sciences Congress, Academic Board, 26-28 June 2008, METU, Ankara	2008
Program Committee Membership / Paper Reviewer	2 <sup>nd</sup> Defence Applications Modeling and Simulation Conference (USMOS 2007), Program Committee, METU, Ankara	2007
Academic Board Membership / Paper Reviewer	3 <sup>rd</sup> Defence Technologies Conference, Academic Board, METU, Ankara	2006

## 7. Interest Areas

Impact Mechanics	Truck-bollard collision
	Crash-tests and crashworthiness
Fracture Mechanics	Crack initiation and propagation
	Combat and prevention of fatigue
	Non-destructive inspection
	Friction and wear (fretting)
Fatigue, Fatigue Testing	Cyclic loading, random loading
	Load monitoring, load history, load history prediction
	Data acquisition, reduction and analysis
	Cumulative damage
	Fatigue life prediction
	Standardization of tests (FALSTAFF)
Damage Tolerance	Fail safety
	Crack propagation mechanisms
	Stress intensity factor calculation
Composite Materials	Polymer, Metal and Ceramic Matrix Composites
	Production and Testing
	Design of Composite Structures
	Macro and Micro Analysis of Composites
Weapon System Design and Ballistics	Weapon System Design, Production, Testing and Evaluation
	System Integration
	Internal ballistics
	External ballistics
	Terminal ballistics, armor, impact mechanics



Project Management	Program Management
	R&D Project Management
	Systems Project Management
Defense Technologies	Technology management, planning
	Technology matrices
	Critical technologies
Planning, Programming and Budgeting	Future planning
	Programming
	Cost analysis and budgeting
Organizational Restructuring	Restructuring
Lecture Delivery	New organization establishment
	Advanced Mechanics of Materials
	Advanced Strength of Materials
	Engineering Mechanics
	Innovative Engineering Analysis and Design
	Innovative Engineering Design and Implementation
	Design of Composite Structures
	Mechanical Engineering Orientation
	Material Science
	Strength of Materials
	Internal Combustion Engines
	Machine Design
	Ballistics
	Weapon System Design
	Fracture Mechanics
	Project Management
	Applied Mathematics
	Research Methods
	Failure Analysis

## 8. Languages

Turkish	Native Language
English	KPDS (93/100)
	ECL (98/100)

German	Introductory
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## 9. Computer Skills

Programming Languages	Fortran 95, Fortran 77, Basic
Office Programs	Windows, MS Office (Word, Excel, Power Point, Access, Project), Front Page, Photoshop, Adobe Acrobat Writer, Internet Explorer
Engineering Package Programs	Matlab, AutoCad, Inventor, Solid Works, Ansys, LsDyna, Quick Load, Quick Target, Cracks IV, Fastran, Crkgro
Written Package Programs	Fatigue, Rate, Loads

## 10. Lectures Given

Lecture		Place
Undergraduate	Innovative Engineering Analysis and Design (ME407)	Cankaya University
	Innovative Engineering Design and Implementation (ME408)	Cankaya University
	Design of Composite Structures (ME403)	Cankaya University
	Mechanical Engineering Orientation (ME102) Workshop	Cankaya University
	Engineering Mechanics: Dynamics (ME204)	Cankaya University
	Statics (ME203)	Cankaya University
	Strength of Materials (ME202)	Cankaya University
	Computer Aided Engineering Drawing II (ME114)	Cankaya University
	Computer Aided Engineering Drawing I (ME113)	Cankaya University
	Computer Aided Engineering Drawing (IE111)	Cankaya University
	Mechanics of Materials	Gazi University
	Weapon Systems and Ballistics	TLFC Military Academy
	Propulsion Systems and Weapon System Design	TLFC Military Academy
	Internal Combustion Engines	TLFC Military Academy
	Machine Design	TLFC Military Academy
Material Science	TLFC Military Academy	

	Strength of Materials	TLFC Military Academy
	Engineering Mechanics II (Dynamics)	TLFC Military Academy
	Engineering Mechanics I (Statics)	TLFC Military Academy
Graduate	Advanced Mechanics of Materials (ME626)	Cankaya University
	Fracture Mechanics (ME542)	Cankaya University
	Advanced Strength of Materials (ME526)	Cankaya University
	Research Methods	TLFC Military Academy
	Failure Analysis (Forensic Engineering)	Gazi University

## 11. Special Training Taken

Orientation Training	Land Forces Military Academy, Ankara, Turkey	12.09.2005-16.09.2005
International Cadre Training	Land Forces Language School, Istanbul, Turkey	11.05.1998-19.06.1998
International Cadre Training	Land Forces Command Intelligence School, Ankara, Turkey	13.04.1998-31.08.1998
Teaching Techniques	Navy Karamürsel Training Center, Gölcük, Turkey	07.09.1987-25.09.1987
Applied Gas Dynamics	901. Aircraft Main Depot and Factory Command, Ankara, Turkey	29.06.1987-03.07.1987

## 12. Award and Scholarship

### a. Award (General)

Money Award (Staff Prominent Service)	General. M. Hikmet BAYAR, Turkish Land Forces Commander	19.07.1995
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### b. Award (Projects)

Best Graduation Project Award in ME Projects (Autonomous UAV Design) - Supervisor	13 <sup>rd</sup> R&D Project Bazaar Organized by Çankaya University Technology Transfer Office and Polatlı Organized Industry, Ankara, Turkey	13.06.2019
Best Graduation Project Award in ME Projects + TUBİTAK support (Design of a Subsonic Wind Tunnel with a 6 Component Mount and Balance System sponsored by Çankaya University) - Supervisor	12 <sup>th</sup> R&D Project Bazaar Organized by Çankaya University Technology Transfer Office and Polatlı Organized Industry, Ankara, Turkey	07.06.2018
Best Graduation Project Award in ME Projects (Fatigue Life Test System	10 <sup>th</sup> R&D Project Bazaar Organized by Çankaya University Technology Transfer	03.06.2016

Design for Excavator Digging Apparatus sponsored by Hidromek) - Supervisor	Office and Polatlı Organized Industry, Ankara, Turkey	
Best Graduation Project Award in ME Projects (Design of Light or Soon Activated Handle-Free Door Opening Mechanism of Fully Integrated Dishwasher sponsored by Arçelik) - Supervisor	9 <sup>th</sup> R&D Project Bazaar Organized by Çankaya University Technology Transfer Office and Polatlı Organized Industry, Ankara, Turkey	11.06.2015

### **c. Scholarship**

NATO Defense Research Scholarship	National Aeronautical Establishment, National Research Council, Ottawa, Canada	01.09.1989-01.09.1990
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