International Journal of Engineering Research and Applications (IJERA)

Editor-In-Chief

Prof. Manju Sharma

Editorial Board Members

Dr. Hadi Arabshahi, Iran A. K. M Nazmus Sakib, Bangladesh

Dr. Eugen Axinte, Romanian Dr. Rao, P.hd, USA

Dr. Yaduvir Singh, India Dr. Aknuas William, Australia

Dr. Shahram Jamali, Iran

Associate Editorial Board members

Sukumar Senthil Kumar

Universiti Sains Malaysia, School of Mathematical Sciences, Malaysia

Dr. Bensafi Abd-El-Hamid

Abou Bekr Belkaid University of Tlemcen, Algeria Tamilnadu, India

Dr. Prasanta K Sinha

Deputy Director, Durgapur Institute of Advanced Technology & Management, West Bengal

Hari Mohan Pandey

Middle East College of Information Technology, Under Coventry University, U.K.

Dr. V S Giridhar Akula

Professor and Principal, Avanthi's Scientifi Technological and Research Academy (JNTU), Hyderabad

Dr. Prasanta K Sinha

Durgapur Institute of Advanced Technology & Management, Durgapur

Dr. A.V.Senthil Kumar

Director, MCA depart, Hindusthan College of Arts and Science,

Dr. Suresh Prasad Singh

H.O.D.(Chemical Engineering), B. I. T. Sindri, Dhanbad

Patrick Tiong Liq Yee

Universiti Teknologi Malaysia, Malaysia,

Dr. Santosh K. Pandey

Department of Information Technology Board of Studies, The Institute of Chartered Accountants of India

Contact Details

Ukraine Office

First floor, ST Street, Ivano-Frankivsk, 76008, Ukraine **India Office**

SC-89, Shastri Nagar, Ghaziabad, UP, India

Email: ijera.editor@gmail.com Website: www.ijera.com









ISSN: 2248-9622



International Journal of Engineering Research and Applications (IJERA)

Volume 12 - Issue 1 January 2022





All Papers are indexed in Index Copernicus



International Journal of Engineering Research and Applications (IJERA)

Contents: 01-05 Design, Simulation, Realization and measurement of a 3.5 GHz linear patch antenna network Richard Essomba Mbondjo, Jean Ndoumbe, Jean-François Essiben D. An Optimal Linearized Quali-Quantitative Multi-Objective Simulation 06-16 Model to Planning and Managing Integrated Surface Resources **Systems** Allan Sarmento Vieira, Wilson Fadlo Curi Design and Analysis of hypothetical Electrical Network for Power 17-24 factor Improvement Calculations Fawaz .M. Alsubaie Role of Nano Electronics in Modern Era 25-33 Dr Shailendra Kumar Srivastava, Dr Subhash Kumar Sharma 34-47 Qualitative and Quantitative Assessment of the Alto Piranhas River Sub-basin Located in the Brazilian Semiarid Region Allan Sarmento Vieira, Wilson Fadlo Curi 48-52 Removal of nitrates from water by environmental waste materials Poluri Venkata Naga Sai Kiran, Madaraboyina Naga Ramu, Vemula Siva Nagendra Babu, Jakkireddy Sai Krishna Reddy Wireless Signal Obstacles 53-59 Eng. Anwar Ahmad, Eng. Meshal ALNasheet Avaliação Do Índice De Resto-Ingestão E Sobras Da Alimentação 60-67 Escolar Servida Em Uma Escola Estadual De Cuiabá-Mt Measure the Rest-Intake and the Waste of Food of a State School in Cuiabá-Mt, 2014

SOUZA, A. L.T.M de, SILVEIRA, T.L.V.S; MENEGAZ, A.