

2021 International Conference on Electronics, Communications and Information Technology (ICECIT 2021)

**Khulna, Bangladesh
14 – 16 September 2021**



**IEEE Catalog Number: CFP21BD6-POD
ISBN: 978-1-6654-2364-9**

**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:	CFP21BD6-POD
ISBN (Print-On-Demand):	978-1-6654-2364-9
ISBN (Online):	978-1-6654-2363-2

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 Contents

table-of-contents	iii
program-book	xiii
index-author	liii
Human Expertise Inspired Smart Sensing and Manufacturing <i>Martin B.G. Jun, Huitaek Yun, Eunseob Kim</i>	1
Photonic Microring Resonator Based DWDM System Within a Single Free Spectral Range <i>M. Rakib Uddin, Nur Musyirah Haji Masri, Md. Shamim Ahsan</i>	8
Linear Frequency Modulated Photonics RADAR Using Injection Locking in Semiconductor Laser <i>Bikash Nakarmi, Hao Chen, Ikechi Augustine Ukaegbu, Bijay Gaudel, Ukash Nakarmi, Saravanan Muthaiyah, Annie Ng, Xiangchuan Wang, Shilong Pan</i>	13
P2P Motion: A Motion Planning Algorithm for Cyclic Synchronous Position Based Motion Control Systems <i>Mohammad Khairul Hasan</i>	17
Neural Network Pruning: An Effective Way to Reduce the Initial Network for Deep Learning Based Human Activity Recognition <i>Mohammad Helal Uddin, Jannat Mir Kanon Ara, Md Hafizur Rahman, S.H. Yang</i>	21
A Deep Learning Based Approach for Real Time Face Recognition System <i>Tanusree Das Tithy, Soarov Chakraborty, Rabaya Islam, Abdul Aziz</i>	25
A Comparative Study of Machine Learning Models for Network Intrusion Detection System Using UNSW-NB 15 Dataset <i>Raisa Abedin Disha, Sajjad Waheed</i>	29
An Automated Approach for the Recognition of Bengali License Plates <i>Md Abdullah Al Nasim, Atiqul Islam Chowdhury, Jannatun Naeem Muna, Faisal Muhammad Shah</i>	34
A Cross-Platform Blood Donation Application with a Real-Time, Intelligent, and Rational	38

Recommendation System

Md Rafat Jamader Maraz, Rashik Rahman, Md. Mehedi Ul Hasnain, Hasan Murad

An Approach for Detecting Bangla Spam Comments on Facebook 42

Pushpita Shil, Umma Saima Rahman, Maqsudur Rahman, Md Shariful Islam

Application of Machine Learning to Interpret Predictability of Different Models: Approach to Classification for SDSS Sources 46

Mohammad Abu Tareq Rony, D. S. A. Aashiqur Reza, Robiul Mostafa, Md. Ahsan Ullah

Handwritten English Character and Digit Recognition 50

Al-Mahmud, Asnuva Tanvin, Sazia Rahman

Pneumonia Detection Using Deep Transfer Learning in Gender Specific Chest X-ray Images 54

Syed Nazmus Sakib, Raihan Masud, Sajratul Yakin Rubaiat, Chinmay Bepery, Manash Sarker, Md Kamrul Hasan

Design and Optimization of a Self-tuning PID Controller Based on Fuzzy Logic for Temperature Control System of Furnace 58

Md. Tauhidul Islam, Md. Saiful Islam

Multiple Authors Identification from Source Code Using Deep Learning Model 62

Abdul Mannan Omi, Monir Hossain, Md Nahidul Islam, Tanni Mitra

Comparative Analysis of Continuous Wavelet Transforms on Vibration Signal in Bearing Fault Diagnosis of Induction Motor 66

Rafia Nishat Toma, Farzana Haque Toma, Jong-Myon Kim

Iris Recognition Using Wavelet Features and Various Distance Based Classification 70

Arnab Mukherjee, Md. Zahidul Islam, G.M. Mamun-Al-Imran, Lasker Ershad Ali

SDP-ML: An Automated Approach of Software Defect Prediction Employing Machine Learning Techniques 74

Md Nasir Uddin, Bixin Li, Md Naim Mondol, Md Mostafizur Rahman, Md Suman Mia, Elizabeth Lisa Mondol

Hybrid Sensor Based Path-Planning for Autonomous Vehicle 78

Md Sadik Samrat, Md Forhad Ali, Md Ashraful Islam, Mehedi Hasan, Md Abid Hasan

Machine Learning-Based Sensor Drift Fault Classification using Discrete Cosine Transform 82

Md. Nazmul Hasan, Insoo Koo

Shongket: A Comprehensive and Multipurpose Dataset for Bangla Sign Language Detection 86

SK Nahid Hasan, Md. Jahid Hasan, Kazi Saeed Alam

ALAPI: An Automated Voice Chat System in Bangla Language <i>Md. Mehedi Hasan, Auronno Roy, Md. Tariq Hasan</i>	90
A Classical Approach to Handcrafted Feature Extraction Techniques for Bangla Handwritten Digit Recognition <i>Md. Ferdous Wahid, Md. Fahim Shahriar, Md. Shohanur Islam Sobuj</i>	94
An Image Processing Approach to Identify Plastic Garbage <i>Faijunnahar, Arafatur Rahman, Warda Ruheen Bristi, Afsara Tasneem Misha</i>	98
Skin Disease Classification: A Comparative Analysis of K-Nearest Neighbors (KNN) and Random Forest Algorithm <i>Osim Kumar Pal</i>	102
Can Machine Learning Technique Predict the Prostate Cancer accurately?: The Fact and Remedy <i>SM Mahamudul Hasan, Md Forhad Rabbi, Nusrat Jahan</i>	107
Comparative Study of Forecasting Global Mean Sea Level Rising using Machine Learning <i>Kazi Md. Abir Hassan, Md. Atiqul Haque, Sakif Ahmed</i>	111
An Optimal and Automatic Irrigation System for Pre-monsoon Crops Using Internet of Things <i>Md. Ashikul Islam, Sayed Mahmud Al Amin</i>	115
Interpretable Retinal Disease Classification from OCT Images Using Deep Neural Network and Explainable AI <i>Md Tanzim Reza, Farzad Ahmed, Shihab Sharar, Annajiat Alim Rasel</i>	120
ML Classifier Comparative Performance Analysis of Prediction on Cervical Cancer <i>Md. Ashfaqul Haque, Israt Jahan Dristy, Shihab Sharar, Annajiat Alim Rasel</i>	124
Effective Fault Tolerance in Cloud Computing Using Hybrid Technique <i>Md. Mostafijur Rahman, Mohammad Abdur Rouf</i>	128
Development of Noninvasive Electroencephalogram Brain Sensor Actuated Motorized Prosthetic Arm to Support Disabled People <i>Md. Shamim Ahsan, Kazi Mahmud Hasan</i>	133
Emotion Recognition Using EEG-Based Brain Computer Interface <i>Abu Shams Md. Shazid Reaj, Md. Maniruzzaman, Abdullah Al Jaid Jim</i>	137
Computer Aided Atrial Fibrillation Detection from the Statistical Attributes of ECG Signal <i>Kaniz Tahsin, Md. Foisal Hossain, Md. Asadur Rahman</i>	141
Finite Element Simulation and Analysis of Pulsatile Blood Flow Through Aorta with	145

Varying LDL Cholesterol Concentration <i>Md. Asaduzzaman, Sheikh Md. Rabiul Islam</i>	
Hybrid CNN-SVM Model for Brain Tumor Classification utilizing Different Datasets <i>Angona Biswas, Md. Saiful Islam</i>	149
Feasible Detection of Breast Cancer Metastasis Using a CNN-based Deep Learning Model <i>Mohammad Badhruddouza Khan, Pranto Soumik Saha, Rahat Shahrior</i>	153
SVM Based COVID-19 Detection from CT Scan Image Using Local Feature <i>Farhana Tazmim Pinki, Md Abdul Masud, Jannatul Ferdousi, Farhana Yeasmin Eva, Md. Mehedi Rahman Rana</i>	157
An Investigative Approach to Employ Support Vector Classifier as a Potential Detector of Brain Cancer from MRI Dataset <i>Mirza Muntasir Nishat, Fahim Faisal, Tasnimul Hasan, Md. Faiyed Bin Karim, Zahidul Islam, Md. RafidKaysar Shagor</i>	161
SAOLP-ISA: Structural Analysis of Osteoclast Inhibitory Lectin Partial Using an <i>In Silico</i> Based Approach <i>Mounita Ghosh, Nasrin Akhter, Md. Zahidul Islam</i>	165
Design and Development of a Low Cost Ultraviolet Disinfection System to Reduce the Cross Infection of SARS-CoV-2 in Ambulances <i>Sakhawat Hossen Rakib, S.M Masum, Md. Rashadul Islam Patwari, Rafatul Alam Fahima, Atika Farhana, Md. Aminul Islam</i>	169
A Deep Learning Based Approach to Predict Lung Cancer from Histopathological Images <i>Rahul Deb Mohalder, Juliet Polok Sarkar, Khandkar Asif Hossain, Laboni Paul, M. Raihan</i>	173
Noise Removing from ECG Signal Using FIR Filter with Windowing Techniques <i>Sudon Biswas, Md. Maniruzzaman, Ramendra Nath Bairagi</i>	177
Understanding CNN's Decision Making on OCT-Based AMD Detection <i>S. M. Azoad Ahnaf, G. M. Atiqur Rahaman, Sajib Saha</i>	181
Automatic Region of Interest Extraction from Finger Nail Images for Measuring Blood Hemoglobin Level <i>Shaharin Ahmed, Mohammad Ashfak Habib</i>	185
Switching Algorithm and Data Acquisition for Pigeon Hole Imaging System <i>Bikash Kumar Bhawmick, Muhammad Abdul Kadir, Khondkar Siddique-e Rabbani</i>	189
Coordinates Determination of Submerged Single Mobile Sensor Using Sensor's Mobility <i>Md. Mostafizur Rahman</i>	194
A New Error Correcting Coding Technique to Tolerate Soft Errors	199

Priyabrota Sen, Muhammad Sheikh Sadi, Nabil Ashab, Daniele Rossi

Design of a Wide Dual-band Monopole Microstrip Antenna With Beam Steering Capability 203

Yeadee Hasan, Muhammad Asad Rahman

Comparative Analysis of Modified Microstrip Patch Antenna for Mobile Phone Applications 207

Shadhon Chandra Mohonta, Md. Firoj Ali

Evaluation of UFMC as a Potential Waveform Contender of OFDM for Next-Generation Wireless 211

A. Alim Molla, Md. Ferdous Ahammed, Mohammad Ismat Kadir

In-band Full-duplex MAC Protocol for Ad Hoc Networks 215

Md. Abdur Rahman, Md. Mizanur Rahman, Md. Abdul Alim

A Compact Slotted Circular Patch Antenna for 5G Applications 220

Liton Chandra Paul, Sarker Saleh Ahmed Ankan, Md Murshid Alam, Md. Zulfiker Mahmud, Papon Kumar Paul

An Aperture Coupled Compact Cylindrical Dielectric Resonator Antenna for WiGig Application 224

Liton Chandra Paul, Md. Faisal Rahman, Md. Zulfiker Mahmud, Rezaul Azim, Mohammad Tariqul Islam

A Wideband Microstrip Line Feed Slotted Patch Antenna for 28 GHz 5G Applications 228

Liton Chandra Paul, Himel Kumar Saha

Multiple Near-field Sources Localization by Optimal Beamformer Using Minimum Norm Method 232

Rony Tota, Dr. Md Selim Hossain

A Highly Efficient Circular Patch Antenna for UAV Application 236

Mohammad Ishtiaque Khan, Salsabil Ebna Mostaque, Syed Mohammad Golam Kader, Abu Zafar Md Imran, Md Tohedul Islam, Mr. Md. Jiabul Hoque, Md. Razu Ahmed

Demonstration of a 4 Gb/s Wavelength Division Multiplexing Based Li-Fi Network 240

Zubaida Azad Shikha, Subroto Kumer Deb Nath, Niloy Sikder, Ik-Bu Sohn, Hun-Kook Choi, Md. Shamim Ahsan

Response of Channel Inversion Technique with Space Time Block Code in Multi-User MIMO 244

Sharif Minhazul Abeden, Professor S.M. Shamsul Alam, Md Khaled Hasan

Development of a Time Division Multiplexing Based Li-Fi System for Voice Communication 248

Zubaida Azad Shikha, Subroto Kumer Deb Nath, Niloy Sikder, Ik-Bu Sohn, Hun-Kook

Choi, Md. Shamim Ahsan

Deep Bidirectional LSTM Network Learning-Aided OFDMA Downlink and SC-FDMA Uplink 252

Rafiul Kadir, Ritu Saha, Md. Abdul Awal, Mohammad Ismat Kadir

Artificial Intelligence Based Network Selection in Heterogeneous Wireless Networks 256

Fahim Ahmed, Mostafa Zaman Chowdhury

Performance Improvement of Aperture Coupled Microstrip Antenna Using Strip-slot Patch for C-band Satellite Applications 260

Md. Abdullah-Al-Mamun, Md. Shamim Anower, Sham Datto, Md. Rashed Billah

A Dual Blade-shaped Patch Directional Array Antenna for 5G Communication 264

Liton Chandra Paul, Himel Kumar Saha

Impact of Receiver Antenna Polarization and Resource Scheduler on the Downlink Performance of High Velocity Users in 5G Millimeter Wave Small Cell Technology 268

Fehima Tajrian, Md. Asif Ishrak Sarder, Mariea Sharaf Anzum, Moontasir Rafique, Abdullah Bin Shams

A High Gain Array Antenna for 28 GHz Upper 5G Application 272

Liton Chandra Paul, Himel Kumar Saha

Design of a Compact Implantable Antenna in Seven-layer Brain Phantom for Brain-machine Interface Applications 276

Emtiaz Ahmed Mainul, Md. Faruque Hossain

A Dual Band Microstrip Patch Antenna with Metamaterial Superstrate for Biomedical Applications 280

Md. Biplob Hossain, Md. Faruque Hossain

LoRa WAN-based Smart Sewerage Monitoring System 284

Dk Nurul Saiyidah Binti Pg Md Jeffery, S. H. Shah Newaz, Shahriar Shams, Nicolas Guillou, Nazmus Shaker Nafi

LoRa Based Real-time Flood Detection and Monitoring System: A Brunei Darussalam Based Study 290

Muhammad Ihsanuddin Haji Md Yassin, Au Thien Wan, S. H. Shah Newaz, Saiful Omar

Understanding QoS and Energy Saving Performance in FiWi Access Network with Sleep Mode Enabled ONUs 295

Md. Faiz Zulfadly Bin Hj Abdul Latif, S. H. Shah Newaz, Alaelddin F. Y. Mohammed, Au Thien Wan, Saiful Omar

K-Cosine-Means Clustering Algorithm 299

Md. Kafi Khan, Sakil Sarker, Syed Mahmud Ahmed, Mozammel H A Khan

BenSW: A Standard Dataset for Bengali Stop Word Detection <i>Jannatul Ferdousi Sohana, Ranak Jahan Rupa, Moqsadur Rahman</i>	303
Amazon Product Reviews: Sentiment Analysis Using Supervised Learning Algorithms <i>Mohibullah Hawlader, Arjan Ghosh, Zaoyad Khan Raad, Wali Ahad Chowdhury, Md. Sazzad Hossain Shehan, Faisal Bin Ashraf</i>	307
An Empirical Study to Detect Cyberbullying with TF-IDF and Machine Learning Algorithms <i>Shagoto Rahman, Kamrul Hasan Talukder, Sabia Khatun Mithila</i>	313
A Comparative Study of Sentiment Analysis Using NLP and Different Machine Learning Techniques on US Airline Twitter Data <i>Md Taufiqul Haque Khan Tusar, Md. Touhidul Islam</i>	317
Comparison between Support Vector Machine and Random Forest for Audio Classification <i>Md. Rifat Ansari, Sadia Alam Tumpa, Jannat Ara Ferdouse Raya, Mohammad N. Murshed</i>	321
Two Unorthodox Aspects in Handcrafted-feature Extraction for Human Activity Recognition Datasets <i>Mahmudul Hasan Abid, Abdullah-Al Nahid</i>	325
GWO-XGB: Grey Wolf Optimization-based eXtreme Gradient Boosting for Hypertension Prediction in Bangladesh <i>Tasfia Tahsin, Khondoker Mirazul Mumenin, Farhana Tazmim Pinki, Anamika Biswas Tuli, Shahriar Sikder, Md. Ashfikur Rahman, Abdullah Al-Mamun Bulbul, Md. Abdul Awal</i>	329
Design of an Intelligent Temperature Controller of Furnace System using the Fuzzy Self-tuning PID Controller <i>Md. Al-Amin, Md. Saiful Islam</i>	333
Design and Development of an Online Road Traffic Information System <i>Abir Muhammad Shahriar, Priyanka Ghosh, Md. Mehadi Hassan, Md Khaled Hasan, Md. Shamim Ahsan</i>	337
An Anonymity and Interaction Supported Complaint Platform based on Blockchain Technology for National and Social Welfare <i>Mijanur Rahman, Md. Moshiul Azam, Faria Sanjida Chowdhury</i>	341
An Intelligent Vaccine Distribution Process in COVID-19 Pandemic through Blockchain-SDN Framework from Bangladesh Perspective <i>Anichur Rahman, Md. Jahidul Islam, Md Razaul Karim, Dipanjali Kundu, Sumaiya Kabir</i>	349
A NewStegano-Cryptographic Approach for Enhancing TextData Communication	353

Security

Amit Singha, Nasirul Mumenin, Nahid Ibne Akhter, Mosabber Uddin Ahmed

IoT-based System for Real-time Water Pollution Monitoring of Rivers 357

Mohammad Ariful Islam Khan, Mohammad Akidul Hoque, Sabbir Ahmed

BLS: Bank Loan Sanction Using Blockchain 362

Md. Rabbi, Prince Mahmud Hradoy, Md. Mainul Islam, Md. Hsibul Islam, Mst. Yesmine Akter, Milon Biswas

Design and Development of a Smart Surveillance System for Security of an Institution 367

Foez Ahmed, T. A. M. Ragib Shahriar, Robi Paul, Arif Ahammad

Blockchain-based Reward System: A Means for Providing Incentive to Students for Teaching Feedback 371

Mahrn Morsidi, Sharul Tajuddin, Ravi Kumar Patchmuthu, S. H. Shah Newaz

Efficiency Enhancement of Organic Light Emitting Diodes (OLEDs) by Micro/nano-structuring the Substrate Layer 376

Tasmima Akter, Arif Istiaq Arafat, Md. Shamim Ahsan

Design and Performance Analysis of Fiber Bragg Grating based Temperature Sensor 380

Zubaida Azad Shikha, Md. Shamim Ahsan, Md. Maniruzzaman, Md. Abdul Alim, Md Tariq Hasan, Sheikh Md. Rabiul Islam

Adrenal Glands Cancer Detection using PCF-based Biosensor 384

Rayhan Habib Jibon, Etu Podder, Abdullah Al-Mamun Bulbul

Study and Analysis of a Novel Hexagonal Core PCF for Broadband Supercontinuum Generation 388

Mohammed Faisal, Sk. M. Jahangir Kabir, M. R. Karim

A Numerical Study on Effects of Buffer Layers Electron Affinity on $\text{Cu}_2\text{ZnSnS}_4$ Based Solar Cell Using SCAPS-1D 392

Nasim Mia, Sharmin Akter Moyna, Md. Mahinur Alam, Moazzam Hossain

Porous-Core Hexagonal Photonic Crystal Fiber for Chemical Sensing 397

Himadri Shekhar Mondal, Md. Mahbub Hossain, Md. Shamim Ahsan, Saibba Biswas

Multimode Interference based Y-Branch Polymer Optical Waveguide Splitter: Design and Investigation 400

Md Koushik Alam, Noor Afsary, Md Omar Faruk Rasel, Takaaki Ishigure

Wideband Linear Wire-grid Plasmonic Polarizer for Visible and Near – Infrared Applications 404

Ragib Shakil Rafi, Swadesh Poddar

Effect of Plasmonic Silver Nanoparticles Layer on the Performance of Organic 408

Photovoltaic Cell

Soundarzo Tasnim, Md Rejvi Kaysir, Md Jahirul Islam

A Feasibility Analysis on Clean Energy System for Rural Health Care Centre 412

Anirudha Barman

Investigating the Effect of Sidechains in Anthracene Derivatives on Charge Transport Behaviour by Quantum Chemical Method 417

Md. Rakib Hossain, Ahsan Ullah, Banasree Sarkar Mou, Nazia Chawdhury

A DFT investigation on optical properties of Mg Doped SrMoO₃ for Optoelectronic Applications 421

Arpon Podder, Md. Solayman, Ovijit Das, Wasif Abu Dujana

Effectiveness of CuO as Selective Coating on Cu Substrate Obtained by Dip Coating Method for Solar Thermal Applications 425

Pragati Gupta, Sejuti Zaman, Farhat Tasnim Farin, Himangshu Ranjan Ghosh

A Comparative Analysis of Different Approach for Basic Emotions Recognition from Speech 430

Shammy Shikder Shanta, Md. Sham-E-Ansari, Atiqul Islam Chowdhury, Mohammad Munem Shahriar, Md. Khairul Hasan

Deep Convolutional Neural Network for Handwritten Bangla and English Digit Recognition 434

Md. Ali Akbar, Md Saiful Islam

Detection of Diabetic Retinopathy at Early Stage Using Retinal Fundus Images 438

Tanha Zaman, Dr. Quazi Delwar Hossain

A Convolutional Neural Network Based Approach to Recognize Bangla Spoken Digits from Speech Signal 442

Ovishake Sen, Al-Mahmud, Pias Roy

Image Reconstruction via Compressed Sensing 446

Raghib Shahriar, Nawshin Jahan Mowri, Mohammad Ismat Kadir

Customized K-Means Clustering Based Color Image Segmentation Measuring PRI 450

Md. Zahidul Islam, Shamsun Nahar, S.M. Shariful Islam, Saria Islam, Arnab Mukherjee, Lasker Ershad Ali

Local Binary Pattern with Neighborhood Relationship (LBPNR) –A Novel Approach for Texture Classification 454

Shamima Akter, Md. Wahid Murad, Subrina Akter, Israt Binteh Habib

Analogy among Different Conventional Watermarking Transforms and Noise Removing Filters against Various Attacks 459

Sejuti Zaman, Susmita Ghosh, Puza Roy, Ebtidaul Karim, Fahrin Rahman, Nabil Hassan

Performance Projection of GaN HEMT: Experimental Verification Using Curtice Model 465
Shariful Islam, Mohammad Abdul Alim, Anika Tahsin, Famin Rahman Rakib, Refat Uddin Rafi, Christophe Gaquiere

Performance Analysis and Implementation of SRAM Controller on Altera DE2 Board 469
Jabin Sultana, S. M. Shamsul Alam

Harmonic Reduction of Cascaded H-Bridge Multilevel Inverter Using Advanced Level Shifted Pulse Width Modulation Technique 473
Md. Tariqul Islam, Md. Fayzur Rahman, Sourav Barua, ASM Shihavuddin, Md. Hasan Maruf, Ratil H Ashique

An Automated and Scalable Tool for Fingerprint based Biometric Attendance Management System 477
Projapoti Roy, Prottoy Saha, Sharia Wasika Aditi

A Low-Cost Non-Isolated AC/DC Power Supply Design and Analysis for Embedded Systems 481
Subroto Kumer Deb Nath, Hasibur Rahman Hemel, Zubaida Azad Shikha

A Convolutional Generative Model for Short Circuit Fault Protection of a Microgrid System 485
Ananta Bijoy Bhadra, Sheikh Shafaet Islam, Kazi Hasan, Niloy Sarker, Jalal Uddin, Erphan A. Bhuiyan

Design and Performance Analysis of SRAM Circuit Using Adiabatic Logic with FinFET 489
A O M Shamsuddoha, Md. Khairul Islam, Satyendra N. Biswas