

Prof.Dr. Tufan Kumbasar

Kişisel Bilgiler

E-posta: kumbasart@itu.edu.tr

Web: <http://web.itu.edu.tr/kumbasart/>

Uluslararası Araştırmacı ID'leri

ScholarID: i2hguUsAAAAJ

ORCID: 0000-0001-9366-0240

Publons / Web Of Science ResearcherID: B-1021-2013

ScopusID: 24766319200

Yoksis Araştırmacı ID: 106905

Biyografi

Tufan Kumbasar received the B.Sc., M.Sc., and Ph.D. degrees in Control and Automation Engineering from Istanbul Technical University (ITU), Türkiye. He holds the position of Professor in the Control and Automation Engineering Department and serves as the Director of the Artificial Intelligence and Intelligent Systems (AI2S) Laboratory, Faculty of Electrical and Electronics Engineering, ITU, Türkiye. His major research interests are in computational intelligence, notably type-2 fuzzy logic, fuzzy control, neural networks, evolutionary algorithms, and intelligent systems. He is also interested in robotics, machine learning, intelligent control, and their real-world applications. He has served as a Publication Co-Chair, Panel Session Co-Chair, Special Session Co-Chair, PC, IPC, and TPC in various international and national conferences. Dr. Kumbasar is an Associate Editor for the IEEE Transactions on Fuzzy Systems and an Area Editor for the International Journal of Approximate Reasoning.

Dr. Kumbasar received the Best Paper Award from the IEEE International Conference on Fuzzy Systems in 2015 and the 6th International Conference on Control Engineering and Information Technology in 2018. He is the recipient of the ODTÜ Mustafa N. Parlar Research and Education Foundation Research Incentive Award in 2020, the Turkish Academy of Sciences Outstanding Young Scientists Award in 2021, the Istanbul Technical University Young Scientists Achievement Award in 2022, IEEE Turkey Research Incentive Award in 2022, and the Science Academy Young Scientist Award in 2023.

Eğitim Bilgileri

Doktora, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Kontrol Ve Otomasyon Mühendisliği (Dr), Türkiye 2008 - 2012

Yüksek Lisans, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Kontrol Ve Otomasyon Mühendisliği (YI) (Tezli), Türkiye 2006 - 2008

Lisans, İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Kontrol Ve Otomasyon Mühendisliği Bölümü, Türkiye 2002 - 2006

Yabancı Diller

İngilizce

Yaptığı Tezler

Doktora, Type-2 fuzzy model inversion methods and fuzzy model based controller design, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Kontrol Ve Otomasyon Mühendisliği (Dr), 2012
Yüksek Lisans, Ters bulanık model alma yöntemleri, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Kontrol Ve Otomasyon Mühendisliği (YI) (Tezli), 2008

Araştırma Alanları

Bilgi Sistemleri, Haberleşme ve Kontrol Mühendisliği, Kontrol ve Sistem Mühendisliği, Denetleyiciler, Optimal Kontrol, Robotik ve Mekatronik Sistemler, Akıllı Etmenler, Mühendislik ve Teknoloji

Akademik Unvanlar / Görevler

Doç.Dr., İstanbul Teknik Üniversitesi, Elektrik-Elektronik, Kontrol Ve Otomasyon Mühendisliği, 2018 - Devam Ediyor
Yrd.Doç.Dr., İstanbul Teknik Üniversitesi, Elektrik-Elektronik, Kontrol Ve Otomasyon Mühendisliği, 2014 - 2018
Araştırma Görevlisi, İstanbul Teknik Üniversitesi, Elektrik-Elektronik, Kontrol Ve Otomasyon Mühendisliği, 2007 - 2014

Akademik İdari Deneyim

İstanbul Teknik Üniversitesi, 2017 - Devam Ediyor
İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Kontrol Ve Otomasyon Mühendisliği Bölümü, 2016 - Devam Ediyor

Verdiği Dersler

OTOMATİK KONTROL SİSTEMLERİ, Lisans, 2016 - 2017
DESİGN OF DİSCRETE TİME CONTROL SYSTEMS, Yüksek Lisans, 2016 - 2017, 2015 - 2016
PROCESS CONTROL, Lisans, 2016 - 2017, 2015 - 2016, 2014 - 2015
SÜREÇ KONTROL, Lisans, 2015 - 2016
AYRIK KONTROL SİSTEMLERİN TASARIMI, Yüksek Lisans, 2014 - 2015
BULANIK MODELLEME VE KONTROL, Yüksek Lisans, 2014 - 2015
CONTROL SYSTEMS, Lisans, 2014 - 2015
SEMİNER, Yüksek Lisans, 2014 - 2015

Yönetilen Tezler

Kumbasar T., Differential flatness-based fuzzy controller design for aggressive maneuvering of quadcopters, Doktora, Ç.GÜZAY(Öğrenci), 2023
Kumbasar T., A CONTROL-THEORETIC APPROACH FOR VISION BASED QUALITY AWARE AUTONOMOUS NAVIGATION AND MAPPING TOWARD DRONE LANDING, Doktora, O.SÖZER(Öğrenci), 2023
Kumbasar T., DESIGN AND DEPLOYMENT OF DEEP LEARNING BASED FUZZY LOGIC SYSTEMS, Doktora, A.BEKE(Öğrenci), 2023
Kumbasar T., APPLICATIONS OF DEEP REINFORCEMENT LEARNING FOR ADVANCED DRIVING ASSISTANCE SYSTEMS, Doktora, M.UĞUR(Öğrenci), 2023
Kumbasar T., Kural A., On control of direct-drive permanent magnet synchronous machines in micromobility applications, Yüksek Lisans, K.METEHAN(Öğrenci), 2023

Kumbasar T., Integrating fuzzy logic into deep autoencoders for interpretability and clustering, Yüksek Lisans, K.BÖLAT(Öğrenci), 2021

Kumbasar T., Analysis and design of general type-2 fuzzy logic controllers, Doktora, A.SAKALLI(Öğrenci), 2020

Kumbasar T., Unity 3d oyun ortamında akıllı ajanlar ile kaçma-kovalama oyun tasarımı, Yüksek Lisans, İ.ŞAHİN(Öğrenci), 2020

Kumbasar T., An intelligent overtaking assistant for autonomous racing cars, Yüksek Lisans, E.ARMAĞAN(Öğrenci), 2020

Kumbasar T., Transforming feedback control systems on whiteboard into Matlab via a deep learning based intelligent system, Yüksek Lisans, D.ERDEM(Öğrenci), 2020

Kumbasar T., Human operator modelling with ts fuzzy modelling using symbolic interval-valued data, Yüksek Lisans, A.ERDİNÇ(Öğrenci), 2019

Kumbasar T., Self-commissioning and position sensorless field oriented control of IPMSM, Yüksek Lisans, Y.ÇETİN(Öğrenci), 2019

Kumbasar T., Fuzzy logic based position control system design for nano quadcopter, Yüksek Lisans, F.CANDAN(Öğrenci), 2018

Kumbasar T., Type-2 fuzzy logic based linguistic pursuing strategy design with a real world application, Yüksek Lisans, A.BEKE(Öğrenci), 2018

Kumbasar T., Vision based positioning ABB IRB 140 robot for gas leakage test automation, Yüksek Lisans, A.İLKER(Öğrenci), 2018

Kumbasar T., Real-time target tracking and following with ur5 collaborative robot arm, Yüksek Lisans, B.TEKE(Öğrenci), 2018

Kumbasar T., Machine learning techniques for surface electromyography based hand gesture recognition, Yüksek Lisans, E.KAYA(Öğrenci), 2018

Kumbasar T., Ofis aydınlatma sistemlerinde akıllı telefon ile ölçüm ve BP-BÇ tabanlı optimal kontrol yöntemi, Yüksek Lisans, M.ALPER(Öğrenci), 2017

Kumbasar T., An internal model control based tuning method for single input fuzzy PID controller, Yüksek Lisans, A.VAR(Öğrenci), 2017

Kumbasar T., FV sistemlerde güneşi takip eden sistem tasarımı ve MPPT kontrolü ile enerjinin yüke maksimum olarak aktarılması, Yüksek Lisans, M.İKBAL(Öğrenci), 2016

Kumbasar T., Termal konfor ve enerji verimliliği odaklı akıllı klima kontrol sistemi, Yüksek Lisans, O.SÖZER(Öğrenci), 2016

Kumbasar T., Time series forecasting via computational intelligence methods, Yüksek Lisans, A.ŞAHİN(Öğrenci), 2016

Kumbasar T., A Matlab/Simulink toolbox for interval type-2 fuzzy logic systems, Yüksek Lisans, A.TAŞKIN(Öğrenci), 2015

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Zero-order fuzzy neural network with adaptive fuzzy partition and its applications on high-dimensional problems**
Zhang B., Wang J., Zhang C., Yang J., Kumbasar T., Wu W.
Neurocomputing, cilt.569, 2024 (SCI-Expanded)
- II. **Towards capsule endoscope locomotion in large volumes: design, fuzzy modeling, and testing**
Peker F., Beşer M. A., Işıldar E., Terzioğlu Y., Erten A. C., Kumbasar T., Ferhanoğlu O.
Robotica, cilt.42, sa.1, ss.203-224, 2024 (SCI-Expanded)
- III. **A Real-World Reinforcement Learning Framework for Safe and Human-Like Tactical Decision-Making**
Yavas M. U., Kumbasar T., Üre N. K.
IEEE Transactions on Intelligent Transportation Systems, cilt.24, sa.11, ss.11773-11784, 2023 (SCI-Expanded)
- IV. **Designing practical fuzzy gain scheduling controllers for micromobility applications of permanent magnet synchronous machines**
Gul K. M., Kacar B., Aziziaghdam M., Kumbasar T.
Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering, cilt.237, sa.10, ss.1884-1897, 2023 (SCI-Expanded)

- V. **Quality-Aware Autonomous Navigation with Dynamic Path Cost for Vision-Based Mapping toward Drone Landing**
Sözer O., Kumbasar T.
Drones, cilt.7, sa.4, 2023 (SCI-Expanded)
- VI. **More than Accuracy: A Composite Learning Framework for Interval Type-2 Fuzzy Logic Systems**
Beke A., Kumbasar T.
IEEE Transactions on Fuzzy Systems, cilt.31, sa.3, ss.734-744, 2023 (SCI-Expanded)
- VII. **Toward Learning Human-Like, Safe and Comfortable Car-Following Policies With a Novel Deep Reinforcement Learning Approach**
Yavas M. U., Kumbasar T., Üre N. K.
IEEE Access, cilt.11, ss.16843-16854, 2023 (SCI-Expanded)
- VIII. **Aggressive maneuvering of a quadcopter via differential flatness-based fuzzy controllers: From tuning to experiments**
Güzay Ç., Kumbasar T.
Applied Soft Computing, cilt.126, 2022 (SCI-Expanded)
- IX. **Deep learning frameworks to learn prediction and simulation focused control system models**
Tuna T., Beke A., Kumbasar T.
APPLIED INTELLIGENCE, cilt.52, sa.1, ss.662-679, 2022 (SCI-Expanded)
- X. **A framework for designing cognitive trajectory controllers using genetically evolved interval type-2 fuzzy cognitive maps**
Amirkhani A., Shirzadeh M., Kumbasar T., Mashadi B.
INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS, cilt.37, sa.1, ss.305-335, 2022 (SCI-Expanded)
- XI. **Towards Systematic Design of General Type-2 Fuzzy Logic Controllers: Analysis, Interpretation, and Tuning**
Sakalli A., Kumbasar T., Mendel J. M.
IEEE TRANSACTIONS ON FUZZY SYSTEMS, cilt.29, sa.2, ss.226-239, 2021 (SCI-Expanded)
- XII. **Interval Type-2 Fuzzy Cognitive Map-Based Flight Control System for Quadcopters**
Amirkhani A., Shirzadeh M., Kumbasar T.
INTERNATIONAL JOURNAL OF FUZZY SYSTEMS, cilt.22, sa.8, ss.2504-2520, 2020 (SCI-Expanded)
- XIII. **A new fractional-order general type-2 fuzzy predictive control system and its application for glucose level regulation**
Mohammadzadeh A., Kumbasar T.
APPLIED SOFT COMPUTING, cilt.91, 2020 (SCI-Expanded)
- XIV. **Adaptive backstepping controller design for MIMO cancer immunotherapy using Laguerre polynomials**
Zirkohi M. M., Kumbasar T.
JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS, cilt.357, sa.8, ss.4664-4679, 2020 (SCI-Expanded)
- XV. **Design and development of FOLLY: A self-foldable and self-deployable quadcopter**
Tuna T., Ovrur S. E., Gokbel E., Kumbasar T.
AEROSPACE SCIENCE AND TECHNOLOGY, cilt.100, 2020 (SCI-Expanded)
- XVI. **Optimal PID control of spatial inverted pendulum with big bang-big crunch optimization**
Wang J., Kumbasar T.
IEEE-CAA JOURNAL OF AUTOMATICA SINICA, cilt.7, sa.3, ss.822-832, 2020 (SCI-Expanded)
- XVII. **A Deep Learning-Based Pipeline for Teaching Control Theory: Transforming Feedback Control Systems on Whiteboard Into MATLAB**
Erdem D., Beke A., Kumbasar T.
IEEE ACCESS, cilt.8, ss.84631-84641, 2020 (SCI-Expanded)
- XVIII. **Type-2 Fuzzy Logic-Based Linguistic Pursuing Strategy Design and Its Deployment to a Real-World Pursuit Evasion Game**
Beke A., Kumbasar T.

- IEEE TRANSACTIONS ON CYBERNETICS, cilt.50, sa.1, ss.211-221, 2020 (SCI-Expanded)
- XIX. **A fuzzy logic-based autonomous car control system for the JavaScript Racer game**
Etlik U. B., Korkmaz B., Beke A., Kumbasar T.
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, 2019 (SCI-Expanded)
- XX. **Learning with Type-2 Fuzzy activation functions to improve the performance of Deep Neural Networks**
Beke A., Kumbasar T.
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, cilt.85, ss.372-384, 2019 (SCI-Expanded)
- XXI. **Current development on using Rotary Inverted Pendulum as a benchmark for testing linear and nonlinear control algorithms**
Hamza M. F., Yap H. J., Choudhury I. A., Isa A. I., Zimit A. Y., Kumbasar T.
MECHANICAL SYSTEMS AND SIGNAL PROCESSING, cilt.116, ss.347-369, 2019 (SCI-Expanded)
- XXII. **Big Bang-Big Crunch optimized hierarchical sliding-mode control of X-Z inverted pendulum**
Wang J., Kumbasar T.
SIMULATION MODELLING PRACTICE AND THEORY, cilt.86, ss.25-35, 2018 (SCI-Expanded)
- XXIII. **A survey on advancement of hybrid type 2 fuzzy sliding mode control**
HAMZA M. F., YAP H. J., CHOUDHURY I. A., CHIROMA H., Kumbasar T.
NEURAL COMPUTING & APPLICATIONS, cilt.30, sa.2, ss.331-353, 2018 (SCI-Expanded)
- XXIV. **Type-2 Fuzzy Logic Controllers Made Even Simpler: From Design to Deployment for UAVs**
Sarabakha A., Fu C., Kayacan E., Kumbasar T.
IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, cilt.65, sa.6, ss.5069-5077, 2018 (SCI-Expanded)
- XXV. **An inverse controller design method for interval type-2 fuzzy models**
Kumbasar T., EKSİN İ., GÜZELKAYA M., Yesil E.
SOFT COMPUTING, cilt.21, sa.10, ss.2665-2686, 2017 (SCI-Expanded)
- XXVI. **HYBRID ADAPTIVE TYPE-2 FUZZY TRACKING CONTROL OF CHAOTIC OSCILLATION DAMPING OF POWER SYSTEMS**
Zirkohi M. M., Kumbasar T., Lin T.
ASIAN JOURNAL OF CONTROL, cilt.19, sa.3, ss.1114-1125, 2017 (SCI-Expanded)
- XXVII. **Revisiting Karnik-Mendel Algorithms in the framework of Linear Fractional Programming**
Kumbasar T.
INTERNATIONAL JOURNAL OF APPROXIMATE REASONING, cilt.82, ss.1-21, 2017 (SCI-Expanded)
- XXVIII. **Book review**
KUMBASAR T.
FUZZY SETS AND SYSTEMS, cilt.306, ss.169-170, 2017 (SCI-Expanded)
- XXIX. **Robust Stability Analysis and Systematic Design of Single-Input Interval Type-2 Fuzzy Logic Controllers**
Kumbasar T.
IEEE TRANSACTIONS ON FUZZY SYSTEMS, cilt.24, sa.3, ss.675-694, 2016 (SCI-Expanded)
- XXX. **A Self-Tuning zSlices-Based General Type-2 Fuzzy PI Controller**
Kumbasar T., Hagraş H.
IEEE TRANSACTIONS ON FUZZY SYSTEMS, cilt.23, sa.4, ss.991-1013, 2015 (SCI-Expanded)
- XXXI. **General derivation and analysis for input-output relations in interval type-2 fuzzy logic systems**
Aliasghary M., EKSİN İ., Güzelkaya M., KUMBASAR T.
SOFT COMPUTING, cilt.19, sa.5, ss.1283-1293, 2015 (SCI-Expanded)
- XXXII. **Big Bang-Big Crunch optimization based interval type-2 fuzzy PID cascade controller design strategy**
Kumbasar T., Hagraş H.
INFORMATION SCIENCES, cilt.282, ss.277-295, 2014 (SCI-Expanded)
- XXXIII. **A simple design method for interval type-2 fuzzy pid controllers**
Kumbasar T.
SOFT COMPUTING, cilt.18, sa.7, ss.1293-1304, 2014 (SCI-Expanded)
- XXXIV. **Exact inversion of decomposable interval type-2 fuzzy logic systems**

- Kumbasar T, EKSİN İ., Güzelkaya M., YESİL E.
INTERNATIONAL JOURNAL OF APPROXIMATE REASONING, cilt.54, sa.2, ss.253-272, 2013 (SCI-Expanded)
- XXXV. **Online tuning of fuzzy PID controllers via rule weighing based on normalized acceleration**
Karasakal O., Güzelkaya M., EKSİN İ., YESİL E., KUMBASAR T.
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, cilt.26, sa.1, ss.184-197, 2013 (SCI-Expanded)
- XXXVI. **Type-2 fuzzy model based controller design for neutralization processes**
Kumbasar T, EKSİN İ., Güzelkaya M., YESİL E.
ISA TRANSACTIONS, cilt.51, sa.2, ss.277-287, 2012 (SCI-Expanded)
- XXXVII. **Adaptive fuzzy model based inverse controller design using BB-BC optimization algorithm**
Kumbasar T, EKSİN İ., Güzelkaya M., YESİL E.
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.10, ss.12356-12364, 2011 (SCI-Expanded)
- XXXVIII. **Interval type-2 fuzzy inverse controller design in nonlinear IMC structure**
Kumbasar T., EKSİN İ., Güzelkaya M., YESİL E.
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, cilt.24, sa.6, ss.996-1005, 2011 (SCI-Expanded)
- XXXIX. **Big Bang Big Crunch Optimization Method Based Fuzzy Model Inversion**
KUMBASAR T., GÜZELKAYA M.
Lecture Notes in Computer Science, ss.732-740, 2008 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

- I. **Real-Time Interval Type-2 Fuzzy Control of an Unmanned Aerial Vehicle with Flexible Cable-Connected Payload**
Candan F., Dik Ö. F., Kumbasar T., Mahfouf M., Mihaylova L.
Algorithms, cilt.16, sa.6, 2023 (ESCI)
- II. **Parameter Optimization of Interval Type-2 Fuzzy Neural Networks Based on PSO and BBBC Methods**
Wang J., Kumbasar T.
IEEE-CAA JOURNAL OF AUTOMATICA SINICA, cilt.6, ss.247-257, 2019 (Hakemli Dergi)
- III. **A fuzzy logic based intelligent autonomous vehicle control system design in the TORCS game environment**
Armagan E., KUMBASAR T.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, cilt.24, sa.8, ss.1435-1442, 2018 (Hakemli Dergi)
- IV. **Type-2 Fuzzy Logic Control in Computer Games**
Sahin A., Kumbasar T.
TYPE-2 FUZZY LOGIC AND SYSTEMS: DEDICATED TO PROFESSOR JERRY MENDEL FOR HIS PIONEERING CONTRIBUTION, cilt.362, ss.105-127, 2018 (Scopus)
- V. **Interval type-2 fuzzy PID controllers and an online self-tuning mechanism**
KUMBASAR T.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, cilt.22, ss.643-649, 2016 (Hakemli Dergi)
- VI. **Interval Type-2 Fuzzy PID Controllers**
Kumbasar T., Hagraş H.
SPRINGER HANDBOOK OF COMPUTATIONAL INTELLIGENCE, ss.285-294, 2015 (Hakemli Dergi)
- VII. **A Design Methodology and Analysis for Interval Type 2 Fuzzy PI PD Controllers**
MORTAZA A., EKSİN İ., GÜZELKAYA M., KUMBASAR T.
International Journal Of Innovative Computing Information And Control, cilt.10, ss.4215-4230, 2013 (Scopus)
- VIII. **A design methodology and analysis for interval type 2 fuzzy PI PD controllers**
ALİASGHARY M., EKSİN İ., GÜZELKAYA M., KUMBASAR T.
Int. J. Innov. Comput. Inf. Control, cilt.9, sa.10, ss.4215-4230, 2013 (Hakemli Dergi)
- IX. **Type-2 fuzzy model inverse controller design based on BB-BC optimization method**

Kumbasar T., Eksin İ., Güzelkaya M., Yesil E.

IFAC Proceedings Volumes (IFAC-PapersOnline), cilt.44, ss.5308-5313, 2011 (Scopus)

Kitap & Kitap Bölümleri

- I. **Type-2 Fuzzy Logic Control in Computer Games**
Sahin A., KUMBASAR T.
Type-2 Fuzzy Logic and Systems, John R., Hagraş H., Castillo O., Editör, Springer, 2018
- II. **An Overview on Interval Type-2 Fuzzy PID Controllers**
KUMBASAR T., Hagraş H.
Handbook of Computational Intelligence, Kacprzyk, Janusz, Pedrycz, Witold , Editör, Springer, 2015

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Design of 2 DOF Fuzzy Control System for Fuel Cell Systems**
Kendir F., Kumbasar T.
Intelligent and Fuzzy Systems - Intelligence and Sustainable Future Proceedings of the INFUS 2023 Conference, İstanbul, Türkiye, 22 - 24 Ağustos 2023, cilt.759 LNNS, ss.584-591
- II. **Design of a Fuzzy Linear Quadratic Regulator for the Speed Control of SPMSM**
Gul K. M., Kural A., Kumbasar T.
Intelligent and Fuzzy Systems - Intelligence and Sustainable Future Proceedings of the INFUS 2023 Conference, İstanbul, Türkiye, 22 - 24 Ağustos 2023, cilt.759 LNNS, ss.692-699
- III. **Design and Implementation of a Novel Self-Tuning Single Input Fuzzy Controller for PMSM**
Gul K. M., Kacar B., Aziziaghdam M., Kumbasar T.
2023 IEEE International Conference on Fuzzy Systems, FUZZ 2023, Incheon, Güney Kore, 13 - 17 Ağustos 2023
- IV. **Recognizing and Tracking Person of Interest: A Real-Time Efficient Deep Learning based Method for Quadcopters**
Dursun H. E., Guven E. C., Avci B., Kumbasar T.
10th International Conference on Recent Advances in Air and Space Technologies, RAST 2023, İstanbul, Türkiye, 7 - 09 Haziran 2023
- V. **Generating High-Quality Prediction Intervals for Regression Tasks via Fuzzy C-Means Clustering-Based Conformal Prediction**
Msaddi S., Kumbasar T.
Intelligent and Fuzzy Systems - Intelligence and Sustainable Future Proceedings of the INFUS 2023 Conference, İstanbul, Türkiye, 22 - 24 Ağustos 2023, cilt.759 LNNS, ss.532-539
- VI. **Towards Reliable Uncertainty Quantification and High Precision with General Type-2 Fuzzy Systems**
Avci B., Beke A., Kumbasar T.
2023 IEEE International Conference on Fuzzy Systems, FUZZ 2023, Incheon, Güney Kore, 13 - 17 Ağustos 2023
- VII. **Model-Based Reinforcement Learning for Advanced Adaptive Cruise Control: A Hybrid Car Following Policy**
Yavas U., Kumbasar T., Üre N. K.
33rd IEEE Intelligent Vehicles Symposium (IEEE IV), Aachen, Almanya, 5 - 09 Haziran 2022, ss.1466-1472
- VIII. **Enhancing the Learning of Interval Type-2 Fuzzy Classifiers with Knowledge Distillation**
Erdem D., Kumbasar T.
IEEE International Conference on Fuzzy Systems, Luxembourg, Lüksemburg, 11 - 14 Temmuz 2021, ss.1-7
- IX. **Integrating Interval Type-2 Fuzzy Sets into Deep Embedding Clustering to Cope with Uncertainty**
Bölat K., Kumbasar T.
IEEE International Conference on Fuzzy Systems, Luxembourg, Lüksemburg, 11 - 14 Temmuz 2021, ss.1-7
- X. **Capturing Uncertainty with Interval Fuzzy Logic Systems through Composite Deep Learning**

- Beke A., Kumbasar T.
IEEE International Conference on Fuzzy Systems, Luxembourg, Lüksemburg, 11 - 14 Temmuz 2021, ss.1-7
- XI. **An Intelligent Overtaking Assistant System for Autonomous Vehicles**
Armağan E., Kumbasar T.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Türkiye, 21 - 23 Temmuz 2020, cilt.1197 AISC, ss.1068-1076
- XII. **Catch me if you can: A pursuit-evasion game with intelligent agents in the Unity 3D game environment**
Sahin I., Kumbasar T.
6th International Conference on Electrical Engineering, ICEE 2020, Virtual, İstanbul, Türkiye, 25 - 27 Eylül 2020
- XIII. **Interpreting Variational Autoencoders with Fuzzy Logic: A step towards interpretable deep learning based fuzzy classifiers**
Bölat K., KUMBASAR T.
2020 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Glasgow, United Kingdom, 19 - 24 Temmuz 2020
- XIV. **A Design Approach for General Type-2 Fuzzy Logic Controllers with an Online Scheduling Mechanism**
Sakalli A., Kumbasar T., Mendel J.
2020 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), 19 - 24 Temmuz 2020
- XV. **Real-Time Leader-Follower Formation Control of Nano Quadcopters in the Framework of Ratio Control**
Mandacı M., KUMBASAR T.
European Control Conference, 12 - 15 Mayıs 2020
- XVI. **Parameter Identification and Auto-Tuning of IPMSM for Self-Commissioning**
Çetin Y., Akyol I. E., Buyukozturk K. C., KUMBASAR T.
2020 7th International Conference on Electrical and Electronics Engineering (ICEEE), Antalya, Turkey, 14 - 16 Nisan 2020
- XVII. **A New Approach for Tactical Decision Making in Lane Changing: Sample Efficient Deep Q Learning with a Safety Feedback Reward**
Yavas U., Kumbasar T., Üre N. K.
31st IEEE Intelligent Vehicles Symposium (IV), ELECTR NETWORK, 23 - 26 Haziran 2020, ss.1156-1161
- XVIII. **Altitude and Position Control of Parrot Mambo Minidrone with PID and Fuzzy PID Controllers**
Kaplan M. R., Eraslan A., BEKE A., KUMBASAR T.
International Conference on Electrical and Electronics Engineering, 28 - 30 Kasım 2019
- XIX. **Human Operator Modelling with Interval-valued Takagi-Sugeno Fuzzy Models**
tüfekçi a. e., KUMBASAR T.
International Conference on Electrical and Electronics Engineering, 28 - 30 Kasım 2019
- XX. **Self-Commissioning of Electrical Parameters for Sensorless IPMSM Drives**
çetin y., akyol i. e., büyüköztürk k. ç., KUMBASAR T.
International Conference on Electrical and Electronics Engineering, 28 - 30 Kasım 2019
- XXI. **Big Bang Big Crunch based Near-Optimal Guidance Law for Interceptor Problem**
Banerjee A., Nabi M. u., KUMBASAR T.
International Conference on Electrical and Electronics Engineering, 28 - 30 Kasım 2019
- XXII. **A New Insight on the Mappings of Type-2 Fuzzy Logic Systems**
KUMBASAR T.
2019 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), New Orleans, LA, USA, 23 - 26 Haziran 2019
- XXIII. **Interval Type-2 Fuzzy Systems as Deep Neural Network Activation Functions**
BEKE A., KUMBASAR T.
Proceedings of the 2019 Conference of the International Fuzzy Systems Association and the European Society for Fuzzy Logic and Technology (EUSFLAT 2019), Prague, Czech Republic, 9 - 13 Eylül 2019
- XXIV. **Real-Time Applications of Fuzzy Logic Control**

- KUMBASAR T.
International Symposium on Advanced Electrical and Communication Technologies, 21 - 23 Kasım 2018
- XXV. **A Fuzzy Logic based Real Time Two-Wheeled Inverted Pendulum Robot**
Ovur S. E., Candan F., BEKE A., KUMBASAR T.
6th International Conference on Control Engineering Information Technology, 25 - 27 Ekim 2018
- XXVI. **Hand Gesture Recognition Systems with the Wearable Myo Armband**
Kaya E., KUMBASAR T.
6th International Conference on Control Engineering Information Technology, 25 - 27 Ekim 2018
- XXVII. **Analyzing the control surfaces of type-1 and interval type-2 FLCs through an experimental study**
SAKALLI A., Beke A., Kumbasar T.
2018 IEEE International Conference on Fuzzy Systems, FUZZ 2018, Rio-De-Janeiro, Brezilya, 8 - 13 Temmuz 2018
- XXVIII. **Single vs. Double input interval type-2 fuzzy PID controllers: Which one is better?**
Beke A., Kumbasar T.
2018 IEEE International Conference on Fuzzy Systems, FUZZ 2018, Rio-De-Janeiro, Brezilya, 8 - 13 Temmuz 2018
- XXIX. **Design and Deployment of Fuzzy PID Controllers to the nano quadcopter Crazyflie 2.0**
CANDAN F., Beke A., Kumbasar T.
2018 IEEE International Conference on Innovations in Intelligent Systems and Applications, INISTA 2018, Thessaloniki, Yunanistan, 3 - 05 Temmuz 2018
- XXX. **Fuzzy Logic and Computer Games**
KUMBASAR T.
2. International Conference on Theoretical and Applied Computer Science and Engineering, 29 - 30 Haziran 2018
- XXXI. **YAFT: A Fuzzy Logic based Real Time Two-Wheeled Inverted Pendulum Robot**
Ovur S. E., Candan F., Beke A., Kumbasar T.
6th International Conference on Control Engineering and Information Technology (CEIT), İstanbul, Türkiye, 25 - 27 Ekim 2018
- XXXII. **A Vision Based Positioning Gas Leakage Test Automation System**
Savran A. I., Kumbasar T.
6th International Conference on Control Engineering and Information Technology (CEIT), İstanbul, Türkiye, 25 - 27 Ekim 2018
- XXXIII. **Hand Gesture Recognition Systems with the Wearable Myo Armband**
Kaya E., Kumbasar T.
6th International Conference on Control Engineering and Information Technology (CEIT), İstanbul, Türkiye, 25 - 27 Ekim 2018
- XXXIV. **Fuzzy Logic Based Self-Driving Racing Car Control System**
Korkmaz B., Etlik U. B., Beke A., Kumbasar T.
6th International Conference on Control Engineering and Information Technology (CEIT), İstanbul, Türkiye, 25 - 27 Ekim 2018
- XXXV. **FOLLY: A Self Foldable and Self Deployable Autonomous Quadcopter**
Tuna T., Ovur S. E., Gokbel E., Kumbasar T.
6th International Conference on Control Engineering and Information Technology (CEIT), İstanbul, Türkiye, 25 - 27 Ekim 2018
- XXXVI. **A Fuzzy Logic Based Autonomous Vehicle Control System Design in the TORCS Environment,**
ARMAGAN E., KUMBASAR T.
International Conference on Electrical and Electronics Engineering, 30 Kasım - 02 Aralık 2017
- XXXVII. **A Fuzzy Logic Based Autonomous Vehicle Control System Design in the TORCS Environment**
Armagan E., Kumbasar T.
10th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Türkiye, 30 Kasım - 02 Aralık 2017, ss.737-741
- XXXVIII. **Diagnosing Interdental Decays in Mouth Radiography Images using Kernel Fuzzy C means Segmentation and Cascade Object Detector**
DİZAJI N. K., KUMBASAR T.

International Conference on Electrical and Electronics Engineering, 30 Kasım - 02 Aralık 2017

- XXXIX. **A smart dermoscope design using artificial neural network**
Türkeli S., OGUZ M. S., ABAY S. B., Kumbasar T., ATAY H. T., Kurt K. K.
2017 International Artificial Intelligence and Data Processing Symposium, IDAP 2017, Malatya, Türkiye, 16 - 17 Eylül 2017
- XL. **A rule based fuzzy gesture recognition system to interact with Sphero 2.0 using a smart phone**
Beke A., YÜCELER A. A., Kumbasar T.
2017 International Artificial Intelligence and Data Processing Symposium, IDAP 2017, Malatya, Türkiye, 16 - 17 Eylül 2017
- XLI. **On the design and gain analysis of IT2-FLC with a case study on an electric vehicle**
Sakalli A., Kumbasar T.
2017 IEEE International Conference on Fuzzy Systems, FUZZ 2017, Naples, İtalya, 9 - 12 Temmuz 2017
- XLII. **Landing on the moon with type-2 fuzzy logic**
Sahin A., Kumbasar T.
2017 IEEE International Conference on Fuzzy Systems, FUZZ 2017, Naples, İtalya, 9 - 12 Temmuz 2017
- XLIII. **Game of spheros: A real-world pursuit-evasion game with type-2 fuzzy logic**
Beke A., Kumbasar T.
2017 IEEE International Conference on Fuzzy Systems, FUZZ 2017, Naples, İtalya, 9 - 12 Temmuz 2017
- XLIV. **A fuzzy logic approach to improve phone segmentation a case study of the Dutch language**
Milewski V., Bilgin A., Kumbasar T.
9th International Joint Conference on Computational Intelligence, IJCCI 2017, Funchal, Madeira, Portekiz, 1 - 03 Kasım 2017, ss.64-72
- XLV. **Birinci Mertebeden Ölü Zamanlı Sistemler için Sistematik bir Bulanık PID Kontrolör Tasarım Yöntemi**
CANKURT R. T., UZUNOĞLU B., KUMBASAR T.
Otomatik Kontrol Toplantısı TOK 2016, Türkiye, 29 Eylül - 01 Ekim 2016
- XLVI. **Type-2 Fuzzified Flappy Bird Control System**
SAHIN A., ATICI E., Kumbasar T.
IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Vancouver, Kanada, 24 - 29 Temmuz 2016, ss.1578-1583
- XLVII. **Gradient Descent and Extended Kalman Filter based Self-Tuning Interval Type-2 Fuzzy PID Controllers**
SAKALLI A., BEKE A., Kumbasar T.
IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Vancouver, Kanada, 24 - 29 Temmuz 2016, ss.1592-1598
- XLVIII. **Design and Experimental Validation of Single Input Type-2 Fuzzy PID Controllers as Applied to 3 DOF Helicopter Testbed**
MEHNDIRATTA M., KAYACAN E., Kumbasar T.
IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Vancouver, Kanada, 24 - 29 Temmuz 2016, ss.1584-1591
- XLIX. **An Open Source Matlab/Simulink Toolbox for Interval Type-2 Fuzzy Logic Systems**
TASKİN A., Kumbasar T.
IEEE Symposium Series Computational Intelligence, Cape-Town, Güney Afrika, 7 - 10 Aralık 2015, ss.1561-1568
- L. **Tip 2 Bulanık PID Kontrolörleri için Yeni Bir Çevrimiçi Öz Ayarlama Yaklaşımı**
Dodurka M. F., Sakalli A., Beke A., Savran A. İ., Sahin A., KUMBASAR T., Yesil E., Hagraş H.
Otomatik Kontrol Toplantısı TOK 2015, Türkiye, 10 - 12 Ekim 2015
- LI. **Ekstruder Süreçleri için İMK Tabanlı Bulanık Kazanç Ayarlama Mekanizmalı PID Kontrolör Tasarımı**
Savran A. İ., Beke A., KUMBASAR T., Yesil E.
Otomatik Kontrol Toplantısı TOK 2015, Türkiye, 10 Ekim 2015
- LII. **A Systematic Type 2 Fuzzy Modelling Methodology for Time Series Forecasting**
Dodurka M. F., Sahin A., KUMBASAR T., Yeşil E., Siradağ S.
4th International Fuzzy Systems Symposium – FUZZYSS'15, 5 - 06 Ekim 2015

- LIII. Review Study on Fuzzy Time Series and Their Applications in the Last Fifteen Years**
Sahin A., DODURKA M. F., KUMBASAR T., Yesil E., Siradağ S.
4th International Fuzzy Systems Symposium – FUZZYSS'15, 5 - 06 Ekim 2015
- LIV. An IMC based Fuzzy Self-Tuning Mechanism for Fuzzy PID Controllers**
SAVRAN A. I., BEKE A., Kumbasar T., YESIL E.
International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2015), Madrid, İspanya, 2 - 04 Eylül 2015, ss.343-349
- LV. An Enhanced Fuzzy Linguistic Term Generation and Representation for time series forecasting**
Sahin A., Kumbasar T., Yesil E., Dodurka M. F., Karasakal O., SİRADAG S.
IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2015, İstanbul, Türkiye, 2 - 05 Ağustos 2015
- LVI. Revisiting KM algorithms: A Linear Programming approach**
Kumbasar T.
IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2015, İstanbul, Türkiye, 2 - 05 Ağustos 2015
- LVII. On the fundamental differences between the NT and the KM center of Sets Calculation Methods on the IT2-FLC performance**
Sakalli A., Kumbasar T.
IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2015, İstanbul, Türkiye, 2 - 05 Ağustos 2015
- LVIII. An Internal Model Control Based Design Method for Single Input Fuzzy PID Controllers**
Var A., Kumbasar T., Yesil E.
IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), İstanbul, Türkiye, 2 - 05 Ağustos 2015
- LIX. A Gradient Descent based online tuning Mechanism for PI Type Single input Interval Type-2 fuzzy logic controllers**
Kumbasar T., Hagraş H.
IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2015, İstanbul, Türkiye, 2 - 05 Ağustos 2015
- LX. Tuning Methods and Educational GUI Design for 1 DoF and 2 DoF PI D Controllers**
ÇELİK M. K., Yeşil E., KUMBASAR T.
16th International Conference on Mechatronics – Mechatronika 2014, 3 - 05 Aralık 2014
- LXI. An Approach to Represent Time Series Forecasting via Fuzzy Numbers**
Sahin A., Kumbasar T., Yesil E., Dodurka M. F., Karasakal O.
2nd International Conference on Artificial Intelligence, Modelling and Simulation (AIMS 2014), Madrid, İspanya, 18 - 20 Kasım 2014, ss.51-56
- LXII. Peak Observer based Self tuning of Type 2 Fuzzy PID Controllers**
Yesil E., KUMBASAR T., Dodurka M. F., Sakalli A.
International Conference on Artificial Intelligence Applications and Innovations – AIAI 2014, 19 - 21 Eylül 2014
- LXIII. Bir ve İki Serbestlik Dereceli PID Kontrolörleri için Ayar Yöntemleri ve Esnek Bir Kullanıcı Arayüz Tasarımı**
ÇELİK M. K., Yesil E., KUMBASAR T.
Otomatik Kontrol Toplantısı TOK 2014, Türkiye, 11 - 13 Eylül 2014
- LXIV. Analysis of the performances of type-1, self-tuning type-1 and interval type-2 fuzzy PID controllers on the Magnetic Levitation system**
Sakalli A., KUMBASAR T., Yesil E., Hagraş H.
2014 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Beijing, China, 6 - 11 Temmuz 2014
- LXV. Boundary Function based Karnik- Mendel Type Reduction Method for Interval Type-2 Fuzzy PID Controllers**
Dodurka M. F., Kumbasar T., Sakalli A., Yesil E.
IEEE International Conference on Fuzzy Systems, Beijing, Çin, 6 - 11 Temmuz 2014, ss.619-625
- LXVI. Robust Stability Analysis of PD Type Single Input Interval Type-2 Fuzzy Control Systems**
Kumbasar T.
IEEE International Conference on Fuzzy Systems, Beijing, Çin, 6 - 11 Temmuz 2014, ss.634-639
- LXVII. Performance Evaluation of Interval Type-2 and Online Rule weighing based Type-1 Fuzzy PID Controllers on a pH Process**

- Kumbasar T., Ozturk C., Yesil E., Hagraş H.
IEEE International Conference on Fuzzy Systems, Beijing, Çin, 6 - 11 Temmuz 2014, ss.1875-1882
- LXVIII. **The Simplest Interval Type-2 Fuzzy PID Controller: Structural Analysis**
Sakalli A., Kumbasar T., Dodurka M. F., Yesil E.
IEEE International Conference on Fuzzy Systems, Beijing, Çin, 6 - 11 Temmuz 2014, ss.626-633
- LXIX. **A Type-2 Fuzzy Cascade Control Architecture for Mobile Robots**
Kumbasar T., Hagraş H.
IEEE International Conference on Systems, Man, and Cybernetics (SMC), Manchester, Birleşik Krallık, 13 - 16 Ekim 2013, ss.3226-3231
- LXX. **Bulanık PID Kontrolörlerinin Eğitiminde Durum Tabanlı Çıkarsama Yaklaşımı**
Yesil E., Ozturk C., COSARDEMİR B., KUMBASAR T.
Otomatik Kontrol Toplantısı TOK 2012, Türkiye, 11 - 13 Ekim 2013
- LXXI. **Self-tuning interval type-2 fuzzy PID controllers based on online rule weighting**
Kumbasar T., Yesil E., Karasakal O.
2013 IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2013, Hyderabad, Hindistan, 7 - 10 Temmuz 2013
- LXXII. **A big bang-big crunch optimization based approach for interval type-2 fuzzy PID controller design**
Kumbasar T., Hagraş H.
2013 IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2013, Hyderabad, Hindistan, 7 - 10 Temmuz 2013
- LXXIII. **Online fuzzy rule weighting method for fuzzy PID controllers via Big Bang-Big Crunch optimization**
Yesil E., Sakalli A., ÖZTÜRK C., Kumbasar T.
2013 IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2013, Hyderabad, Hindistan, 7 - 10 Temmuz 2013
- LXXIV. **A one to three input mapping IT2-FLC PID design strategy**
Kumbasar T.
2013 IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2013, Hyderabad, Hindistan, 7 - 10 Temmuz 2013
- LXXV. **PI ve PD Kontrol Yapıları için Baskınlığı Garantileyen Kutup Atama Yöntemi**
BASYIĞİT A. İ., KUMBASAR T., GÜZELKAYA M., EKŞİN İ.
Otomatik Kontrol Toplantısı TOK 2012, Türkiye, 11 - 13 Kasım 2012
- LXXVI. **Çevrimiçi Bulanık Ayar Mekanizması İçeren Yeni Bir Kaskat Kontrol Yapısının Tasarımı ve DCS Üzerinde Gerçekleşmesi**
Yeşil E., Taskin A., KUMBASAR T.
Otomatik Kontrol Toplantısı TOK 2012, Türkiye, 11 - 13 Ekim 2012
- LXXVII. **pH Nötrleştirme Süreci için Kazanç Ayarlamalı PID Kontrolör Tasarımı ve Uygulaması**
Yesil E., Dodurka M. F., KUMBASAR T.
Otomatik Kontrol Toplantısı TOK 2012, Türkiye, 11 - 13 Ekim 2012
- LXXVIII. **Design of an interval type-2 fuzzy logic controller based on conventional PI controller**
Aliasghary M., Eksin İ., Güzelkaya M., Kumbasar T.
2012 20th Mediterranean Conference on Control and Automation, MED 2012, Barcelona, İspanya, 3 - 06 Temmuz 2012, ss.627-632
- LXXIX. **An inversion method for interval type-2 fuzzy logic systems**
Kumbasar T., Eksin İ., Güzelkaya M., Yesil E.
2011 11th International Conference on Intelligent Systems Design and Applications, ISDA'11, Cordoba, İspanya, 22 - 24 Kasım 2011, ss.760-765
- LXXX. **Melez Bulanık PID Kontrolörlerinin Tasarım Yöntemleri ve DCS Üzerinde Gerçekleşmesi**
Yesil E., KURTULUŞ B., TOZAR H., YAVAŞ M. U., KUMBASAR T.
Otomatik Kontrol Toplantısı TOK 2011, Türkiye, 14 - 16 Eylül 2011
- LXXXI. **Kaskat Kontrol yapıları için Bulanık PID Kontrolör Tasarım Yöntemi**
Yeşil E., Dodurka M. F., YÜKSELEN A., KUMBASAR T.

Otomatik Kontrol Toplantısı TOK 2011, Türkiye, 14 - 16 Eylül 2011

- LXXXII. **Type 2 Fuzzy Model Inverse Controller Design Based on BB BC Optimization Method**
KUMBASAR T., EKSİN İ., GÜZELKAYA M., Yeşil E.
IFAC 2011 - 18th World Congress of the International Federation of Automatic Control, Milano, Italy, Milan, İtalya, 28 Ağustos - 02 Eylül 2011
- LXXXIII. **Adaptive fuzzy Internal Model Control design with bias term compensator**
KUMBASAR T., EKSİN İ., GÜZELKAYA M., Yesil E.
2011 IEEE International Conference on Mechatronics, Istanbul, Turkey, 13 - 15 Nisan 2011
- LXXXIV. **Inverse model predictive control based on INFUMO BB BC optimization**
OBLAK S., KUMBASAR T., SKRJANC I., Yesil E.
10th IFAC Workshop on Adaptation and Learning in Control and Signal Processing – ALCOSP 2010, 26 - 28 Ağustos 2010, cilt.43, ss.294-299
- LXXXV. **Ratio Control Problem in Inventory Control Systems**
Yeşil E., ÜZÜMCÜ C. E., GÜZELKAYA M., EKSİN İ., KUMBASAR T.
6th IFAC International Workshop on Knowledge and Technology Transfer in/to Developing Countries – DECOM-IFAC-2009, 26 - 29 Eylül 2009
- LXXXVI. **Fuzzy Blending Hybrid Structure with Fuzzy and Conventional PID Controllers**
BULUT C., EKSİN İ., GÜZELKAYA M., KUMBASAR T., Yesil E.
6th International Mediterranean Modelling Multi Conference – MAS 2009, 23 - 25 Eylül 2009
- LXXXVII. **Control of a pH Neutralization Process via the Big Bang Big Crunch Optimization**
KUMBASAR T., EKSİN İ., GÜZELKAYA M., Yeşil E.
6th International Mediterranean Modelling Multi Conference – MAS 2009: The International Workshop on Modelling Applied Simulation, 23 Eylül 2009
- LXXXVIII. **Control of a pH neutralization process via the Big Bang Big Crunch optimization**
Kumbasar T., Eksin İ., Güzelkaya M., Yeşil E.
8th International Workshop on Modeling and Applied Simulation, MAS 2009, Held at the International Mediterranean and Latin American Modeling Multiconference, I3M 2009, Puerto de la Cruz, İspanya, 23 - 25 Eylül 2009, ss.38-43
- LXXXIX. **İntegratör Etkili Ölü Zamanlı Süreçlerin PI PD Kontrolü İçin Bir Bulanık Ayar Mekanizması**
DURMUŞ M. S., KUMBASAR T., Yeşil E., EKSİN İ., SÖYLEMEZ M. T.
Otomatik Kontrol Toplantısı TOK 2008, Türkiye, 13 - 15 Kasım 2008
- XC. **İntegratör Etkili Ölü Zamanlı Süreçlerin PI-PD Kontrolü için Bir Bulanık Ayar Mekanizması**
DURMUŞ M. S., KUMBASAR T., Yeşil E., EKSİN İ., SÖYLEMEZ M. T.
Otomatik Kontrol Ulusal Toplantısı, TOK 2008, İstanbul, Türkiye, 13 - 15 Kasım 2008, ss.365-369
- XCII. **Inverse fuzzy model control with online adaptation via Big Bang-Big Crunch optimization**
Kumbasar T., Yesil E., Eksin İ., Guezelkaya M.
3rd IEEE International Symposium on Control, Communications and Signal Processing (ISCCSP 2008), St Julians, Malta, 12 - 14 Mart 2008, ss.697-702
- XCIII. **Big Bang Big Crunch Optimization Method Based Fuzzy Model Inversion**
Kumbasar T., Eksin İ., Guzelkaya M., Yesil E.
7th Mexican International Conference on Artificial Intelligence (MICAI 2008), Atizapan de Zaragoza, Meksika, 27 - 31 Ekim 2008, cilt.5317, ss.732-740
- XCIII. **Bulanık Modellerin Ters Aracılığıyla Kontrolör Tasarlanması**
KUMBASAR T., DİLMAC Y., TEKİN Ö. A., Yesil E., EKSİN İ., GÜZELKAYA M.
Otomatik Kontrol Toplantısı TOK 2007, Türkiye, 5 - 07 Eylül 2007

Desteklenen Projeler

Sezer V., Demir A., Kumbasar T., Zengin R. S., Yükseköğretim Kurumları Destekli Proje, Servis Robotları İçin Otonom Sürüş Çözümlerinin Geliştirilmesi ve Uygulanması, 2018 - 2019

Kumbasar T., Candan F., Yükseköğretim Kurumları Destekli Proje, Intelligent Systems in Embedded Systems, 2018 - 2019
Kumbasar T., Türkeli S., Beke A., Yükseköğretim Kurumları Destekli Proje, Kaçma Kovalama Oyunları için Akıllı Kontrol Sistemlerinin Geliştirilmesi, 2017 - 2018
Kumbasar T., Yükseköğretim Kurumları Destekli Proje, ARALIK DEĞERLİ TİP-2 BULANIK SİSTEMLER İÇİN AÇIK KAYNAK BİR MATLAB/SİMULİNK ARAYÜZÜ, 2015 - 2018
Kumbasar T., Yükseköğretim Kurumları Destekli Proje, Aralık Değerli tip-2 ve Çevrim İçi Kural Ağırlıklandırılmalı Tip-1 Bulanık PID Kontrolörlerin Ph Süreci Üzerinde Performans Analizi, 2014 - 2018
Kumbasar T., Yükseköğretim Kurumları Destekli Proje, Büyük Çöküş Büyük Patlama Tabanlı Aralık Değerli Tip -2 Bulanık Kontrolörler için bir tasarım yöntemi, 2013 - 2018
Kumbasar T., Yükseköğretim Kurumları Destekli Proje, Zaman serisi tahminlemede bulanık mantık tabanlı yeni bir yaklaşım, 2015 - 2016

Bilimsel Dergilerdeki Faaliyetler

IEEE Transactions on Fuzzy Systems, Yardımcı Editör/Bölüm Editörü, 2018 - Devam Ediyor

Metrikler

Yayın: 144

Atf (WoS): 1016

Atf (Scopus): 1748

H-İndeks (WoS): 17

H-İndeks (Scopus): 21

Ödüller

Kumbasar T., Genç Bilim İnsanları Ödülü , Bilim Akademisi, Mart 2023

Kumbasar T., IEEE Türkiye Araştırma Teşvik Ödülü, Ieee Türkiye, Aralık 2022

Kumbasar T., Genç Akademisyen Başarı Ödülü, İstanbul Teknik Üniversitesi, Aralık 2022

Kumbasar T., Üstün Başarılı Genç Bilim İnsanı Ödülü, Tüba, Aralık 2021

Kumbasar T., Araştırma Teşvik Ödülü, Odtü Mustafa N. Parlar Eğitim Ve Araştırma Vakfı, Aralık 2021

Kumbasar T., Best Paper Award, 6th International Conference on Control Engineering & Information Technology, Ekim 2018

Kumbasar T., Best Paper Award, IEEE International Conference on Fuzzy Systems, Temmuz 2015

Akademi Dışı Deneyim

University of Alaska Fairbanks, ABD

Essex Üniversitesi, İngiltere