# Asst. Prof. ALİ TÜRKER KUTAY

## Personal Information

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**International Researcher IDs**
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ScopusID: 10642297500
Yoksis Researcher ID: 164682

## Education Information

Doctorate, Georgia Institute of Technology, Aerospace Engineering, United States Of America 2000 - 2005

## Foreign Languages

English, C1 Advanced

## Dissertations

Doctorate, Neural Network Based Adaptive Output Feedback Control: Applications and Improvements, Georgia Institute Of Technology, Aerospace Engineering, 2005
Postgraduate, Modeling and simulation of the TÜRKSAT 1B satellite using artificial neural networks, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 1999

## Research Areas

Flight Dynamics and Stability, Performance, Flight Control Systems

## Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018 - Continues
Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2010 - 2018

## Academic and Administrative Experience

Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2012 - 2015

## Courses

ROBUST CONTROL IN AEROSPACE SYSTEMS, Postgraduate, 2022 - 2023
AUTOMATIC CONTROL SYSTEMS II, Undergraduate, 2022 - 2023
INTRODUCTION TO AIRCRAFT PERFORMANCE, Undergraduate, 2017 - 2018
SYSTEMS DYNAMICS, Undergraduate, 2018 - 2019

## Advising Theses

KUTAY A. T., Kill analysis tool for missiles equipped with proximity fuzes, Postgraduate, E.ÖZTÜRK(Student), 2021
KUTAY A. T., Full Envelope Nonlinear Controller Design for a Novel Electric VTOL(eVTOL) Air-taxi via INDI Approach Combined with CA, Doctorate, E.CAN(Student), 2021
KUTAY A. T., ESTIMATION OF AERODYNAMIC LOADS OF A PROPELLER THROUGH IMPROVED BLADE ELEMENT AND MOMENTUM THEORY AND PROPELLER DESIGN OPTIMIZATION, Doctorate, D.DERYA(Student), 2021
Kutay A. T., Noise minimal & green trajectory and flight profile optimization for helicopters, Doctorate, A.YÜCEKAYALI(Student), 2020
Kutay A. T., Experimental design and statistical modeling for efficient wind tunnel testing, Postgraduate, Ö.SAVAŞ(Student), 2019
Kutay A. T., Multidisciplinary design, optimization and performance analysis tool for ballistic missiles, Postgraduate, M.AYŞE(Student), 2019
Kutay A. T., Time and state dependent parameterized model reference adaptive control, Postgraduate, Z.OKUMUŞ(Student), 2019
Kutay A. T., Physical subspace identification for helicopters, Doctorate, S.AVCIOĞLU(Student), 2019
Kutay A. T., MISSILE SYSTEM DESIGN AND OPTIMIZATION INTEGRATED WITH SYSTEM ENGINEERING METHODOLOGIES, Postgraduate, D.BAHÇECİ(Student), 2019
KUTAY A. T., A method for estimating target velocity and range with passive seeker data, Postgraduate, B.CAN(Student), 2018
KUTAY A. T., System identification and control of a fixed wing aircraft by using flight data obtained from X-plane flight simulator, Postgraduate, E.ÇETİN(Student), 2018
KUTAY A. T., An algorithmic fault-tolerant control architecture without actuator redundancy, Doctorate, A.MARANGOZ(Student), 2018
KUTAY A. T., Drone supported pre-scan optimal active suspension for 8x8 vehicle, Postgraduate, A.SANCAR(Student), 2018
KUTAY A. T., An active rocket launcher design for an attack helicopter, Postgraduate, T.BARAN(Student), 2018
KUTAY A. T., A robust altitude control approach for sea skimming missiles, Postgraduate, Ö.DÜLGAR(Student), 2018
KUTAY A. T., A model based approach for aircraft sensor fault detection, Postgraduate, Ö.SERÇEKMAN(Student), 2018
KUTAY A. T., Reinforcement learning control for autorotation of a simple point-mass helicopter model, Postgraduate, K.KOPŞA(Student), 2018
KUTAY A. T., Mathematical modeling of a small-scale helicopter and MRAC design with time based uncertainty parametrizations, Postgraduate, M.GÜRLER(Student), 2018
KUTAY A. T., Trajectory optimization of a tactical missile by usinggenetic algorithm, Postgraduate, B.DİLAN(Student), 2018
KUTAY A. T., Terrain referenced navigation of an aircraft using particle filter, Postgraduate, B.TURAN(Student), 2017
KUTAY A. T., Development of an object-oriented design, analysis, and simulation software for a generic air vehicle, Postgraduate, M.ŞENİPEK(Student), 2017
KUTAY A. T., Aerodynamic parameter estimation of a supersonic missile with rapid speed variation by using kalman filtering, Postgraduate, T.BAYOĞLU(Student), 2016
KUTAY A. T., Adaptive roll control of guided munitions, Postgraduate, N.TUĞÇE(Student), 2016
KUTAY A. T., Abrupt fault detection and accommodation for air data systems, Postgraduate, S.KARAHAN(Student), 2016
KUTAY A. T., Vision-aided landing for fixed wing unmanned aerial vehicle, Postgraduate, E.ESİN(Student), 2016

KUTAY A. T., Neural extended kalman filter based angle-only target tracking for cruise missiles, Postgraduate, G.EŞSİZ(Student), 2016
KUTAY A. T., An Integration Method over a Moving Window for Exponential Convergence in Adaptive Control without Persistency of Excitation, Postgraduate, M.YAYLA(Student), 2016
KUTAY A. T., Design and control of nose actuation kit for position correction of spin stabilized munitions under wind effect, Postgraduate, M.EROĞLU(Student), 2016
KUTAY A. T., Interfacing simulink/matlab with V-REP for analysis and control synthesis of a quadrotor, Postgraduate, J.KHALİLOV(Student), 2016
KUTAY A. T., Comparison of concurrent learning and derivative-free model reference adaptive control against parameter variation, Postgraduate, S.BURAK(Student), 2016
KUTAY A. T., Abrupt fault detection and accommodation for air data systems, Postgraduate, S.Karahan(Student), 2016
KUTAY A. T., Stochastic and deterministic analysis of nonlinear missile engagement scenarios using 5-dof 6-dof and adjoint models, Postgraduate, E.Sezer(Student), 2015
KUTAY A. T., A comparison of model following control systems for helicopter flight control near hover, Postgraduate, I.DOĞA(Student), 2015
KUTAY A. T., Stochastic and deterministic analysis of nonlinear of nonlinear missile engagement scenarios using 5-dof 6-dof and adjoint model, Postgraduate, E.SEZER(Student), 2015
KUTAY A. T., Range to-go estimation for a tactical missile with a passive seeker, Postgraduate, S.KALE(Student), 2015
KUTAY A. T., Lyapunov based nonlinear impact angle guidance law for stationary targets, Postgraduate, H.ULAŞ(Student), 2015
KUTAY A. T., Fourier series based model reference adaptive control, Postgraduate, R.BERK(Student), 2014
KUTAY A. T., Adaptive robust attitude controller design for a quadrotor platform, Postgraduate, E.YILMAZ(Student), 2014
KUTAY A. T., Geometric tracking control of a fully actuated rigid body and applicatin to attitude control of a quadrotor UAV, Postgraduate, V.Bashiri(Student), 2014
KUTAY A. T., Geometric tracking control of a fully actuated rigid body and application to attitude control of a quadrotor UAV, Postgraduate, V.BASHIRI(Student), 2014
KUTAY A. T., Modeling and experimental identification of quadrotor aerodynamics, Postgraduate, D.DERYA(Student), 2014
KUTAY A. T., Missile guidance with impact angle constraint, Postgraduate, B.ÇİLEK(Student), 2014
KUTAY A. T., Trajectory tracking of a quadrotor unmanned aerial vehicle (UAV) via attitude and position control, Postgraduate, E.CAN(Student), 2014
KUTAY A. T., Aerodynamic parameter estimation of a missile, Postgraduate, A.AKSU(Student), 2013
UZOL O., KUTAY A. T., Development of a high-fideliity transient aerothermal model for a helicopter turboshaft engine for inlet distortion and engine deterioration simulations, Postgraduate, Y.Novikov(Student), 2012
KUTAY A. T., UZOL O., Development of a high-fidelity transient aerothermal model for a helicopter turboshaft engine for inlet distortion and engine deterioration simulations, Postgraduate, Y.NOVİKOV(Student), 2012
KUTAY A. T., Aerodynamic parameter estimation of a missile in closed loop control and validation with flight data, Postgraduate, G.AYDIN(Student), 2012
KUTAY A. T., Development of a comprehensive and modular modelling, analysis and simulation tool for helicopters, Postgraduate, A.YÜCEKAYALI(Student), 2011

## Published journal articles indexed by SCI, SSCI, and AHCI

I. **Full envelope nonlinear flight controller design for a novel electric VTOL (eVTOL) air taxi**
Suiçmez E., Kutay A. T.
AERONAUTICAL JOURNAL, vol.1, pp.1-28, 2023 (SCI-Expanded)

II. **Optimization of reward shaping function based on genetic algorithm applied to a cross validated deep deterministic policy gradient in a powered landing guidance problem**
Nugroho L., Andiarti R., Akmeliawati R., KUTAY A. T., Larasati D. K., Wijaya S. K.

Engineering Applications of Artificial Intelligence, vol.120, 2023 (SCI-Expanded)

III. **Single channel digital controller design for a high spinning rate rolling airframe missile**
Suicmez E. C., KUTAY A. T.
AERONAUTICAL JOURNAL, vol.126, no.1305, pp.1815-1833, 2022 (SCI-Expanded)

IV. **Identification of Physical Helicopter Models Using Subspace Identification**
Avcioglu S., KUTAY A. T., Leblebicioglu K.
JOURNAL OF THE AMERICAN HELICOPTER SOCIETY, vol.65, no.2, 2020 (SCI-Expanded)

V. **Command governor-based adaptive control for dynamical systems with matched and unmatched uncertainties**
YAYLA M., Arabi E., KUTAY A. T., Yucelen T.
INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING, vol.32, no.8, pp.1124-1144, 2018 (SCI-Expanded)

VI. **Simulation of Rapidly Maneuvering Airfoils with Synthetic Jet Actuators**
Jee S., Lopez Mejia O. D., Moser R. D., Muse J. A., KUTAY A. T., Calise A. J.
AIAA JOURNAL, vol.51, no.8, pp.1883-1897, 2013 (SCI-Expanded)

VII. **Experimental results on adaptive output feedback control using a laboratory model helicopter**
Kutay A. T., Calise A., Idan M., Hovakimyan N.
IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY, vol.13, no.2, pp.196-202, 2005 (SCI-Expanded)

## Articles Published in Other Journals

I. **Hibrit hedef kestirim algoritması tasarımı**
Kale S., KUTAY A. T.
Havacılık ve Uzay Teknolojileri Dergisi, vol.7, no.2, pp.103-110, 2014 (Peer-Reviewed Journal)

II. **Dört rotorlu bir insansız hava aracının geri adımlama yöntemi ile yol takibi kontrolü**
Emrecan S., KUTAY A. T.
Havacılık ve Uzay Teknolojileri Dergisi, vol.7, no.2, pp.1-13, 2014 (Peer-Reviewed Journal)

III. **Flow simulation of a controlled airfoil with synthetic jet actuators**
Jee S. K., Lopez O., Moser R. D., Kutay A. T., Muse J. A., Calise A. J.
19th AIAA Computational Fluid Dynamics Conference, 2009 (Scopus)

IV. **Vortex model based adaptive flight control using synthetic jets**
Muse J. A., Tchieu A. A., Kutay A. T., Chandramohan R., Calise A. J., Leonard A.
AIAA Guidance, Navigation, and Control Conference and Exhibit, 2009 (Scopus)

V. **A novel force control traverse for simulating UAV flight in a wind tunnel**
Muse J. A., Kutay A. T., Calise A. J.
AIAA Atmospheric Flight Mechanics Conference and Exhibit, 2008 (Scopus)

VI. **Experimental trapped vorticity flight control using an augmenting error minimization adaptive law**
Muse J. A., Kutay A. T., Calise A. J.
AIAA Guidance, Navigation and Control Conference and Exhibit, 2008 (Scopus)

## Books & Book Chapters

I. **Adaptive Neural Network Based Approach for Active Flow Control**
Idan M., Calise A. J., KUTAY A. T., David E P.
in: Manipulation and Control of Jets in Crossflow, Karagozian Ann R., Cortelezzi Luca, Soldati Alfredo, Editor, Springer-Verlag Wien, Viyana, pp.287-297, 2003

## Refereed Congress / Symposium Publications in Proceedings

I. **Experimental Study on Active Vibration Control of a Piezo-Beam Structure with Finite Series Based Adaptive Controller**
Gezer R. B., Alan A. B., Kutay A. T., ŞAHİN M.
AIAA SciTech Forum and Exposition, 2024, Florida, United States Of America, 8 - 12 January 2024

II. **Quadcopter Guidance Law Design using Deep Reinforcement Learning**
Aydinli S. U., KUTAY A. T.
10th International Conference on Recent Advances in Air and Space Technologies, RAST 2023, İstanbul, Turkey, 7 - 09 June 2023

III. **Comparison of Deep Reinforcement Learning-Based Guidance Strategies under Non-Ideal Conditions**
Aydinli S. U., KUTAY A. T.
9th International Conference on Control, Decision and Information Technologies, CoDIT 2023, Rome, Italy, 3 - 06 July 2023, pp.1524-1529

IV. **A Modification to Adaptive Control with Time-varying Learning Rate for Improved Transient Performance**
YAYLA M., KUTAY A. T.
AIAA Science and Technology Forum and Exposition, AIAA SciTech Forum 2022, California, United States Of America, 3 - 07 January 2022

V. **Energy-based adaptive flight controller for improved coordinated longitudinal control**
YAYLA M., KUTAY A. T., Kutlu A.
AIAA Science and Technology Forum and Exposition, AIAA SciTech Forum 2021, Virtual, Online, 11 - 15 January 2021, pp.1-18

VI. **An adaptive flight controller design for a tilt-prop fixed wing uav for all flight modes**
YAYLA M., KUTAY A. T., Senipek M., Gungor O.
AIAA Scitech Forum, 2020, Florida, United States Of America, 6 - 10 January 2020, pp.1-20

VII. **Single hidden layer neural network based model reference adaptive controller for estimation of periodic disturbances**
Gezer R. B., KUTAY A. T.
AIAA Scitech Forum, 2019, California, United States Of America, 7 - 11 January 2019

VIII. **Multidisciplinary optimization and performance analysis tool for ballistic missiles**
Adsız M. A., KUTAY A. T.
AIAA Scitech Forum, 2019, California, United States Of America, 7 - 11 January 2019

IX. **Implementation of physical subspace identification on a realistic helicopter**
Avcıoğlu S., KUTAY A. T., Leblebicioğlu K.
AIAA Scitech Forum, 2019, California, United States Of America, 7 - 11 January 2019

X. **Helicopter parameters estimation from subspace identification by constrained nonlinear optimization**
Avcıoğlu S., KUTAY A. T., LEBLEBİCİOĞLU M. K., Özkazanç Y., YAVRUCUK İ.
45th European Rotorcraft Forum 2019, ERF 2019, Warszawa, Poland, 17 - 20 September 2019, vol.2, pp.1001-1012

XI. **A Model Based Approach for Sensor Fault Detection in Civil Aircraft Control Surface**
Sercekman O., KUTAY A. T.
IEEE/ION Position, Location and Navigation Symposium (PLANS), Monterrey, Mexico, 23 - 26 April 2018, pp.715-729

XII. **Experimental design and statistical modeling methodology for wind tunnel aerodynamics of an agile missile to improve the simulation accuracy and performance**
Savas O., Topbas E., Unal K., Karaca H. D., KUTAY A. T.
AIAA Modeling and Simulation Technologies Conference, 2018, Florida, United States Of America, 8 - 12 January 2018

XIII. **Nonlinear optimal adaptive transition control of a tolt-prop VTOL UAV**
Senipek M., YAYLA M., Gungor O., Cevher L., KUTAY A. T., TEKİNALP O.
44th European Rotorcraft Forum 2018, ERF 2018, Delft, Netherlands, 18 - 21 September 2018, vol.2, pp.952-964

XIV. **Reinforcement learning control for helicopter landing in autorotation**
Kopsa K., KUTAY A. T.
44th European Rotorcraft Forum 2018, ERF 2018, Delft, Netherlands, 18 - 21 September 2018, vol.2, pp.917-924

XV. **ON ROBUSTNESS OF CONCURRENT LEARNING ADAPTIVE CONTROL TO TIME-VARYING DISTURBANCES AND SYSTEM UNCERTAINTIES**
Sarsilmaz S. B., KUTAY A. T., Yucelen T.
ASME International Mechanical Engineering Congress and Exposition, Tama, Japan, 3 - 09 November 2017

XVI. **A Control System Architecture for Control of Non-Affine in Control, Open-Loop Unstable Underactuated Systems**
Marangoz A., KUTAY A. T.
8th International Conference on Mechanical and Aerospace Engineering (ICMAE), Prague, Czech Republic, 22 - 25 July 2017, pp.780-785

XVII. **Attitude and Altitude Tracking of Hexacopter via LQR with Integral Action**
Suicmez E. C., KUTAY A. T.
International Conference on Unmanned Aircraft Systems (ICUAS), Florida, United States Of America, 13 - 16 June 2017, pp.150-159

XVIII. **Experimental Investigation of Optimal Gap Distance between Rotors of a Quadrotor UAV**
KAYA D. D., KUTAY A. T., TEKİNALP O.
AIAA Aviation Forum 2017, Atmospheric Flight Mechanics Conference, 5 - 09 June 2017

XIX. **Estimation of Target Velocity under Scarce Range Information for IR Guided Missiles**
Babaoglu B. C., KUTAY A. T.
IEEE Aerospace Conference, Montana, United States Of America, 4 - 11 March 2017

XX. **Adaptive roll control of guided munitions with state independent uncertainty parameterization**
Ovec N. T., KUTAY A. T.
AIAA Guidance, Navigation, and Control Conference, 2017, Texas, United States Of America, 9 - 13 January 2017

XXI. **Adaptive model predictive control of uncertain systems with input constraints**
YAYLA M., KUTAY A. T.
AIAA Guidance, Navigation, and Control Conference, 2017, Texas, United States Of America, 9 - 13 January 2017

XXII. **Adaptive Control Algorithm for Linear Systems with Matched and Unmatched Uncertainties**
YAYLA M., KUTAY A. T.
55th IEEE Conference on Decision and Control (CDC), Nevada, United States Of America, 12 - 14 December 2016, pp.2975-2980

XXIII. **Guaranteed Exponential Convergence without Persistent Excitation in Adaptive Control**
YAYLA M., KUTAY A. T.
11th UKACC International Conference on Control (UKACC Control), Belfast, United Kingdom, 31 August - 02 September 2016

XXIV. **Automatic Landing Flare Control Design by Model-Following Control and Flight Test on X-Plane Flight Simulator**
Cetin E., KUTAY A. T.
7th International Conference on Mechanical and Aerospace Engineering (ICMAE), London, Canada, 18 - 20 July 2016, pp.416-420

XXV. **Particle Filter Studies on Terrain Referenced Navigation**
Turan B., KUTAY A. T.
IEEE/ION Position, Location and Navigation Symposium (PLANS), Savannakhet, Laos, 11 - 14 April 2016, pp.949-954

XXVI. **Propulsion System Selection and Modeling for a Quadrotor with Search and Rescue Mission**
KAYA D., KUTAY A. T., KURTULUŞ D. F., TEKİNALP O., ŞİMŞEK İ., SOYSAL S., HOSGİT G.
54th AIAA Aerospace Sciences Meeting, San Diego, United States Of America, 4 - 08 January 2016

XXVII. **Design and control of a micro UAV**
Kaya D., Büyükkoçak A. T., KUTAY A. T., TEKİNALP O.
AIAA Atmospheric Flight Mechanics Conference, 2016, California, United States Of America, 4 - 08 January 2016

XXVIII. **Aerodynamic parameter estimation of a supersonic air to air missile with rapid speed variation**
Bayoglu T., Nalci M. O., KUTAY A. T.
AIAA Atmospheric Flight Mechanics Conference, 2016, California, United States Of America, 4 - 08 January 2016

XXIX. **An analysis of stochastic disturbances on nonlinear missile-target engagements based on the adjoint method**
Sezer E., Nalcı M. O., KUTAY A. T.
AIAA Modeling and Simulation Technologies Conference, 2016, California, United States Of America, 4 - 08 January 2016

XXX. **Extended kalman filter based robust altitude controller for sea skimming missiles**
Dülgar Ö., Gezer R. B., KUTAY A. T.
AIAA Guidance, Navigation, and Control Conference, 2016, California, United States Of America, 4 - 08 January 2016

XXXI. **Capturability of Combined Augmented Proportional Navigation against a Pull-Up Maneuvering Target**
Nugroho L., KUTAY A. T.
IEEE International Conference on Aerospace Electronics and Remote Sensing Technology (ICARES), Balvi, Latvia, 3 - 05 December 2015

XXXII. **Uncertainty Parametrization on Inverted Pendulum with Model Reference Adaptive Control**
SARSILMAZ S. B., YAYLA M., KUTAY A. T.
Ankara International Aerospace Conference (AIAC), 10 - 12 September 2015

XXXIII. **Modeling and Simulation of a Quadrotor using Curve Fitting Method**
KAYA D. D., KUTAY A. T.
AIAA Atmospheric Flight Mechanics Conference, Dallas, TX, United States Of America, 22 - 26 June 2015

XXXIV. **Calibration of Five Hole Probe with Redundant Coefficients**
Karahan S., KUTAY A. T.
31st AIAA Aerodynamic Measurement Technology and Ground Testing Conference, Dallas, TX, United States Of America, 22 - 26 June 2015

XXXV. **A Comparative Study of a Pseudo Five Degree of Freedom and an Adjoint Model Against a Six Degree of Freedom Model for Fidelity Assessment**
Sezer E., Nalci M. O., KUTAY A. T.
AIAA Modeling and Simulation Technologies Conference, Dallas, TX, United States Of America, 22 - 26 June 2015

XXXVI. **Finite Series Based Model Reference Adaptive Control**
Rustu Berk G., KUTAY A. T.
AIAA Atmospheric Flight Mechanics Conference, Dallas, TX, United States Of America, 22 - 26 June 2015

XXXVII. **Linear Analysis of Zero-Lift Pitching Moment Coefficient and Gravity Effects on Missile Autopilots**
Ovec N. T., Erer K. S., KUTAY A. T.
IEEE Aerospace Conference, Montana, United States Of America, 7 - 14 March 2015

XXXVIII. **Analysis of five-hole probe calibration parameters**
Karahan S., KUTAY A. T.
31st AIAA Aerodynamic Measurement Technology and Ground Testing Conference, 2015, Texas, United States Of America, 22 - 26 June 2015

XXXIX. **Robust Model Following Control Design for Missile Roll Autopilot**
Gezer R. B., KUTAY A. T.
United-Kingdom-Automatic-Control-Council (UKACC) 10th International Conference on Control (CONTROL), Loughborough, United Kingdom, 9 - 11 July 2014, pp.7-12

XL. **Optimal Path Tracking Control of a Quadrotor UAV**
Suicmez E. C., KUTAY A. T.
International Conference on Unmanned Aircraft Systems (ICUAS), Florida, United States Of America, 27 - 30 May 2014, pp.115-125

XLI. **Adaptive robust attitude controller design for a quadrotor platform**
Yilmaz E., KUTAY A. T.
AIAA AVIATION 2014 -AIAA Atmospheric Flight Mechanics Conference 2014, Atlanta, GA, United States Of America,

16 - 20 June 2014

XLII. **Aerodynamic modeling and parameter estimation of a quadrotor helicopter**
Kaya D., KUTAY A. T.
AIAA AVIATION 2014 -AIAA Atmospheric Flight Mechanics Conference 2014, Atlanta, GA, United States Of America, 16 - 20 June 2014

XLIII. **SYSTEM IDENTIFICATION AND CONTROLLER DEVELOPMENTFOR A SMALL TURBOJET ENGINE**
Ekinci S., KUTAY A. T., UZOL O., Yiğittürk M.
6th Ankara International Aerospace Conference, Turkey, 14 - 16 September 2011

XLIV. **A comparison of two novel direct adaptive control methods under actuator failure accommodation**
Kutay A. T., Chowdhary G., Calise A. J., Johnson E. N.
AIAA Guidance, Navigation and Control Conference and Exhibit, Honolulu, HI, United States Of America, 18 - 21 August 2008

XLV. **Closed-loop aerodynamic flow control of a free airfoil**
Brzozowski D. P., Culp J. R., Kutay A. T., Muse J. A., Glezer A.
4th AIAA Flow Control Conference, Seattle, WA, United States Of America, 23 - 26 June 2008

XLVI. **Validation of a low-order model for closed-loop flow control enable flight**
Tchieu A. A., Kutay A. T., Muse J. A., Calise A. J., Leonard A.
4th AIAA Flow Control Conference, Seattle, WA, United States Of America, 23 - 26 June 2008

XLVII. **Dynamic flight maneuvering using trapped vorticity flow control**
Muse J. A., Kutay A. T., Brzozowski D. P., Culp J. R., Calise A. J., Glezer A.
46th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, United States Of America, 7 - 10 January 2008

XLVIII. **A Comparison of Select Direct Adaptive Control Methods Under Actuator Failure Accommodation**
KUTAY A. T., Chowdhary G., Calise A. J., Johnson E. N.
AIAA Guidance, Navigation and Control Conference and Exhibit, Honolulu, Hawaii, United States Of America, 18 - 21 August 2008

XLIX. **Validation of A Low Order Model for Closed Loop Flow Control Enabled Flight**
Tchieu A., KUTAY A. T., Muse J., Calise A. J., Leonard A.
4th Flow Control Conference, Seattle, Washington, United States Of America, 23 - 26 June 2008

L. **A closed-loop flight control experiment using active flow control actuators**
Kutay A. T., Culp J. R., Muse J. A., Brzozowski D. P., Glezer A., Calise A. J.
45th AIAA Aerospace Sciences Meeting 2007, Reno, NV, United States Of America, 8 - 11 January 2007, vol.2, pp.1289-1304

LI. **Adaptive longitudinal control of aircraft using synthetic jets**
Muse J. A., Kutay A. T., Calise A. J.
AIAA Guidance, Navigation, and Control Conference 2007, Hilton Head, SC, United States Of America, 20 - 23 August 2007, vol.3, pp.2594-2615

LII. **A 1-DOF wind tunnel experiment in adaptive flow control**
Kutay A. T., Calise A. J., Muse J. A.
AIAA Guidance, Navigation, and Control Conference 2006, Keystone, CO, United States Of America, 21 - 24 August 2006, vol.5, pp.3017-3028

LIII. **"Adaptive Neural Network Based Control System Applications for Autonomous UAV**
YAVRUCUK İ., KUTAY A. T.
AIAC 2005, 10 - 12 September 2005

LIV. **Distributed adaptive output feedback control design and application to a formation flight experiment**
Kutay A. T., Fowler J. M., Calise A. J., D'Andrea R.
AIAA Guidance, Navigation, and Control Conference 2005, San Francisco, CA, United States Of America, 15 - 18 August 2005, vol.7, pp.4953-4965

LV. **An adaptive guidance approach for spinning projectiles**
Calise A. J., El-Shirbiny H. A., Kim N., Kutay A. T.
Collection of Technical Papers - AIAA Guidance, Navigation, and Control Conference, Providence, RI, United States

Of America, 16 - 19 August 2004, vol.5, pp.3226-3238

LVI. **Adaptive output feedback control with reduced sensitivity to sensor noise**
Kutay A. T., Calise A., Hovakimyan N.
Annual American Control Conference (ACC 2003), Colorado, United States Of America, 04 June 2003 - 06 June 2006, pp.5141-5146

LVII. **Experimental results on adaptive output feedback control using a laboratory model helicopter**
Kutay A. T., Calise A. J., Idan M., Hovakimyan N.
AIAA Guidance, Navigation, and Control Conference and Exhibit 2002, Monterey, CA, United States Of America, 5 - 08 August 2002

LVIII. **NEURAL NETWORK BASED ORBIT PREDICTION FOR A GEOSTATIONARY SATELLITE**
KUTAY A. T., Yurdanur T., Tulunay E., TEKİNALP O.
Automatic Systems for Building the Infrastructure in Developing Countries 2001. Knowledge and Technology Transfer, Ohrid, Macedonia, 21 - 23 May 2001, pp.3-14

## Tasks In Event Organizations

Kutay A. T., KAHVECİ H. S., 12th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Scientific Congress, Ankara, Turkey, Eylül 2023
Tekinalp O., Kutay A. T., Perçin M., VTOL Aircraft Competition, Dikine Kalkan İnsansız Hava Araçları Yarışması, Social Activities, Ankara, Turkey, Ekim 2019
Tekinalp O., Perçin M., Kutay A. T., METU VTOL Aircraft Competetion 2, Social Activities, Ankara, Turkey, Ekim 2018

## Metrics

Publication: 72
Citation (WoS): 157
Citation (Scopus): 444
H-Index (WoS): 7
H-Index (Scopus): 11

## Non Academic Experience

Georgia Institute of Technology
Georgia Institute of Technology
Georgia Institute of Technology
METU