

2022 13th International Conference on Electrical Engineering (ICEENG 2022)

**Cairo, Egypt
29 – 31 March 2022**



**IEEE Catalog Number: CFP22U98-POD
ISBN: 978-1-6654-3510-9**

**Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP22U98-POD
ISBN (Print-On-Demand):	978-1-6654-3510-9
ISBN (Online):	978-1-6654-3509-3

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com



Table of Content

Title	page
Preface	ii
Conference High Committee	iv
Contributors	v
Table of Content	vi
Conference Program	xi
Location of conference rooms	xv
Scientific Sessions	xvii
Control Systems and Automation (1)	xviii
Aerospace Navigation Engineering (1)	xix
Power and Energy	xx
Control Systems and Automation (2)	xxi
Computer Engineering and Artificial Intelligence (1)	xxii
Communications and Networks	xxiii
Aerospace Navigation Engineering (2)	xxiv
Computer Engineering and Artificial Intelligence (2)	xxv
Image processing	xxvi



Real-Time Aerial Targets Tracking for Anti-UAV Systems Using OpenCV	1
System Identification and Modeling of an Actuation System for Small Aerial Vehicle	5
Re-entry Vehicle Longitudinal Autopilot Design via Two-Loop with PI and Three-Loop Topologies	9
Nonlinear Autoregressive Neural Network Integrated Approach for Tackling GPS Outages Intervals	14
Comparative Synthesis of Linear and Optimal Controllers for a Quadcopter Unmanned Aerial Vehicles	19
Modeling, Simulation and Attitude Control of An Aerial Gliding Vehicle	23
Robust Performance Attitude Control System for Nano-Satellites	27
Enhancement of estimated stochastic errors using Allan Variance and Wavelet De-noising for inertial navigation systems	32
Loosely Coupled GNSS/INS for Android Platforms	37
Spacecraft Nickel Hydrogen Storage Battery Experimental Model	42
Optimal Unit commitment using heuristic technique considering environmental effect	47



PV solar power forecasting based on hybrid MFFNN-ALO	52
Development, Estimation and Control of a Bio-Inspired Quadruped Robotic Leg	57
A Robust Target Detection and Tracking Approach for UAV Guidance	62
Dual Attitude-GNSS/INS Unscented Kalman Filter for Low Cost Integrated Navigation Systems	66
Bot Detection Using Multi-Input Deep Neural Network Model in Social Media	71
Automotive Software Self Reprogramming OTA	76
Survey on IoT-based Big Data Analytics	81
Detection Approaches for Position Falsification Attack in VANET	86
Performance Comparison of SDN Wireless Network Under Floodlight and POX Controllers	91
Optimized Harmonic Tuned High Efficiency L-Band Power Amplifier	96
Improved RF Energy Harvesting Rectifier Targeting Ambient Local Sources of DTV, Cellular Networks and Wi-Fi	100



ENHANCED LEARNING FOR RECURRENT NEURAL NETWORKBASED POLAR DECODER	105
Terminal Guidance of Unmanned Aerial Vehicle Based on Visual Information	110
Nonlinear Dynamics Modelling and Free-Launch Simulation of a Flying-Vehicle	115
IMU-Error Estimation and Cancellation Using ANFIS for Improved UAV Navigation	120
Modeling and Attitude Control of Cube Sat using Reaction Wheels	125
Artificial intelligence-based approach for Univariate time-series Anomaly detection using Hybrid CNN-BiLSTM Model	129
MPTCP-based Security Schema in Fog Computing	134
How to Manage the Emergent Imaging Requests and Urgent Situations in Satellite Constellations	139
Securing Big Data: A Survey on Security Solutions	145
Response-time enhancement of a hybrid controller of unmanned aerial vehicles using parametrization	150
Visual Drone Detection In Static Complex Environment	154



Optical Characterization of Biological Tissues in Visible and Near-Infrared Spectra	159
Breast Tumors Delineation for Mammogram Investigations Exploiting k-Means Algorithm and Associated Image Processing	164
Workshops And Seminars	N/A
Polarization Imaging in Computer Vision	N/A
Developing Entrepreneurial Talents for Aerospace of the Future	N/A
Japan Society for the Promotion of Science (JSPS); Functions, Structures and Strategies	N/A
Anticipatory Radio Resource Management for 5G Networks and Beyond	N/A
IoT Hardware Security: Using Physically Unclonable Functions (PUFs) for Authentication and Secure Key Exchange	N/A
A Journey in Design, Synthesis and Development of Novel Anticancer and Antimalarial Agents	N/A
Authors Index	170