

## **Personal Information**

**Email:** kutay@metu.edu.tr

## **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

## **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

## **Professional Experience**

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

## **Advising Theses**

KUTAYA. T. , A method for estimating target velocity and range with passive seeker data, Post Graduate, B.CAN(Student), 2018

KUTAYA. T. , An algorithmic fault-tolerant control architecture without actuator redundancy, Doctorate, A.MARANGOZ(Student), 2018

KUTAYA. T. , Mathematical modeling of a small-scale helicopter and MRAC design with time based uncertainty parametrizations, Post Graduate, M.GÜRLER(Student), 2018

KUTAYA. T. , An active rocket launcher design for an attack helicopter, Post Graduate, T.BARAN(Student), 2018

KUTAYA. T. , A robust altitude control approach for sea skimming missiles, Post Graduate, Ö.DÜLGAR(Student), 2018

KUTAYA. T. , A model based approach for aircraft sensor fault detection, Post Graduate, Ö.SERÇEKMAN(Student), 2018

KUTAYA. T. , Drone supported pre-scan optimal active suspension for 8x8 vehicle, Post Graduate, A.SANCAR(Student), 2018

KUTAYA. T. , Reinforcement learning control for autorotation of a simple point-mass helicopter model, Post Graduate, K.KOPŞA(Student), 2018

KUTAYA. T. , Trajectory optimization of a tactical missile by using genetic algorithm, Post Graduate, B.DİLAN(Student), 2018

KUTAYA. T. , System identification and control of a fixed wing aircraft by using flight data obtained from X-plane flight simulator, Post Graduate, E.ÇETİN(Student), 2018

KUTAYA. T. , Development of an object-oriented design, analysis and simulation software for a generic air vehicle, Post Graduate, M.ŞENİPEK(Student), 2017

KUTAYA. T. , Terrain referenced navigation of an aircraft using particle filter, Post Graduate, B.TURAN(Student), 2017

KUTAYA. T. , Abrupt fault detection and accommodation for air data systems, Post Graduate, S.KARAHAN(Student), 2016

KUTAYA. T. , Aerodynamic parameter estimation of a supersonic missile with rapid speed variation by using kalman filtering, Post Graduate, T.BAYOĞLU(Student), 2016

KUTAYA. T. , Neural extended kalman filter based angle-only target tracking for cruise missiles, Post Graduate, G.EŞSİZ(Student), 2016

KUTAYA. T. , Vision-aided landing for fixed wing unmanned aerial vehicle, Post Graduate, E.ESİN(Student), 2016

KUTAYA. T. , Comparison of concurrent learning and derivative-free model reference adaptive control against parameter variation, Post Graduate, S.BURAK(Student), 2016

KUTAYA. T. , Interfacing simulink/matlab with V-REP for analysis and control synthesis of a quadrotor, Post Graduate, J.KHALİLOV(Student), 2016

KUTAYA. T. , An Integration Method over a Moving Window for Exponential Convergence in Adaptive Control without Persistency of Excitation, Post Graduate, M.YAYLA(Student), 2016

KUTAYA. T. , Adaptive roll control of guided munitions, Post Graduate, N.TUĞÇE(Student), 2016

KUTAYA. T. , Design and control of nose actuation kit for position correction of spin stabilized munitions under wind effect, Post Graduate, M.EROĞLU(Student), 2016

KUTAYA. T. , Lyapunov based nonlinear impact angle guidance law for stationary targets, Post Graduate, H.ULAŞ(Student), 2015

KUTAYA. T. , A comparison of model following control systems for helicopter flight control near hover, Post Graduate, I.DOĞA(Student), 2015

KUTAYA. T. , Stochastic and deterministic analysis of nonlinear of nonlinear missile engagement scenarios using 5-dof 6-dof and adjoint model, Post Graduate, E.SEZER(Student), 2015

KUTAYA. T. , Range to-go estimation for a tactical missile with a passive seeker, Post Graduate, S.KALE(Student), 2015

KUTAYA. T. , Trajectory tracking of a quadrotor unmanned aerial vehicle (UAV) via attitude and position control, Post Graduate, E.CAN(Student), 2014

KUTAYA. T. , Missile guidance with impact angle constraint, Post Graduate, B.ÇİLEK(Student), 2014

KUTAYA. T. , Adaptive robust attitude controller design for a quadrotor platform, Post Graduate, E.YILMAZ(Student), 2014

KUTAYA. T. , Geometric tracking control of a fully actuated rigid body and application to attitude control of a quadrotor UAV, Post Graduate, V.BASHIRI(Student), 2014

KUTAYA. T. , Modeling and experimental identification of quadrotor aerodynamics, Post Graduate, D.DERYA(Student), 2014

KUTAYA. T. , Fourier series based model reference adaptive control, Post Graduate, R.BERK(Student), 2014

KUTAYA. T. , Aerodynamic parameter estimation of a missile, Post Graduate, A.AKSU(Student), 2013

KUTAYA. T. , Aerodynamic parameter estimation of a missile in closed loop control and validation with flight data, Post Graduate, G.AYDIN(Student), 2012

KUTAYA. T. , UZOL O., Development of a high-fidelity transient aerothermal model for a helicopter turboshaft engine for inlet distortion and engine deterioration simulations, Post Graduate, Y.NOVIKOV(Student), 2012

KUTAYA. T. , Development of a comprehensive and modular modelling, analysis and simulation tool for helicopters, Post Graduate, A.YÜCEKAYALI(Student), 2011

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Identification of Physical Helicopter Models Using Subspace Identification**  
Avcioglu S., KUTAYA. T. , Lelebicioglu K.  
JOURNAL OF THE AMERICAN HELICOPTER SOCIETY, vol.65, 2020 (Journal Indexed in SCI)
- **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, pp.1124-1144, 2018 (Journal Indexed in SCI)

- **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, pp.1883-1897, 2013 (Journal Indexed in SCI)

## Refereed Congress / Symposium Publications in Proceedings

- **Implementation of physical subspace identification on a realistic helicopter**

Avcioglu S., KUTAY A. T. , Leblebicioğlu K.

AIAA Scitech Forum, 2019, California, United States Of America, 7 - 11 January 2019

- **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

- **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

- **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

- **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

- **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

- **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

- **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

- **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

- **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

- **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

- **Capturability of Combined Augmented Proportional Navigation against a Pull-Up Maneuvering Target**

Nugroho L., KUTAYA A. T.

IEEE International Conference on Aerospace Electronics and Remote Sensing Technology (ICARES), Balvi, Latvia, 3 - 05 December 2015

- **Linear Analysis of Zero-Lift Pitching Moment Coefficient and Gravity Effects on Missile Autopilots**

Ovec N. T. , Erer K. S. , KUTAYA A. T.

IEEE Aerospace Conference, Montana, United States Of America, 7 - 14 March 2015

- **Robust Model Following Control Design for Missile Roll Autopilot**

Gezer R. B. , KUTAYA A. T.

United-Kingdom-Automatic-Control-Council (UKACC) 10th International Conference on Control (CONTROL), Loughborough, United Kingdom, 9 - 11 July 2014, pp.7-12

- **Optimal Path Tracking Control of a Quadrotor UAV**

Suicmez E. C. , KUTAYA A. T.

International Conference on Unmanned Aircraft Systems (ICUAS), Florida, United States Of America, 27 - 30 May 2014, pp.115-125

## Citations

Total Citations (WOS):46

h-index (WOS):4