### **2021 IEEE International** Conference on Robotics, Automation, Artificial-Intelligence and Internet-of-Things **(RAAICON 2021)**

Dhaka, Bangladesh **3-4 December 2021** 



**IEEE Catalog Number: CFP21V76-POD ISBN**:

978-1-6654-7870-0

### Copyright © 2021 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:
 CFP21V76-POD

 ISBN (Print-On-Demand):
 978-1-6654-7870-0

 ISBN (Online):
 978-1-6654-7869-4

#### 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





IEEE International Conference on Robotics, Automation, Artificial-intelligence & Internet-of-Things 2021

> 3RD DEC-4TH DEC, 2021 Dhaka, Bangladesh

#### **IEEE RAAICON- 2021**

3-4 December 2021, Dhaka, Bangladesh

### **Content**

ID	Title	Name of Authors	Pages
5	Suspension System Modelling And Control For An Electric Vehicle Driven by In-Wheel Motors	Abdussalam A Ahmed (Bni Walid University)*; Hend Abdelgader Eissa (FacultyofElectronicT echnology, Tripoli); Abdalla Milad Faraj (College of Electronic Technology Bani Walid, Libya); Abdulgani Albagul (College of Electronic Technology Baniwalid, Libya); Mohamed Belrzaeg (Bani Walid University); Abdulgader Alsharif (College of Civil Aviation Technology and Meteorology)	1-5
7	A Comprehensive Study and Modern Take on Intel 8086 like Modular Trainer Board System	Robi Paul (Sust)*; Foez Ahmed (Shahjalal University of Science and Technology); MD. Mufassal Ahmad (Sust); Nayem Hosen (Sust); Aminur Rahman (Sust)	6-9
8	A comparison of Chaotic Key Sequence and Blockchain Hasher for the Privacy Protection of the Internet of Things Image Data	Faizah Safwat (Varendra University); Ayesha Akter Lima (Varendra University); Nakib Aman Turzo (NACTAR)*	10-13
9	Automated Online Exam Proctoring System Using Computer Vision and Hybrid ML Classifier	Rina Nasir (Brac University)*; Zarin Tahia Hossain (Brac University); Protyasha Roy (Brac University); SUMAIYA NAWSHEEN (Brac University); Muhammad Iqbal Hossain (BRAC University)	14-17
10	Smart Diaper: Non-stop Diaper Monitoring System	Mohammad Salah Uddin (East West University)*; Shathi Islam (East West University); Nishat Vasker (East West University)	18-21



IEEE International Conference on Robotics, Automation, Artificial-intelligence & Internet-of-Things 2021

> 3RD DEC-4TH DEC, 2021 Dhaka, Bangladesh

ID	Title	Name of Authors	Pages	
15	D-Bot: A Food Serving Robot During Pandemic Situation	Wong Hooi Guan, UCSI University KL, Malaysia, Aung Moe Zaw, UCSI University KL, Malaysia, Choy Melvern, UCSI University KL, Malaysia, M.K.A.Ahamed Khan*, UCSI University KL, Malaysia, Foo Tun Hou, UCSI University KL, Malaysia, Kalaiselvi Aramugam, UCSI University KL, Malaysia, Manicam Ramaswamy, UCSI University KL, Malaysia	22-25	
28	TOS: A Relative Metric Approach for Model Selection in Machine Learning Solutions	Ricko Shaha (Chittagong University of Engineering & Technology)*; Dipon Talukder (Workera); MD. Asif Iqbal (CUET); Md. Mokammel Haque (Department of CSE, CUET)	26-31	
30	A Simple SDR based Method to Spoof Low-End GPS based Drones for Securing Locations	Margana Bhaskara Satyanarayana (Jawaharlal Nehru Technological University Kakinada); Dattatreya Sarma Achanta (Chaitanya Bharathi Institute of Technology)*; Komal Kumar Songala (Chaitanya Bharathi Institute of Technology); Smt.A.Supraja Reddy ("Chaitanya Bharathi Inst. of Technology, Hyderabad")	32-36	
39	Rose Leaf Disease Detection Using CNN	Sahadat Hossain Khan (Daffodil International University); Md. Nayan Hossain (Daffodil International University); Sithi Mozumder (Daffodil International University); Shayla Sharmin (Daffodil International University); Ms. Nazmun Nessa Moon (Daffodil International University)*	37-41	
41	An Analytical Approach to Predict the COVID-19 Death Rate in Bangladesh Utilizing Multiple Regression and SEIR Model	Tamal Joyti Roy (Khulna University of Engineering & Technology, Khulna )*; Md. Ashiq Mahmood (Khulna University of Engineering and Technology); Aninda Mohanta (Institute of Engineering & Management, Kolkata)	42-45	
46	Designing and Implementing Robot-Web-Suite, A Cloud Based Robotics Platform	Vinay Lanka (Vellore Institute of Technology)*; Deeksha Vinjamuri (Vellore Institute of Technology); Vishnu Bharathram (Vellore Institute of Technology); Dr.Budhaditya Bhattacharyya (Vellore Institute of Technology)	46-49	



IEEE International Conference on Robotics, Automation, Artificial-intelligence & Internet-of-Things 2021

> 3RD DEC-4TH DEC, 2021 Dhaka, Bangladesh

ID	Title	Name of Authors	Dagos
ID	Title	Name of Authors	Pages
52	Procuring MFCCs from Crema-D Dataset for Sentiment Analysis using Deep Learning Models with Hyperparameter Tuning	MD Rizwanul Kabir (Islamic University of Technology); Muhammad Mutiul Muhaimin (Islamic University of Technology); Md. Abrar Mahir (Islamic University of Technology); Mirza Muntasir Nishat (Islamic University of Technology)*; Fahim Faisal (Islamic University of Technology); Nchouwat Ndumgouo Ibrahim moubarak (Islamic University of Technology)	50-55
53	Quadcopter Dynamic Modeling and Stability Control Design using Hardware in Loop	Abdullah Irfan (National University of Computer and Emerging Sciences, Islamabad)*; Muhammad Gufran Khan (National University of Computer and Emerging Sciences, Islamabad); Syed Ali Mohsin (National University of Computer and Emerging Sciences, Islamabad)	56-59
54	An Approach of Implementing IoT Based Rooftop Rainwater Harvesting & Monitoring	Md. Sabit Shahriar Haque (Ahsanullah University of Science & Technology)*; Wazed Al Islam (Chittagong University Of Engineering & Technology); Tasmia Raunak Ferdousi (Chittagong University of Engineering and Technology); Shaira S Oyshee (Military Institute of Science and Technology); Tanvir Mahabub Tamim (Ahsanullah University of Science and Technology)	60-63
55	Development of a Modern Simulation Software and Analysis of its Performance Using a Swarm System Architecture Driven by Nature-Inspired Algorithms	Ishraq Hasan (Military Institute of Science and Technology)*; Kazi Tasnim (Military Institute of Science and Technology); Fahim Foysal (Military Institute Of Science And Technology); Md Shadman Aadeeb (Military Institute of Science and Technology); Nusrat Sharmin (Military Institute of Science and Technology)	64-68
57	EC-5G: Edge Computing- Aware 5G Heterogeneous Networks	Md. Shamrat Apu Gazi (East West University); Mobasshir Mahbub (Ahsanullah University of Science and Technology)*; Md. Mir Saym (Independent University, Bangladesh); Md. Abdur Rouf (Ahsanullah University of Science and Technology)	69-72
59	Detection of Potholes using Convolutional Neural Network Models: A Transfer Learning Approach	Anik Pramanik (Daffodil International University); Md Hasan Imam Bijoy (Daffodil International University)*; Md. Sadekur Rahman (Daffodl International university)	73-78



IEEE International Conference on Robotics, Automation, Artificial-intelligence & Internet-of-Things 2021

> 3RD DEC-4TH DEC, 2021 Dhaka, Bangladesh

ID	Title	Name of Authors	Pages
62	Fine-Grained Image Generation from Bangla Text Description using Attentional Generative Adversarial Network	Md Aminul Haque Palash (Chittagong University of Engineering & Technology); MD Abdullah Al Nasim (Pioneer Alpha)*; Aditi Dhali (Pioneer Alpha); Faria Afrin (Daffodil International University); Khaza Anuarul Hoque (University of Missouri)	79-84
65	A Two-Step Clustering Approach to Measure Soil Quality of Sundarban Based on Organic Carbon and Bulk Density	Diti Roy (Khulna University of Engineering &Technology, Khulna); Md. Ashiq Mahmood (Khulna University of Engineering and Technology)*; Tamal Joyti Roy (Khulna University of Engineering & Technology, Khulna)	85-88
66	A Hybrid Cryptographic Data Security System Utilizing Fuzzy Vault Key	Md. Ashiq Mahmood (Khulna University of Engineering and Technology)*; Tahsina Tabassum (Khulna University of Engineering & Technology)	89-93
67	Impact Analysis of Body Materials for Robo-Res 2.0 & 3.0: Part of Humanoid Rescue Robot	Meer Shadman Shafkat Tanjim (American International University-Bangladesh); Mahedi Islam Rizvi (Ahsanullah University of Science and Technology); Ashrafun Nushra Oishi (American International University- Bangladesh)*	94-97
69	Analysis for Solar-Powered Electric Car Development with Wireless Control Features	Ashrafun Nushra Oishi (American International University-Bangladesh)*; Meer Shadman Shafkat Tanjim (AIUB); M. Hazrat Ali (European university of Bangladesh (EUB)); Enamul Sardar (EUB); Md. Nazmul Islam (EUB); Md. Rubel P.K (EUB); Sharmeen Akter (EUB)	98-101
70	Non-integer Controller for Autonomous Underwater Vehicle Steering Control	Rasheed Abdulkader (King Faisal University)*	102-105
72	Medical Assistant Robot for Communication with Disabled Patients	Ahmed Salem Daw Alarga (Elmergib University); Abdussalam A Ahmed (Bni Walid University)*	106-109