

Asst. Prof. Claudia Fernanda YAŞAR

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: F-8611-2016

ScopusID: 56037089400

Yoksis Researcher ID: 280475

Biography

Biography:

Claudia Fernanda Yasar is working as an assistant professor at YTU Yildiz Technical University, Istanbul, Turkey. She is an electrical engineer from the Universidad Tecnológica de Pereira (Colombia). In this university, she worked in safety and security systems for intelligent buildings (camera based systems using optic fibre). She worked as a lecturer teaching basic sciences and circuits at the Universidad Tecnológica de Pereira and at the Universidad Católica Popular de Risaralda (Colombia). She also worked in designing, programming and implementing traffic controllers using PLCs, as well as designing and implementing physics laboratories.

She received a "DEA" Diploma of Advanced Studies in 2010, which is equivalent to a Master of Science with a thesis option, from Castilla-La Mancha University (Spain). She finished an International Doctorate in Mechatronics, from Castilla-La Mancha University, and graduated with an honorary mention Cum Laude for the thesis titled: Design, Modelling and Control of Two Degree Of Freedom Flexible Antenna Sensors. She received the price of "The Best Spanish PhD thesis, award 2017" by Robotnik and the Spanish Committee of Automation. She was also awarded as a distinguished student in Castilla-La Mancha University.

She has been an active researcher in flexible robotics and has published technical articles for eight international conferences, seven Turkish conferences, and has written five International Journals included in Science Citation Index Expanded. She has worked as a researcher in five Spanish academic projects at Castilla-La Mancha University. Her research interests include mechatronics, instrumentation, vibrations, non-linear control systems, kinematics, dynamics, control of rigid and flexible robots, servo motion systems, superconductivity, system identification, modelling and simulation, force and torque sensors, active touch sensing for robots, haptics, and vibration control, among others.

She is married and has a daughter.

Education Information

Doctorate, Universidad de Castilla-La Mancha, Department Of Electrical, Electronic, Automation And Communications

Engineering, Mechatronics , Spain 2010 - 2016

Undergraduate, Universidad Tecnológica de Pereira, Faculty of Engineering, Electrical Engineering , Colombia 1999 - 2004

Foreign Languages

English, C1 Advanced

Dissertations

Postgraduate, CROSS-MARKET ANALYSIS OF DEEP LEARNING MODELS FOR ELECTRICITY PRICE FORECASTING, Yildiz Technical University, Faculty Of Electrical & Electronics, Control And Automation Engineering, 2024

Research Areas

Information Systems, Communication and Control Engineering, Control and System Engineering, Control Systems and Instrumentation, Robotics and Mechatronics Systems, Mechatronic Systems, Route and Motion Planning, Mechanical Engineering, Machine Theory and Dynamics, Robotics, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Control And Automation Engineering, 2018 - Continues

Academic and Administrative Experience

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An optimized deep learning approach for forecasting day-ahead electricity prices**
Bozlak Ç. B., Yaşar C. F.
Electric Power Systems Research, vol.229, 2024 (SCI-Expanded)
- II. **Developments in smart wall-climbing robots for corrosion inspection through IoT integration, deep learning and advanced control strategies**
Acar Ö., YAŞAR C. F.
Multimedia Tools and Applications, 2024 (SCI-Expanded)
- III. **Active Control Experiments on a Smart Robotic Glass with End-Point Control for Parkinson's Patients**
Kaya Ayana E., Kılıç M., Yaşar C. F., Engin Ş. N.
APPLIED BIONICS AND BIOMECHANICS, vol.2023, pp.1-13, 2023 (SCI-Expanded)
- IV. **Algebraic estimator of Parkinson's tremor frequency from biased and noisy sinusoidal signals**
Yaşar C. F.
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.43, no.3, pp.679-686, 2021 (SCI-Expanded)
- V. **Improved Object Detection Using a Robotic Sensing Antenna with Vibration Damping Control**
Feliu-Batlle V., Feliu-Talegon D., Fernanda Castillo-Berrio C.
SENSORS, vol.17, no.4, 2017 (SCI-Expanded)

- VI. **A study on the tip tracking control of a single flexible beam**
Castillo-Berrio C. F., ENGİN Ş. N., Feliu-Battle V.
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.38, no.5, pp.602-617, 2016 (SCI-Expanded)
- VII. **Motion Control of a Sensing Antenna with a Nonlinear Input Shaping Technique**
Feliu-Talegon D., Feliu-Battle V., Castillo-Berrio C. F.
REVISTA IBEROAMERICANA DE AUTOMATICA E INFORMATICA INDUSTRIAL, vol.13, no.2, pp.162-173, 2016 (SCI-Expanded)
- VIII. **Vibration-free position control for a two degrees of freedom flexible-beam sensor**
Castillo-Berrio C. F., Feliu-Battle V.
MECHATRONICS, vol.27, pp.1-12, 2015 (SCI-Expanded)
- IX. **Design, dynamic modelling and experimental validation of a 2DOF flexible antenna sensor**
Castillo C. F., Engin Ş. N., Battle V. F.
INTERNATIONAL JOURNAL OF SYSTEMS SCIENCE, vol.45, no.4, pp.714-727, 2014 (SCI-Expanded)

Articles Published in Other Journals

- I. **Climbing with Robots: A Second Order Controller Design for Accurate Wheel Motion Positioning**
Yaşar C. F.
Çukurova Üniversitesi Mühendislik Fakültesi dergisi, vol.39, no.1, pp.175-187, 2024 (Peer-Reviewed Journal)
- II. **Bulk MgxB₂ superconductor production by excess Mg and hot press methods and their properties**
Yaşar C. F.
BOR DERGİSİ, vol.2, no.1, pp.43-48, 2017 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Dynamic Output Feedback H_∞ Controller Design for a Two-Wheeled Climbing Robot**
Tacal Uçun B., Yaşar C. F., Uçun L.
OTOMATİK KONTROL ULUSAL TOPLANTISI (TOK2024), Konya, Turkey, 12 - 14 September 2024, pp.608-613
- II. **Design and Control of a Magnetic-Wheeled Climbing Robot for Vertical Steel Surfaces: Motor Positioning Performance Through Model Reference Adaptive Control**
Yaşar C. F.
OTOMATİK KONTROL ULUSAL TOPLANTISI (TOK2024), Konya, Turkey, 12 - 14 September 2024, pp.484-489
- III. **Design and Control of a Magnetic-Wheeled Climbing Robot for Vertical Steel Surfaces: Motor Positioning Performance Through Model Reference Adaptive Control**
Yaşar C. F., Tacal Uçun B., Uçun L.
2024 25th International Carpathian Control Conference (ICCC), Krakow, Poland, 22 - 24 May 2024, pp.1-6
- IV. **ANALYZING THE IMPACT OF NATURAL GAS PRICES ON DAY-AHEAD ELECTRICITY PRICE FORECASTING IN TURKEY: A COMPARATIVE STUDY OF LSTM AND CNN- LSTM MODELS**
Yaşar C. F.
12th INTERNATIONAL CONGRESS ON ENGINEERING, ARCHITECTURE AND DESIGN, 23 - 25 December 2023, pp.324-333
- V. **PATHOPHYSIOLOGY CORRECTION WITH A PI CONTROLLER AND A Q-LEARNING-BASED REINFORCEMENT LEARNING ALGORITHM FOR IMPROVED LUNG VENTILATION**
Vural B., Yaşar C. F.
BİLSEL INTERNATIONAL TURABDİN SCIENTIFIC RESEARCHES AND INNOVATION CONGRESS, 23 - 25 January 2024, pp.679
- VI. **Design of an Upper Limb Exoskeleton Controlled by Extremum Seeking Control Based EMG Signal Alteration**

- Vural B., Yaşar C. F.
OTOMATİK KONTROL ULUSAL TOPLANTISI (TOK2023), İstanbul, Turkey, 14 - 16 September 2023, pp.142-149
- VII. **Linear Model Predictive Speed Controller Design for a Two-Wheel Differential Drive Mobile Robot**
Çakır H. S., Tacal Uzun B., Yaşar C. F.
OTOMATİK KONTROL ULUSAL TOPLANTISI (TOK2023), İstanbul, Turkey, 14 - 16 September 2023, pp.360-365
- VIII. **Proton Exchange Membrane Fuel Cell Thermal System Modeling and Control**
Özdemir T. H., Yaşar C. F.
2023 10th International Conference on Electrical and Electronics Engineering (ICEEE), İstanbul, Turkey, 08 May 2023, pp.491-499
- IX. **Dağıtılmış Model Öngörülü Kontrol ile Savaş Uçağı Sürü Koordinasyonu Otopilot, Yörünge Planlaması ve Engelden Kaçınma / Fighter Aircraft Swarm Coordination by Autopilot, Trajectory Planning and Obstacle Avoidance via Distributed Model Predictive Control**
Yaşar C. F.
LIFT_UP_2020_2021_bildiri_kitap, Ankara, Turkey, 01 July 2021, pp.738-742
- X. **A Motion Control Strategy With Disturbance Observation For A Climbing Robot.**
Yaşar C. F.
TOK 2019, Muğla, Turkey, 11 September 2019, pp.284-289
- XI. **Studies on a Robotic Device that Minimizes End-Point Vibrations for Parkinson Tremor**
Ayana E., Yaşar C. F., Engin Ş. N.
3rd World Conference on Technology, Innovation and Entrepreneurship, WOCTINE 2019, İstanbul, Turkey, 21 - 23 June 2019, vol.158, pp.338-345
- XII. **Autonomous Climbing Robot for Tank Inspection**
Acar Ö., Yaşar C. F.
3rd World Conference on Technology, Innovation and Entrepreneurship, WOCTINE 2019, İstanbul, Turkey, 21 - 23 June 2019, vol.158, pp.376-381
- XIII. **Active touch studies of a flexible-beam antenna sensor with controlled movements**
Yaşar C. F., Battle V. F.
6th International Conference on Control Engineering and Information Technology, CEIT 2018, İstanbul, Turkey, 25 - 27 October 2018
- XIV. **İki Serbestlik Dereceli Esnek Robot için Temas Belirlemesi**
YAŞAR C. F.
TOK 2017 : Otomatik kontrol ulusal toplantısı, İstanbul, Turkey, 21 September 2017, pp.51-58
- XV. **Bir FBF-6 Robot Sisteminin Tasarımı, Simulasyonu ve Hareket.**
YAŞAR C. F.
TOK 2017 : Otomatik kontrol ulusal toplantısı, İstanbul, Turkey, 21 September 2017, pp.331-335
- XVI. **Şiddetli Yer Hareketi Yükleri Altında Viskoz Amortisör Sönümleyici ile Yapısal Sistemler Yanıt Kontrolü**
YAŞAR C. F.
TOK konferans, 2017, İstanbul, Turkey, 21 September 2017, pp.137-141
- XVII. **İki Serbestlik Dereceli Bir Esnek Çubugun Titresim Bastırma Kontrolü Deneysel Testleri**
YAŞAR C. F.
TOK konferans, 2015, Denizli, Turkey, 11 September 2015, pp.310-316
- XVIII. **Bir Esnek Çubugun Uç İzleme Kontrolü. Tip Tracking Control of a flexible beam**
YAŞAR C. F.
TOK konferans, 2014., Kocaeli, Turkey, 11 September 2014, pp.904-909
- XIX. **A nonlinear input shaping technique for motion control of a sensing antenna**
Feliu-Talegón D., Feliu-Battle V., YAŞAR C. F.
19th IFAC World Congress on International Federation of Automatic Control, IFAC 2014, Cape-Town, South Africa, 24 - 29 August 2014, vol.19, pp.4733-4738
- XX. **Improving the motion of a sensing antenna by using an input shaping technique**
Talegón D. F., Castillo C. F., Battle V. F.

ROBOT 2013: 1st Iberian Robotics Conference, Madrid, Spain, 28 - 29 November 2013, vol.253, pp.199-214

XXI. Inverse dynamics feed forward based control of two degrees of freedom whisker sensor

Castillo-Berrio C. F., Castillo-Garcia F. J., Feliu Battle V.

2011 IEEE International Conference on Mechatronics, ICM 2011, İstanbul, Turkey, 13 - 15 April 2011, pp.684-689

XXII. Experimental validation of a 2 degrees of freedom whisker sensor dynamic model

Yaşar C. F., Feliu Battle V.

World Congress The International Federation of Automatic Control, Milan, Italy, 28 August - 02 September 2011, pp.3148-3152

XXIII. Feedback linearization based control for trajectory tracking of a 2 degree of freedom whisker

YAŞAR C. F., Garcia F. J. C., Battle V. F.

13th International Conference on Climbing and Walking Robots and the Support Technologies for Mobile Machines, CLAWAR 2010, Nagoya, Japan, 31 August - 03 September 2010, pp.324-331

Supported Projects

Yaşar C. F., Project Supported by Private Organizations in Other Countries, Intelligent Control Systems Curriculum Development Support (Mathworks) - Akıllı Kontrol Sistemleri Müfredatı Geliştirme, 2023 - 2024

UCUN L., YAŞAR C. F., ENGİN G., TACAL B., ETEMADİ A., AYAT AYDOĞAN B., ENGİN Ş. N., Project Supported by Higher Education Institutions, Frekans Tabanlı Sistem Tanıma Yaklaşımı ile Açık Su Kanal Sistemlerinde Verimliliği Arttırmaya Yönelik Su Seviyesi Kontrolü, 2022 - 2024

Yaşar C. F., Ucun L., TUBITAK Project, Design, Modeling and Control of Climbing Robots under External Forces: Applications for Robot Positioning on Vertical Metallic Wall, 2021 - 2024

YAŞAR C. F., Other International Funding Programs, Design and Control of Highly Flexible Robot Constructed of light weight composite material, 2010 - 2012

YAŞAR C. F., Other International Funding Programs, Monitoring and Control of Vibrations in Flexible Mobile Structures. Extension to Impact Situations, 2007 - 2009

YAŞAR C. F., Other International Funding Programs, MMI Robot System Development, 2007 - 2007

Scientific Research / Working Group Memberships

Instrumentation and Control, Universidad de Castilla-La Mancha, İspanya, <http://inei.uclm.es/proyectos.php?gid=13>, 2018 - Continues

Metrics

Publication: 34

Citation (WoS): 45

Citation (Scopus): 123

H-Index (WoS): 5

H-Index (Scopus): 7

Invited Talks

Teaching AI for Control Engineers, Conference, Turkish academic forum 2023, Turkey, November 2023

Turkey Academic Forum 2021 , Workshop, Mathworks , Turkey, October 2021

5th International Conference on Automation, Control, Engineering and Computer Science, Conference, Laboratory of Advanced systems- Polytechnic School of Tunisia, Tunisia, December 2018

Awards

Yaşar C. F., Outstanding student award, Castilla-La Mancha University Spain, June 2018

Yaşar C. F., Award for the Best Doctoral Thesis on Robotics (Spain 2016), Award "Spanish Committee Of Automatics" Cea
And Robotnik, September 2017

Non Academic Experience

Castilla-La Mancha University

Castilla-La Mancha University

Católica Popular del Risaralda University Colombia

Tecnológica de Pereira University