Dr. Ilkay Yavrucuk

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PERSONAL

Date of Birth	February 1973
Place of Birth	Stuttgart, Germany
Nationality	Turkish
Sex	Male
Marital Status	Single

EDUCATION

1998-03	Ph.D. in Aerospace Engineering, Georgia Institute of Technology, Atlanta, GA
1996-97	M.S. in Aerospace Engineering, Georgia Institute of Technology, Atlanta, GA
1990-95	B.S. in Aerospace Engineering, Middle East Technical University, Ankara
1984-90	Ankara Anatolian High School (German Language), Ankara Turkey
1979-84	Fasanenhof Grundschule, Königin-Charlotte-Gymnasium, Stuttgart, Germany

RESEARCH INTERESTS

- Rotorcraft dynamics, modeling, simulation and control
- Advanced Design Methods
- Active control technologies for carefree maneuvering.
- Adaptive nonlinear control.
- Neural network theory and applications.
- Optimal guidance, navigation and control
- Unmanned systems and autonomy

ACADEMIC EXPERIENCE

2005-present **Associate Professor, Middle East Technical University (METU), Ankara, Turkey**
- Teaching undergraduate and graduate level courses in flight dynamic, automatic control systems, dynamics, system dynamics, helicopter dynamics stability and control, aircraft instrumentation and measurement, aircraft design.
- Conducting funded research in modeling and simulation, flight control systems, unmanned aircraft, adaptive control, neural network based learning, active control technologies with emphasis on rotary-wing aircraft.
- Research faculty at the METU-Wind Energy Center.
- Manage the Simulation, Control and Avionics LAB (SCALAB).

2003-05 **Post-Doctoral Fellow, Georgia Institute of Technology, Atlanta, GA**
- Research in helicopter design, unmanned helicopter control software development, modeling and simulation.

1998-03 **Graduate Research Assistant, Georgia Institute of Technology, Atlanta, GA**
- Center of Excellence in Rotorcraft Technology
- GT UAV Research Facility
- Carefree Maneuver Lab

1995- 96 **Graduate Assistant, Middle East Technical University, Ankara**
- Sub- and supersonic wind tunnel testing and teaching assistantship.

PROFESSIONAL EXPERIENCE – NON-ACADEMIC

2007-present **Managing Founder, AEROTIM Engineering Ltd., Ankara, Turkey**
- An engineering company at the METU Technopolis dedicated to rotary wing and automation.

2012-13 **Program/Engineering Manager, Turkish Aerospace Industries (TAI) Ankara, Turkey**
- Turkish Indigenous Helicopter Program
- Development Programs for Rotorcraft Systems

2006-present **Consultant, Ankara, Turkey**
- TAI, Tubitak Sa-Ge, Roketsan, R&D Small Businesses, etc.

1997-98 **OJT-Engineer, Sikorsky Aircraft Corporation, Stratford, CT**
Avionics Analysis & Integration Group. *Technical leader* of the Turkish OJT Team.

MAJOR RESEARCH PROJECTS -ACADEMIC

2014-17 **Limit Protection Algorithms for Flight Envelope Protection, METU**
Principal Investigator, Budget: $120K, Turkish Science Foundation (Tubitak) 1001 Program

2011-06 **Coordinated Guidance and Path Planning of Multiple UAVs, METU**
Co- Principal Investigator, Budget: $400K, Tubitak 1001 Program

2009-11 **Flight Testing of Adaptive Algorithms on an Unmanned Helicopter, METU**
Principal Investigator, Budget: $25K, Tubitak 1002 Program

2008-10 **Control Algorithms for UAVs with Redundant Control Surfaces, METU**
Co- Principal Investigator, Budget: $150K, Tubitak 1001 Program

2006-08 **An Affordable Helicopter Flight Simulator Using Virtual Reality, METU**
Principal Investigator, Budget: $150K, Tubitak 1001 Program

2004-05 **Renegade Heli-UAV Program, Georgia Tech.**
Lead Research Scientist
- Integration of Georgia Tech's flight control technologies into Boeing Company's full-size unmanned helicopter (Maverick).

2003-05 **ITU Light Commercial Helicopter Preliminary Design, Georgia Tech.**
Project Coordinator, Design Team Leader
- Conceptual and preliminary design of a light commercial helicopter using IPPD.
- Custom build and tested a whirl-test-stand in Ankara 5.ABM in 2004.
- Consultancy in developing a Rotorcraft Center of Excellence (ROTAM) at ITU.

2000-03 **Helicopter Active Control Technologies (HACT) Program, Georgia Tech.**
Graduate Student
- Developed active control technologies for flight envelope protection using static and adaptive neural networks for fly-by-wire helicopters.
- Sponsored by and implemented at the Boeing Helicopter Simulator at Philadelphia, NASA/Army Rotorcraft Center

1998-04 **Software Enabled Control (SEC) Program (DARPA), Georgia Tech.**
Graduate Student, Post-Doc
- Modeling, simulation, controller design, integration and testing of the GTmax autonomous Yamaha helicopter test-bed at Georgia Tech.
- Design and flight testing of the adaptive neural network based automatic envelope protection system for the GTmax as part of the PhD Thesis; a first in UAV control systems.

RESEARCH PROJECTS - NON-ACADEMIC (AEROTIM Engineering)

2015-present **FFS Level D Simulator Modeling and Simulation Projects (EU Countries)**
Principal Investigator

2014-present **ATAKSIM Aerodynamic Modeling and Simulation**
Principal Investigator

2009-present **Various Research Projects in Modeling, Simulation and Control**
Principal Investigator, Received External Funding Budget: >$1M.
- Recent customers include Havelsan, Aselsan, TAI, Roketsan, TEI, Tübitak Sage, Vestel, Turkish Land Forces

2009-present **Various Research Projects in Embedded Systems**
Co-Principal Investigator, Received External Funding Budget: >$250K.

2007-present **Development of the Helicopter Modeling and Simulation Tool, Heli-Dyn™, AEROTIM Eng.**
Principal Investigator, Funded Budget: $250K
- Supported by Tübitak, Kosgeb and investors

TEACHING EXPERIENCE

Undergraduate Level
- AE 372 Flight Dynamics, Spring 2006-17, METU
- AE 446 Introduction to Helicopter Aerodynamics and Design, Spring 2015, 17
- AE 483 Automatic Control Systems II, Fall 2005-14, METU
- AE 101 Introduction to Aerospace Engineering, Fall 2014, METU
- AE 402 Aircraft Instrumentation and Measurement, Fall 2005-11, METU
- AE 451 Aeronautical Engineering Design, Fall 2007, METU
- AE 262 Dynamics, Spring 2006, METU

Graduate Level
- AE 584 Helicopter Dynamics, Stability and Control, Spring 2006-14 METU (Developed and taught)
- AE 6333 Rotorcraft Design-I, Assist. Instructor, Fall 2002-04, Georgia Tech.
- AE 6334 Rotorcraft Design-II, Assist. Instructor, Spring 2004-05, Georgia Tech.

HONORS/ AWARDS/ SCHOLARSHIPS

2016- AHS Modeling and Simulation Technical Committee, Member
2015 AIAA SCITech 2105, AFM, Best Student Paper (Advisor, Co-Author)
2013 IEEE Harry Rowe Mimno Award, IEEE Aeropace and Electronic Systems Society
2012 AHS Undergrad Design Competition, *Winner*, Academic Co-Advisor
2008 AHS Undergrad Design Competition, *Best New Entrant*, Academic Advisor
2003 Best Paper in UAV Sessions, *American Helicopter Society* (AHS) Forum.
2002 Best Student Paper Award, AIAA AFM Conference.
2001 AHS Vertical Flight Foundation (VFF) Award.
2001 Best Session Paper Presentation, AIAA AFM Conference.
2000 AHS Graduate Design Competition, *Winner*, Design Team Member.
1997 AHS Graduate Design Competition, *Winner*, Design Team Member.
1996 Scholarship awarded by the Turkish Undersecretary for Defense Industries.

RECENT SCIENTIFIC ACTIVITIES

2006-present Reviewer for various SCI-indexed Journals
- AIAA Journal of Guidance Control and Dynamics
- AIAA Journal of Aircraft
- Journal of the American Helicopter Society
- IEEE Transactions on Aerospace and Electronic Systems
- IEEE Transactions on Industrial Electronics
- IEEE/ASME Transactions of Mechatronics
- Journal of Intelligent and Robotic Systems
- Journal of Defence Modeling and Simulation
- Mechatronics (Elsevier)

2008-12 ACFA2020 FP7 Program, *Scientific Advisory Board*

2007-present National and international short courses, seminars, presentations and invited talks on Adaptive Flight Control for Helicopters, Intelligent Heli-UAVs and Automatic Envelope Protection
Recent international: University of Surrey, Surrey(UK), TU Munich (Munich, Germany), DLR (Braunschweig, Germany), RWTH Aachen University (Aachen, Germany)

GRADUATE STUDENTS

Current Students

- Sinan Ekinci, PhD Candidate
- Mustafa Şahin, PhD Candidate
- Hazal Altuğ, PhD Candidate
- Said Mert Türkal, MS Candidate
- Anıl Demirel,MS, Candidate
- Bulut Efe Akmenek, MS Candidate
- Zeynep Ünal, MS Candidate
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Graduated Students

- Gonenc Gursoy, PhD "Direct Adaptive Flight Envelope Protection," 2016
- Kadriye Tiryaki, PhD, "Adaptive Control of Guided Missiles," 2011
- Feyyaz Guner, MS, "Comparison of Rotor Inflow Models for Flight Simulation Fidelity, "2016
- Ş.Eser Kubalı, MS, "Development of an intelligent model prediction controller for autonomous helicopters," 2016
- A.Hazal Altuğ, MS, "Dynamic Modelling and Simulation of a Wind Turbine," 2015
- Merve Okatan, MS, "Kalman Filter Based Applications for Helicopters," 2014
- Gizem Yücel, MS, "A reactionary Obstacle Avoidance Algorithm for Autonomous Vehicles, " 2012
- Sevil Avcioglu, MS, "Controller Design and Simulation for a Helicopter During Target Engement," 2011
- Gonenc Gursoy, MS, "Neural Network Based Online Estimation of Maneuvering Steady States and Control Limits," 2010
- Selim Selvi, MS, "A Probabilistic Conceptual Design and Sizing Approach for a Helicopter," 2010
- Özgür Ekinci, MS, "Adaptation of a Control System to Varying Missile Configurations," 2009
- Serkan Sağıroğlu, MS, "Adapt've Neural Network Applications on Missile Controller design," 2009
- Onur Tarimci, MS, "Adaptive Controller Applications for Rotary Wing Aircraft Models of Varying Fidelity," 2009
- Serkan Sagiroglu, MS, "Adaptive Neural Network Applications on Missile Controller Design," 2009
- Murat H. Bakir, MS, "Mathematical Model Development of the Anti-Torque System of a Notar Helicopter," 2008
- Deniz Yilmaz, MS, "Evaluation and Comparison of Helicopter Simulation Models With Different Fidelities," 2008
- Volkan Kargin, MS, "Design of an Autonomous Landing Control Algorithm for a Fixed Wing UAV," 2007

MEMBERSHIP/ LEADERSHIP

AHS	Member of the American Helicopter Society (1998-present)
AIAA	Member of the American Institute of Aeronautics and Astronautics (1998-09)
GTAR	Member of the Georgia Tech Aerial Robotics Team (1999-03)
TSO	President of the Turkish Student Organization at Georgia Tech (00/01/02), V.P. in 98/99.

LANGUAGES

Excellent written and oral communication in German, English and Turkish (native).

PUBLICATIONS

Publication in a Journal/ Book Chapter

1. G.Gürsoy, I.Yavrucuk "Direct Adaptive Limit and Control Margin Estimation with Concurrent Learning," *AIAA Journal of Guidance Control, and Dynamics*, Vol. 39, No. 6 : pp. 1356-1373, June 2016. DOI: 10.2514/1.G001515
2. G.Gürsoy, I.Yavrucuk "Concurrent Learning Enabled Adaptive Limit Detection for Active Pilot Cueing," *AIAA Journal of Aerospace Information Systems*, Vol.11, No.8, DOI:10.25141/1.I010205, Aug 2014.
3. G.Gürsoy, I.Yavrucuk "Paraşüt-Yük SistemleriDinamik Modellenmesi ve Yol-Takibi," *Journal of Electrical, Electronics, Computer and Biomedical Engineering*, Vol.3, No.5, p. 49-54, 2103. (Turkish)

4. I.Yavrucuk, H.M.Bakir, O.Uzol "Mathematical Modeling of the NOTAR Anti-Torque System for Flight Simulation*," Journal of the American Helicopter Society*, Vol.58, p. 1-9, DOI:10.4050/JAHS.58.022002, 2013.
5. I.Yavrucuk, J.V.R. Prasad "Online Dynamic Trim and Control Limit Estimation ," *AIAA Journal of Guidance Control, and Dynamics*, Vol.35, No.5, p.1647-1656, DOI: 10.2514/1.53116, 2012.
6. I.Yavrucuk, E.S.Kubali, O.Tarimci "A Low Cost Flight Simulator Using Virtual Reality Tools," *IEEE Aerospace and Electronic Systems Magazine*, Vol.26, No.4, page 10-15, DOI:10.1109/MAES.2011.5763338, April 2011. (Harry Rowe Mimno Award)
7. S. Unnikrishnan, J.V.R. Prasad, I.Yavrucuk "Flight Evaluation of Reactionary Envelope Protection System*," Journal of the American Helicopter Society*, Vol. 56, Page 1-14, DOI:10.4050/JAHS.56.012009, Jan 2011.
8. O.Uzol, I.Yavrucuk, N. Sezer-Uzol "Panel Method Based Path Planning and Collaborative Target Tracking for Swarming Micro Air Vehicles in Urban Environment," *AIAA Journal of Aircraft*, Vol.47, No.2, Page 544-550, DOI: 10.2514/1.45469, Mar-Apr 2010.
9. I.Yavrucuk, J.V.R. Prasad, S. Unnikrishnan "Envelope Protection for Autonomous Unmanned Aerial Vehicles," *AIAA Journal of Guidance Control, and Dynamics*, Vol.32, No.1, Page 248-261, DOI: 10.2514/1.35265 Jan-Feb 2009.
10. G.Vachtsevanos, F. Rufus, J.V.R. Prasad, I. Yavrucuk, D. Schrage, B. Heck and L. Wills, "An Intelligent Methodology for Real-time Adaptive Mode Transitioning and Limit Avoidance of Unmanned Aerial Vehicles," Book Chapter in "*Software-Enabled Control: Information Technologies for Dynamical Systems*," A John Wiley/IEEE Press book, 2002.

Publications in Conference Proceedings

11. M. Okatan, G.Gursoy, I.Yavrucuk, "Kalman Filter Based Modification on Helicopter Adaptive Control," Proceedings of AIAA Scitech Conference, Orlando, FL, Jan. 2015
12. G.Gursoy, I.Yavrucuk, "A Non-Iterative Direct Approach to Adaptive Limit and Control Margin Estimation," Proceedings of AIAA Scitech Conference, Orlando, FL, Jan. 2015 (Best Student Paper)
13. G.Gursoy, Y.Novikov, I.Yavrucuk, "Engine Limit Detection and Avoidance for Helicopters with Multiple Limits," Proceedings of AIAA Atmospheric Flight Mechanics Conference, Boston, MA, Aug. 2013
14. I.Yavrucuk, G.Gursoy, Y. Novikov, "Online Detection and Avoidance of Helicopter TGT Limits," Proceedings of 69th American Helicopter Society Forum, Phoenix, AZ, May 2013
15. G.Gursoy, A.Prach, I.Yavrucuk, "Design of a Waypoint Tracking Control Algorithm for Parachute-Payload Systems," Proceedings of 2nd CEAS Specialist Conference on Guidance, Navigation & Control, TU Delft, Netherlands, April 2013
16. G.Gursoy, O.Tarımcı, I.Yavrucuk, "Helicopter Slung Load Simulations Using Heli-Dyn+," Proceedings of AIAA Modeling ang Simulation Technologies Conference, Minneapolis, MN, Aug. 2012
17. I.Yavrucuk, G.Gursoy, European Rotorcraft Forum "Limit Margin Prediction For Helicopters Using Long Term Learning Adaptive Neural Networks", Proceedings of European Rotorcraft Forum, Milan Italy, September 2011
18. O.Tekinalp, S.Isik, I.Yavrucuk, "Fault Tolerant Control of an Over Actuated UAV," Proceedings of AIAA Guidance, Navigation, and Control Conference, Portland, OR, USA, Aug 2011
19. K.Tiryaki Kutluay, I.Yavrucuk, "Dynamic Inversion Based Control of a Missile with L1 Adaptive Control Augmentation," IEEE Multi-Conference on Systems & Control (MSC),Tokyo, Japan, September 2010
20. G.Gursoy, I.Yavrucuk "Concurrent Learning Enabled Adaptive Limit Detection for Active Pilot Cueing," American Institute of Aeronautics and Astronautics, Guidance, Navigation and Control Conference, Ontario, Canada, August 2010.
21. I.Yavrucuk, H.M.Bakir, O.Uzol "Mathematical Modeling of the NOTAR Anti-Torque System for Flight Simulation," 66th AHS Annual Forum, Phoenix, AZ, May 2010.
22. Z.Cakir, A.M.Erkmen, I.Yavrucuk,"Cooperation Control of Three UAVs for Aerial Rescue and Aerial Retrieval," International Conference on Adaptive Science&Technology, Accra, Ghana, December 2009
23. D.Yilmaz, M.Pavel, I.Yavrucuk,"Helicopter Design for Handling Qualities Enhancement," European Rotorcraft Forum, Hamburg, September 2009.
24. I.Yavrucuk, E.S.Kubali, O.Tarimci, D.Yilmaz, "A Low Cost Flight Simulator Using Virtual Reality Tools," American Institute of Aeronautics and Astronautics, Modelling and Simulation Conference, Chicago, IL, USA, August 2009.
25. O.Tekinalp, T.Unlu and I.Yavrucuk, "Simulation and Flight Control of a Tilt Duct UAV," American Institute of Aeronautics and Astronautics, Modelling and Simulation Conference, Chicago, IL, USA, August 2009.
26. M. Cevik, O.Uzol, I.Yavrucuk, "A Robust Design Optimization of a Mixed-Flow Compressor Impeller," to be presented at ASME Turbo Expo 2009, Orlando, Florida, June.

27. O.Tarimci, D.Yilmaz and I.Yavrucuk, “On the Level of Center of Gravity Modeling Error in Neural Network Based Adaptive Controller Design,” European Rotorcraft Forum, Liverpool, 2008.
28. O.Uzol, I.Yavrucuk, N.Sezer-Uzol “Collaborative Target Tracking for Swarming MAVs Using Potential Fields and Panel Methods,” American Institute of Aeronautics and Astronautics, Guidance, Navigation and Control Conference, Honolulu, HI, USA, August 2008.
29. V.Kargin, I.Yavrucuk,”Autolanding Strategies for a Fixed wing UAV Under adverse Atmospheric Conditions,” American Institute of Aeronautics and Astronautics, Guidance, Navigation and Control Conference, Honolulu, HI, USA, August 2008.
30. Kocer, G., Uzol, O., Yavrucuk, I., 2008, “Simulation of the Transient Response of a Helicopter Turboshaft Engine to Hot-Gas Ingestion,” Proceedings of ASME Turbo Expo 2008 Berlin, Germany, June 9-13, 2008.
31. I.Yavrucuk, O.Uzol, “Panel Method-Based Motion Planning for Swarming MAVs with Probabilistic Target Tracking,” American Institute of Aeronautics and Astronautics, Guidance, Navigation and Control Conference, Hilton Head, SC, USA, August 2007
32. A.Ulku, I.Yavrucuk, T.Aybar, “A Multi-Purpose Helicopter Technology Demonstrator For Engineering Students,” American Institute of Aeronautics and Astronautics, Modelling and Simulation Conference, Hilton Head, SC, USA, August 2007
33. G. Drozeski, I. Yavrucuk, E. Johnson, J.V.R. Prasad, D. Schrage, G. Vachtsevanos, “Application of Software Enabled Control Technologies to a Full-Scale Unmanned Helicopter, “AIAA-2005-6234, American Institute of Aeronautics and Astronautics, Atmospheric Flight Mechanics Conference and Exhibit, San Francisco, California, USA, Aug. 15-18, 2005
34. S. Unnikrishnan, I.Yavrucuk, J.V.R. Prasad, “Reactionary Envelope Protection for Autonomous UAVs,” 61st AHS Annual Forum, Grapevine, TX, June 2005.
35. I.Yavrucuk, “Simulation Based Envelope Protection Systems for Unmanned Rotorcraft,” AHS Specialists” Meeting on Unmanned Rotorcraft, Chandler, AZ, Jan 2005.
36. J.V.R. Prasad, S. Unnikrishnan, I. Yavrucuk, “Envelope Protection Systems for UAVs,” 4th Australian Pacific Vertiflite Conference on Helicopter Technology, Melbourne, Australia, July 2003.
37. I.Yavrucuk, S. Unnikrishnan, J.V.R. Prasad, “Envelope Protection in Autonomous Unmanned Aerial Vehicles,” 59th AHS Annual Forum, Phoenix, Arizona, May 2003. (Best Session Paper)
38. I.Yavrucuk, J.V.R. Prasad, “Adaptive Limit Margin Prediction and Control Cueing for Carefree Maneuvering of VTOL Aircraft,” AHS Flight Controls and Crew System Design Technical Specialists” Meeting, Philadelphia, PA, Oct. 2002.
39. J.V.R. Prasad, I.Yavrucuk, “Adaptive Limit Prediction and Avoidance for Rotorcraft,”28th European Rotorcraft Forum, Bristol, UK, Sept. 2002.
40. I.Yavrucuk, S. Unnikrishnan, J.V.R. Prasad, “Carefree Maneuvering Using Neural Networks,” AIAA Atmospheric Flight Mechanics Conference, Monterey, CA, August 2002. (Best Student Paper Award)
41. I.Yavrucuk, J.V.R. Prasad, A.J. Calise, S. Unnikrishnan, “Adaptive Limit Control Margin Prediction and Avoidance,” 58th AHS Annual Forum, June 2002.
42. I.Yavrucuk, J.V.R. Prasad, “Adaptive Limit Detection and Avoidance for Carefree Maneuvering,” AIAA Atmospheric Flight Mechanics Conference, Montreal, Canada, August 2001. (Best Paper Finalist)
43. I.Yavrucuk, J.V.R. Prasad, “Limit Detection and Avoidance for Heli UAV”s,” 57th AHS Annual Forum, May 2001.
44. I.Yavrucuk, J.V.R. Prasad, “Automatic Limit Detection and Avoidance,” AHS Aeromechanics Specialists Meeting, Atlanta,GA, 2000.
45. Kahn, S. Kannan, I.Yavrucuk, “Gtmars-Flight Mission Computer Architecture,” AHS Graduate Design Competition, 2001. (1st Place)
46. I.Yavrucuk, J.V.R. Prasad, “Reconfigurable Flight Controller for Extreme Maneuvering of Heli-UAVs,” AIAA Modeling and Simulation Technologies Conference, Denver, CO, August 2000.
47. I.Yavrucuk, J.V.R. Prasad, “Simulation of Reconfigurable Heli-UAV”s Using Main Rotor RPM Control In Failure Modes,” AIAA Modeling and Simulation Technologies Conference, Portland, August 1999.
48. JVR Prasad, I. Yavrucuk, “Reconfigurable Flight Control Using RPM Control For Heli-UAV”s,” 25. European Rotorcraft Forum, Rome, Italy, Sept., 1999.
49. S. Kannan, C. Restrepo, I. Yavrucuk, L. Wills, J.V.R. Prasad, D.P. Schrage, “Simulation and Flight Control Integration Using the Open Control Platform for Unmanned Aerial Vehicles,” 18th AIAA Digital Avionics Conference, 1999.
50. S. Kannan, J. Hur, G. Saroufiem, I. Yavrucuk, “Georgia Tech UAV Software Systems,” AUVSI Proceedings, 1999.
51. I.Y. Burdun, D.N. Mavris, D.P. Schrage, I. Yavrucuk, “Computer Simulation of Selected Failure Modes and Operational Conditions for Rotorcraft,” Heli Japan 98 Conference, Gifu, Japan, 21-23 April 1998. D2-4.

Published in Refereed Turkish Conference Proceedings

52. Y. Novikov, G.Gürsoy, O.Uzol, I.Yavrucuk, "Helikopter Simülatörleri için Dinamik Turboşaft Motor Modeli Geliştirilmesi ve Simülatöre Entegrasyonu," USMOS, Haziran 2013
53. G.Gürsoy, O.Tarımcı, I.Yavrucuk, "Helikopter Otopilotları için Yaklışma Üst Modu Tasarımı ve Simülasyonu," USMOS 2013, Haziran 2013
54. G.Gürsoy, I.Yavrucuk, "Paraşüt-Yük Sistemlerinin Dinamik Modellenmesi ve Nokta Kontrolü," SAVTEK Konferansı, Ankara, Haziran 2012
55. G.Gürsoy, O. Tarımcı, E. Kubalı, I.Yavrucuk, "Heli-Dyn+ Kullanılarak Helikopter-Yük Sistemi Simülasyonlarının Gerçeklenmesi," SAVTEK Konferansı, Ankara, Haziran 2012
56. O.Tarimci, M.Turkal, I.Yavrucuk,"Heli-Dyn+ Kullanılarak Helikopter için Kontrolcü Geliştirilmesi," SAVTEK Konferansı, Ankara, Haziran 2012
57. Y. K.Yillikci, D.P. Schrage and I.Yavrucuk A Strategy Development APproach for a Small General Aviation Helicopter Program, "Ankara International Aerospace Conference, Ankara, August 2011
58. G.Gursoy, I.Yavrucuk,"Long Term Learning Adaptive Neural Network Estimator Based Limit Detection," IFAC Adaptation and Learning in Control and Signal Processing (ALCOSP) Conference, Antalya, August 2010
59. K.Tiryaki Kutluay, I.Yavrucuk,"Dynamic Inversion Based Control of a Missile with L1 Adaptive Control Augmentation," IFAC Adaptation and Learning in Control and Signal Processing (ALCOSP) Workshop, Antalya, August 2010
60. I.Yavrucuk, O.Tarımcı, M.Katırcıoğlu, D.Yılmaz, E.Kubalı,"Entegre bir Helikopter Dınamık Modelleme, Simülasyon ve Analiz Ortamı," SAVTEK, Ankara, 2010
61. S.Ekinci, Y.E.Arslantaş, I.Yavrucuk,"Insansız Helikopterin Uçuş Kontrol Algoritmalarının Geliştirilmesi için Test Platformu Çalışmaları," SAVTEK, Ankara, 2010
62. I.Yavrucuk, S.Selvi, O.Tarimci "Helicopter Sizing for the Turkish Market Using Concurrent Engineering Tools," Ankara International Aerospace Conference, Ankara, August 2009
63. I.Yavrucuk, E.S.Kubali, O.Tarimci "The SCALAB Virtual Reality Simulator," Ankara International Aerospace Conference, Ankara, August 2009
64. D.Yilmaz, M.D.Pavel, I.Yavrucuk "Development of Complementary Helicopter Handling Qualities Criteria Based on Performance and Vibratory Loads," Ankara International Aerospace Conference, Ankara, August 2009.
65. S.Sagiroglu, I.Yavrucuk "Adaptive Neural Network Applications on Missile Controller Design," Ankara International Aerospace Conference, Ankara, August 2009.
66. Z.Cakir, B.Demir, O.Tekinalp, I.Yavrucuk "Flight Control System Design and Integration for a Small UAV Test Bed," Ankara International Aerospace Conference, Ankara, August 2009.
67. S.Isik, O.Tekinalp, I.Yavrucuk,"Flight Control System Design for an Unmanned Air Vehicle," Ankara International Aerospace Conference, Ankara, August 2009.
68. G.H.Ercin, O.Tekinalp, I.Yavrucuk, "Helicopter Flight Simulation and Automatic Flight Control System Design," Ankara International Aerospace Conference, Ankara, August 2009.
69. O.Tarımcı, D.Yılmaz, I.Yavrucuk, "Helikopterler için Sinir Ağı Tabanlı Adaptif Kontrolcü Tasarımında Ağırlık erkezi Modelleme Hatasının Önemi,"Türk Otomatik Kontrol (TOK) Konferansı, Istanbul, Ekim 2008
70. D.Yilmaz, I.Yavrucuk, "Development of A Flight Dynamics Model For A UH-1H Helicopter Simulator," Ankara International Aerospace Conference, Ankara, September, 2007
71. O.Tarimci, I.Yavrucuk, "Simulation Evaluation of A Flight Control System for An Autonomous Fullsize Helicopter," Ankara International Aerospace Conference, Ankara, September, 2007
72. V.Kargin, I.Yavrucuk, "Development of A Flight Control System For A UAV In Autonomous Landing," Ankara International Aerospace Conference, Ankara, September, 2007
73. E. Arslan, E.Arikan, I. Yavrucuk, "Dağıtık Uçuş Sistemlerinin Komuta Kontrol Tasarımı ve Geliştirilmesi için Simulasyon Tabanlı Test Platformu Yazılımı F-SIM", USMOS Ankara, June 2007
74. O.Uzol, I.Yavrucuk,"Sürü Halinde Uçan Mikro Hava Araçları için Akışkanlar Mekaniği Tabanlı Güzergah Belirleme Yöntemi," Türk Otomatik Kontrol Konferansı (TOK), Sabancı Üniversitesi, Istanbul, September 2007
75. I.Yavrucuk, A.T.Kutay, "Adaptive Neural Network Based Control System Applications for Autonomous UAVs," presented at the Ankara International Aerospace Conference, METU, Ankara, Turkey, September, 2005
76. I.Yavrucuk, E.Arslan,"Insansiz Hava Araclarininin Komuta Kontrol Sisrtemnleri Tasarimi ve Gelistirilmesi icin simulasyon Tabanli Test Platformu," Savtek, Ankara, June, 2006
77. M.Cevik, I.Yavrucuk, O.Uzol,"Ulusal Insansiz Muharip Hava Araci (Imha) Ihtiyacinda Etkin Sistem Tasarimi ve Itki Alt Sisteminin Degerlendirilmesi," Savtek, Ankara, June 2006

78. Onur Tarımcı, Güliz Bulut, Zeynep Çakır, Öznur Yemenici, Güneş Aydın, İlkay Yavrucuk , “Iki Kisilik Turbin Motorlu Bir Egitim Helikopterinin Konsept Tasarimi 1. Kisim: METUCOPTER,” I.Ulusal Havacilik ve Uzay Konferansi, Ankara, September 2006

Ph.D.Thesis: I. Yavrucuk, “Adaptive Limit Detection and Limit Avoidance,” Georgia Tech, Aug., 2003.

REFERENCES

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