

ICECE 2008 - 5th International Conference on Electrical and Computer Engineering

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Contents

SESSION 1A1 (9:00AM – 11:00 AM) SUNDAY 21 DECEMBER 2008

POWER SYSTEM - I

SESSION CHAIR: M. A. RAHMAN, MEMORIAL UNIV. OF NEWFOUNDLAND, CANADA

Title	Paper ID	Authors	Page
Improvement of Load Frequency Control With Fuzzy Gain Scheduled SMES Unit Considering Governor Dead-Band and GRC	icece0032	M. R. I. Sheikh, S. M. Muyeen, R. Takahashi, Toshiaki Murata and Junji Tamura	1
Computerized Modeling of Hybrid Energy System—Part I: Problem Formulation and Model Development	icece0033	Ajai Gupta, R. P. Saini and M. P. Sharma	7
Computerized Modeling of Hybrid Energy System—Part II: Combined Dispatch Strategies and Solution Algorithm	icece0034	Ajai Gupta, R. P. Saini and M. P. Sharma	13
Computerized Modeling of Hybrid Energy System—Part III: Case Study with Simulation Results	icece0035	Ajai Gupta, R. P. Saini and M. P. Sharma	19
Control and Instrumentation for Small Wind Turbines	icece0043	R. Ahshan, M. T. Iqbal and George K. I. Mann	25
Characteristics of the Induced Currents in Horizontal Conductors Due to a Nearby Lightning Strike	icece0058	Md. Osman Goni	32
Self-Excited Single-Phase and Three-Phase Induction Generators in Remote Areas	icece0077	M. H. Haque	38
Effect of Lightning Return Stroke Current Parameter's on the Components of Lightning Generated Vertical Electric Field over Finitely Conducting Earth	icece0081	M. Z. I. Sarkar, M. A. I. Sarker and M. M. Ali	43

SESSION 1B1 (9:00AM-11:00AM) SUNDAY 21 DECEMBER 2008

BIOMEDICAL SIGNAL PROCESSING - I

SESSION CHAIR: MD. AYNAL HAQUE, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Fuzzy Based Micro Calcification segmentation	icece0029	J. Mohanalin, P. K. Kalra and Nirmal Kumar	49
Compression of ECG Signal Based on Its Deviation From a Reference Signal Using Discrete Cosine Transform	icece0090	Mohammad Saiful Alam and Newaz Muhammad Syfur Rahim	53

Effects of White Matter on EEG of Multi-layered Spherical Head Models	icece0142	Md Rezaul Bashar, Yan Li and Peng Wen	59
Acquisition and Analysis of Electrogastrogram for Digestive System Disorders Using a Novel Approach	icece0246	G. Gopu, R. Neelaveni and K. Porkumaran	65
Bioinformatics Web Data and Service Integration - An Experiment with Gene Regulatory Networks	icece0254	Emdad Ahmed	70
A New Digital Signal Processor for Doppler Radar Cardiopulmonary Monitoring System	icece0261	Mohammad Shaifur Rahman, Byung-Jun Jang and Ki-Doo Kim	76
Design of a Cost-effective EMG Driven Bionic Leg	icece0265	T. Latif, C. M. Ellahi, T. A. Choudhury and K. S. Rabbani	80
EM Radiation from Wi-LAN Base Station and Its Effects in Human Body	icece0456	Hikma Shabani, Md. Rafiqul Islam, AHM Zahirul Alam and Hany Essam Abd El-Raouf	86
Maximization of System Lifetime in Body Sensor Networks	icece0491	Md. Nazrul Islam Mondal and Kazi Mohiuddin Ahmed	92
Power spectral analysis for identifying the onset and termination of obstructive sleep apnoea events in ECG recordings	icece0545	Ahsan H. Khandoker, Chandan K. Karmakar and Marimuthu Palaniswami	96

SESSION 1C1 (9:00AM-10:30AM) SUNDAY 21 DECEMBER 2008

COMMUNICATION SYSTEMS – I

SESSION CHAIR: SAIFUL ISLAM, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Performance Evaluation of a High-Birefringence Linearly Chirped Grating for PMD Compensation in WDM/ IM-DD Transmission System	icece0036	M. S. Islam and S. P. Majumder	101
Synthesis of CMOS OTA based Communication Circuit	icece0065	Arabinda Roy, Sekhar Mandal and Baidya Nath Ray	107
Optical Directional Coupler Switch Using Domain Inversion Technology	icece0201	Ridwan Rafi Hossain, Mohammad Kibria Chowdhury, Ehsanul Matin Shujon and M. S. Islam	113
A New Switching Algorithm for TSISS Network	icece0225	S. M. Raiyan Kabir, Rezwanur Rahman, Anita Quadir and S. P. Majumder	117
On Location Tracking and Load Balancing in Cellular Mobile Environment-A Probabilistic Approach	icece0226	Sulata Mitra and Sipra DasBit	121
Performance Analysis of Star-Tree and Ring-Bus Millimeter-wave Fiber-Radio Networks Incorporated with Cascaded WDM Optical Interfaces	icece0259	Masuduzzaman Bakaul, Ampalavanapillai Nirmalathas, Christina Lim, Dalma Novak and Rod Waterhouse	127

SESSION 1D1 (9:00AM-10:30AM) SUNDAY 21 DECEMBER 2008**SMICONDUCTOR DEVICES - I**

SESSION CHAIR: M. REZWAN KHAN, UNITED INTL. UNIVERSITY, BANGLADESH

Title	Paper ID	Authors	Page
Base Transit Time of a Bipolar Junction Transistor Considering Majority-carrier Current	icece0013	Md Iqbal Bahar Chowdhury and M. M. Shahidul Hassan	133
An Analytical MOSFET Model Including Gate Voltage Dependence of Channel Length Modulation Parameter for 20nm CMOS	icece0093	Akira Hiroki, Akihiro Yamate, and Masayoshi Yamada	139
A comparison of Quantum Mechanical Corrections in Surface Potential Based MOSFET Compact Models	icece0095	M. A. Karim and Anisul Haque	144
Effect of Fringing Field in Modeling of Subthreshold Surface Potential in Dual Material Gate (DMG) MOSFETs	icece0124	Swapnadip De, Angsuman Sarkar, N. Mohankumar and Chandan Kumar Sarkar	148
Comparative Analysis of Subthreshold Swing Models for Different Double Gate MOSFETs	icece0168	Mehdi Zahid Sadi, Nittaranjan Karmakar, Mohammed Khorshed Alam and M. S. Islam	152
Direct Extraction of Interface Trap States from the Low Frequency Gate C-V Characteristics of MOS Devices with Ultrathin High-K Gate Dielectrics	icece0227	Md. M. Satter and A. Haque	158

INVITED PAPER SESSION 1C1A (10:30AM-11:00AM) SUNDAY 21 DECEMBER 2008

SPEAKER: B. M. AZIZUR RAHMAN, CITY UNIVERSITY OF LONDON, UK

SESSION CHAIR: SAIFUL ISLAM, EEE, BUET, BANGLADESH

INVITED PAPER SESSION 1D1A (10:30AM-11:00AM) SUNDAY 21 DECEMBER 2008

SPEAKER: CHANDAN KUMAR SARKAR, JADAVPUR UNIVERSITY, INDIA

SESSION CHAIR: M. REZWAN KHAN, UNITED INTL. UNIVERSITY, BANGLADESH

SESSION 1A2 (11:15AM-1:15PM) SUNDAY 21 DECEMBER 2008

POWER ELECTRONICS – I

SESSION CHAIR: M. H. RASHID, UNIVERSITY OF SOUTH FLORIDA, USA

Title	Paper ID	Authors	Page
Adaptive Neuro - Fuzzy Inference Systems into Squirrel Cage Induction Motor Drive: Modeling, Control and Estimation	icece0146	G. Pandian and S. Rama Reddy	162
3-Phase 3-Level Single-Stage AC to –DC Series Resonant Converter	icece0159	M. M. A. Rahman and M. M. Atiqur Rahman	170
Diagnostic and Protection of Inverter Faults in IPM Motor Drives Using Wavelet Transform	icece0164	M. A. S. K. Khan and M. Azizur Rahman	175
Three Phase PWM Cúk AC-AC Converter Employing Minimum Switches	icece0204	Md. Raju Ahmed and M. J. Alam	181
Eight Switch Buck Boost Regulator Topology for High Efficiency in DC Voltage Regulation	icece0220	Tanwir Zubayer Islam and A. B. M. H. Rashid	184
Advances on IPM Technology for Hybrid Cars and Impact in Developing Countries	icece0244	M. A. Rahman	189
Analysis of Efficiency Optimization for PFM Mode Switching DC-DC Boost regulator	icece0277	Khondker Zakir Ahmed, Moakhkhurul Islam, Syed Mustafa Khelat Bari, Didar Islam, Mohiuddin Hafiz and Quazi Deen Mohd Khosru	195
An Efficient Design of Power Transistor in Switching Regulator	icece0278	Mohiuddin Hafiz, Syed Al-Kadry, Tania Ansari and Khondker Zakir Ahmed	199

SESSION 1B2 (11:15AM-1:15PM) SUNDAY 21 DECEMBER 2008

COMMUNICATION SYSTEMS – II

SESSION CHAIR: B. M. AZIZUR RAHMAN, CITY UNIVERSITY OF LONDON, UK

Title	Paper ID	Authors	Page
Performance Analysis of an OFDM System in the Presence of Carrier Frequency Offset, Phase Noise and Timing Jitter over Rayleigh Fading Channels	icece0266	Shankhanaad Mallick and Satya Prasad Majumder	205
Adaptive Resource Allocation Based on Modified Genetic Algorithm and Particle Swarm Optimization for Multiuser OFDM Systems	icece0268	Imtiaz Ahmed and Satya Prasad Majumder	211

Comparison Study of various Call Admission Control Scheme in WCDMA Network	icece0291	Syed Foysol Islam and Md. Firoz Hossain	217
Decision Combining in Relay Networks	icece0303	Sharmin R Ara and R. Viswanathan	221
Investigation on Stochastic Tap Delay line Model of UWB Indoor Channel	icece0386	Jyoteesh Malhotra, Ajay K. Sharma and R. S. Kaler	227
Secrecy capacity of MIMO channels	icece0432	Mohammad Rakibul Islam, Jinsang Kim and Md. Shamsul Arefin	232
Impact of In-Band and Inter-Band Crosstalk due to Multi wave length Optical Cross-Connect in a WDM Network	icece0443	M. Jalal Uddin and S. P. Majumder	236
Effect of Cross Phase Modulation (XPM) on the Bit Error Rate Performance of an Optical CDMA (OCDMA) System	icece0461	Shahriar Ferdous, Mohammed Shahriar Zaman, Khandaker Fahim Imran and S. P. Majumder	242

SESSION 1C2 (11:15AM-1:15PM) SUNDAY 21 DECEMBER 2008

MEMS AND NANO TECHNOLOGY

SESSION CHAIR: SAIF ISLAM, UCDAVIS, USA

Title	Paper ID	Authors	Page
RF MEMS Tunable Filter: Design, Simulation and Fabrication Process	icece0177	Md. Fokhrul Islam, M. A. Mohd. Ali, B. Y. Majlis and Nowshad Amin	247
VLS Growth of Doped Si-Microprobe Arrays Using Varying PH ₃ Flow with a Fixed Flow of Si ₂ H ₆ at Low Temperature	icece0329	Md. Shofiqul Islam, Kazuaki Sawada and Makoto Ishida	251
MEMS Switch for Designing a Multi-band Reconfigurable Antenna	icece0537	A.H.M. Zahirul Alam, Md. Rafiqul Islam, Sheroz Khan, Soheli Farhana, Norsuzlin Bt. Mohd Sahar and Norasyikin Bt Zamani	255
An Analysis of Electric Fields Developed Inside Microchannels of Microfluidic Devices	icece0540	Bashir I. Morshed, Maitham Shams and Tofy Mussivand	261
Electrical Characteristics of Coaxial Nanowire FETs Based on Analytical Approach	icece0086	Alireza Kargar and Alireza Rezvanian	266
Performance comparison of zero-Schottky-barrier single and double walled carbon nano tube transistors	icece0118	Md. Abdul Wahab and Khairul Alam	270
PI-Clay Nano composites: Synthesis and Characterization	icece0126	Shaikh Md. Mominul Alam	275
The effects of doping, gate length, and gate dielectric on inverse subthreshold slope and on/off current ratio of a top gate silicon nanowire transistor	icece0206	Sishir Bhowmick, Khairul Alam and Quazi Deen Mohd Khosru	279

Effects of uniaxial strain on the bandstructures of silicon nanowires	icece0215	Redwan Noor Sajjad, Khairul Alam and Quazi Deen Mohd Khosru	283
Highly Oriented Carbon Nanotubes by Chemical Vapor Deposition	icece0528	Sharif M. Mominuzzaman, Ishwor Khatri, Zhang Jianhui, Tetsuo Soga and Takashi Jimbo	287

SESSION 1D2 (11:15AM-1:15PM) SUNDAY 21 DECEMBER 2008

VLSI – I

SESSION CHAIR: A. B. M. H. RASHID, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Fully Parallel Single and Two-Stage Associative Memories for High Speed Pattern Matching	icece0067	Md. Anwarul Tetsushi Koide and Hans Juergen Mattausch	291
Modified CAEN-BIST Algorithm for Better Utilization of Nanofabrics	icece0083	Babak Zamanlooy and Ahmad Ayatollahi	297
Phase Noise Reduction in CMOS LC Oscillators Using Tail Noise Shaping and Gm3 Boosting	icece0122	Kapil Jainwal and Jayanta Mukherjee	302
Reversible Multipliers: Decreasing the Depth of the Circuit	icece0233	Fateme Naderpour and Abbas Vafaei	306
An Improved Method of Highly Accurate Supply Detection using Bandgap Reference Circuit and Its Implementation in a Pseudo BiCMOS Process	icece0249	Mustafa Ryadh, Khondker Zakir, Mohiuddin Hafiz and A. B. M. H. Rashid	311
Reconfigurable Monocycle Pulse Based UWB Transmitter in 0.18 μ m CMOS for Intra/Inter Chip Wireless Inter Connect	icece0407	S. M. Salahuddin, Salahuddin Raju and P. K. Saha	315
A Fully Digital Nonlinear, High-speed Rank Order Filter in 0.18 μ m CMOS Technology	icece0417	George John Toscano and Pran Kanai Saha	319
Scalable Arithmetic Cells for Iterative Logic Array	icece0465	Bo-Yuan YE, Po-Yu YEH, Sy-Yen KUO and Shyue-Kung LU	325

SESSION 1A3 (2:15PM-4:15PM) SUNDAY 21 DECEMBER 2008

POWER SYSTEM – II

SESSION CHAIR: S. SHAHNAWAZ AHMED, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Measured Impedance for Inter Phase Faults on Next Line and Second Circuit of a Double Circuit Line	icece0082	H. Shateri and S. Jamali	331
Distance Relay Ideal Tripping Characteristic for Inter Phase Faults in Presence of SSSC on Next Line	icece0087	A. Kazemi, S. Jamali and H. Shateri	337

Optimal Loss Allocation of Multiple Wheeling Transactions in a Deregulated Power System	icece0116	Pornthep Panyakaew and Parnjit Damrongkulkamjorn	343
Neuro Fuzzy Soft Starter for Grid Integration with Pitch Regulated Wind Turbine System	icece0145	L. Rajaji and C. Kumar	349
An Educational Purpose GUI for Evolutionary Computation in Economic Dispatch Problem	icece0250	A. B. M. Nasiruzzaman and M. G. Rabbani	355
Implementation of Genetic Algorithm and Fuzzy Logic in Economic Dispatch Problem	icece0251	A. B. M. Nasiruzzaman and M. G. Rabbani	360
Evaluation of Optimum Capacity and Location of East West Inter-connector Using the Line Planning Approach	icece0283	Abdul Hasib Chowdhury and Q. Ahsan	366
Future Electric Energy Demand of Bangladesh	icece0372	Moin Uddin and Q. Ahsan	370

SESSION 1B3 (2:15PM-4:15PM) SUNDAY 21 DECEMBER 2008

DIGITAL SIGNAL PROCESSING

SESSION CHAIR: MD. KAMRUL HASAN, EAST WEST UNIVERSITY, BANGLADESH

Title	Paper ID	Authors	Page
Non-concatenative Morphology: An HPSG Analysis	icece0356	Md. Shariful Islam Bhuyan and Reaz Ahmed	374
A Parameter Estimation Method for Linear Amplitude Modulated Chirp Signals Based on Discrete Fractional Fourier Transform	icece0015	Saurav Zaman Khan Sajib and Ahmed Mostayed	380
A new perceptual post filter for single channel speech enhancement	icece0113	Md. Jahangir Alam, Douglas O'Shaughnessy and Sid-Ahmed Selouani	386
Iterative Noise Power Subtraction Technique for Improved Speech Quality	icece0130	M. Ryyan Khan, Taufiq Hasan and M. Rezwon Khan	391
Perceptually weighted multi-band spectral subtraction speech enhancement technique	icece0156	Md. Faqrul Alam Chowdhury, Md. Jahangir Alam, Md. Fasiul Alam and Douglas O'Shaughnessy	395
A Two Pass Method to Impulse Noise Reduction from Digital Images Based on Neural Networks	icece0217	Alireza Rezvanian, Karim Faez and Fariborz Mahmoudi	400
Human Motion Detection and Segmentation from Moving Image Sequences	icece0351	Mohiuddin Ahmad	407
A High-Frame-Rate Embedded Image-Processing System by Using a One-chip DSP	icece0352	M. Fukuzawa, H. Hama, N. Nakamori and M. Yamada	412
Modeling of the Video DCT Coefficients	icece0511	M. I. H. Bhuiyan and Rubaiya Rahman	417

Estimation of Direction of Arrival (DOA) Using Real-Time Array Signal Processing	icece0514	Md. Shahedul Amin, 422 Ahmed-Ur-Rahman, Saabah-Bin-Mahbub, Khawza I. Ahmed and Zahidur Rahim Chowdhury
Least-Squares Optimal Variable Step-Size LMS for Nonblind System Identification with Noise	icece0546	M. A. Wahab, M. Adel 428 Uzzaman, M. S. Hai, M. A. Haque and M. K. Hasan

SESSION 1C3 (2:15PM-4:15PM) SUNDAY 21 DECEMBER 2008

SEMICONDUCTOR DEVICES – II

SESSION CHAIR: M. M. SHAHIDUL HASSAN, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Gate C-V Characteristics of Si MOSFETs with Uniaxial Strain Along <110> Direction	icece0295	Md. Itrat Bin Shams, Quazi Deen Mohd Khosru and Anisul Haque	434
Inversion Layer Properties of <110> Strained Silicon n-Channel MOSFETs	icece0314	Samia Nawar Rahman, Hasan Mohammad Faraby, Md Manzur Rahman, Md. Quamrul Huda and Anisul Haque	438
An Analytical Surface Potential Model For Pocket Implanted Sub-100 nm n-MOSFET	icece0315	Muhibul Haque Bhuyan and Quazi D. M. Khosru	442
Linear Pocket Profile Based Threshold Voltage Model For Sub-100 nm n-MOSFET Incorporating Substrate and Drain Bias Effects	icece0319	Muhibul Haque Bhuyan and Quazi D. M. Khosru	447
InN-based Dual Channel High Electron Mobility Transistor	icece0321	Md. Tanvir Hasan, Md. Monibor Rahman, A. N. M. Shamsuzzaman, Md. Sherajul Islam and Ashraful G. Bhuiyan	452
C-V Characteristics of n-channel Double Gate MOS Structures Incorporating the Effect of Interface States	icece0353	A. Alam, S. Ahmed, M. K. Alam and Quazi D. M. Khosru	456
Functional Device Design using Nonuniform Gate Voltage: Analytical Model of a Novel MOSFET	icece0382	Suhad Shembil	460
A Novel Four-Quadrant Analog Multiplier using Laterally Non uniform Gate Voltage MOSFET	icece0385	Suhad Shembil	463

SESSION 1D3 (2:15PM-4:15PM) SUNDAY 21 DECEMBER 2008**COMMUNICATION NETWORK – I**

SESSION CHAIR: PRAN KANAI SAHA, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
New Approach for Throughput Analysis of IEEE 802.11 in AdHoc Networks	icece0005	T. D. Senthilkumar, Krishnan and P. Kumar	A. 466
Nonsaturation Throughput Analysis of IEEE 802.11 Distributed Coordination Function	icece0006	T. D. Senthilkumar, Krishnan and P. Kumar	A. 472
An Efficient Group Key Agreement Protocol for Ad-Hoc Networks	icece0028	Rony Hasinur Rahman and M. Lutfar Rahman	478
Performance Analysis of Relay Selection Methods for IEEE802.16j	icece0084	Najmeh Forouzandeh Mehr and Hossein Khoshbin	484
A Comparative Analysis of Feed-forward Neural Network & Recurrent Neural Network to Detect Intrusion.	icece0092	Nipa Chowdhury and Mohammad Abul Kashem	488
Optimization of k-Fold Multicast Wireless Network Using M/M/n/n+q Traffic Model	icece0125	Asfara R. Towfiq, N. A. Siddiky, Md. Imdadul Islam and M. R. Amin	493
Performance Analysis of an Optical Burst Switching (OBS) Network	icece0194	Md. Shamim Reza and Satya Prasad Majumder	497
Survey on Adaptive Caching Techniques in Peer-to-Peer Network	icece0240	Md. Tauhiduzzaman, Md. Renesa Nizamee, Sheikh Md. Rubabuddin Osmani, Md. Mohiuddin Khan and A. S. M. Ashique Mahmood	501

SESSION 2A1 (9:00AM-11:00AM) MONDAY 22 DECEMBER 2008**POWER ELECTRONICS – II**

SESSION CHAIR: SHAHIDUL I. KHAN, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
A Very Low Voltage High Duty Cycle Step-up Regulator	icece0281	Mohiuddin Hafiz, Tania Ansari, Khondker Zakir Ahmed, Syed Md. Jaffrey and Syed Mustafa Khelat Bari	506
Design and Implementation of Semi-Quadratic Slope Compensation Circuit for PWM Peak Current Mode Boost Regulator	icece0282	Khondker Zakir Ahmed, Syed Mustafa Khelat Bari, Mohiuddin Hafiz and Didar Islam	512

Harmonic Mitigation in Transformers of Twelve-Pulse Rectifier Using Active Filter	icece302	Mohammad Rubaiyat Tanvir Hossain and Muhammad Quamruzzaman	516
Design and Analysis of a Resonant Inverter fed from a Cúk Converter for the Conversion of Alternative Energy directly into Commercial Supply Efficiently.	icece0383	Munshi Mahbubr Rahman and Aminul Hoque	521
Self-Tuned NFC Based Speed Ripple Minimization of a Faulty Induction Motor	icece0393	M. Nasir Uddin and Z. R. Huang	527
Novel Approach on Poly Phase to Single Phase Buck Boost Matrix Converter	icece0454	S. Pushpakaran and B. Umamaheswari	533
Modified Kalman Filter based Direct Torque Control of Induction motor for Ripple Free Torque and Flux Estimation	icece0471	G. Pandian and S. Rama Reddy	539
A Voltage Sag Compensation Utilizing Auto transformer Switched by Hysteresis Voltage Control	icece0472	Amir Ahmad Koolaiyan, Abdolreza Sheikholeslami, Reza and Ahmadi Kordkheili	545

SESSION 2B1 (9:00AM-11:00AM) MONDAY 22 DECEMBER 2008

OPTOELECTRONIC DEVICES AND PHOTONICS

SESSION CHAIR: MD. QUAMRUL HUDA, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Analysis of X-Cut Lithium Niobate Electro-optic Modulators with Backside Slots	icece0011	M. Khaled Hassan and M. Shah Alam	551
Very Deep Nanoscale Domain Inversion in LiNbO ₃ for High-Power and High-Efficiency SHG Devices	icece0115	M. S. Islam and Makoto Minakata	555
Thermal Stress Effects on Higher Order Modes in Highly Elliptical Core Optical Fibers	icece0200	Rahat M. Anwar and M. Shah Alam	561
An Equivalent Circuit Model for Dual-Cavity QWVCSELs	icece0396	F. Emami and A. H. Jafari	566
Optimum Design of a Dispersion Managed Photonic Crystal Fiber for Nonlinear Optics Applications in Telecom Systems	icece0409	S. M. Abdur Razzak, Muhammad Abdul Goffar Khan, Yoshinori Namihira and Md. Yeakub Hussain	570

Dispersion Analysis of Photonic Crystal Fiber	icece0447	M. Jalal Uddin, Iftexhar A. Khan and M. Shah Alam	574
InxGa1-xN Based Multi Junction Concentrator Solar Cell	icece0485	Md. Sherajul Islam, A.K.M. Zillur Rahman, Md. A. R. Chowdhury, Md. Rafiqul Islam and Ashraful G. Bhuiyan	578

SESSION 2C1 (9:00AM-11:00AM) MONDAY 22 DECEMBER 2008

COMMUNICATION NETWORK – II

SESSION CHAIR: ABM SIDDIQUE HOSSAIN, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
A new SS7-SIGTRAN protocol interchanger software operated with modified USB E1 for nationwide IP backbone – Necessity for BTCL PSTN	icece0247	M. S. Munir, K. Ahmed, ASM Shihavuddin, Tahmid Latif and Md. Saifur Rahman	582
A Security Adaptive Protocol Suite: Ranked Neighbor Discovery (RND) and Security Adaptive AODV (SA-AODV)	icece0252	Rasib Hassan Khan, K. M. Imtiaz-ud-Din, Abdullah Ali Faruq, Abu Raihan Mostofa Kamal and Abdul Mottalib	588
Policy Based Admission Control and Handoff Decision Algorithm for Next Generation All-IP Wireless Network	icece0255	Sulata Mitra	594
Routing in Mobile Ad hoc Networks: Cases of Long-hop and Short-hop	icece0267	Tanveer Ahmed Bhuiyan, Mohammed Tarique and Rumana Islam	600
Upper Bound on Blocking Probability for Vertically Stacked Optical Banyan Networks with Link Failures and Given Crosstalk Constraint	icece0325	Basra Sultana and M. R. Khandker	606
Blocking Behavior Analysis of Extended Pruned Vertically Stacked Optical Banyan Networks with Link Failures	icece0328	Basra Sultana and M. R. Khandker	612
Analysis of Real-Time Multimedia Traffic in the Context of Self-Similarity	icece0373	Rajibul Alam Joarder, S. Parveen, H. Sarwar, S. K. Sanyal and S. Rafique	618

RC4A Stream Cipher for WLAN Security: A Hardware Approach icece0377 Abdullah Al Noman, Roslina Mohd. Sidek, Abdul Rahman Ramli and Liakot Ali 624

SESSION 2D1 (9:00AM-11:00AM) MONDAY 22 DECEMBER 2008

COGNITIVE INTELLIGENCE AND DATABASE SYSTEMS – I

SESSION CHAIR: MD. SAIFUR RAHMAN, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
A New Approach to Sort Unicode Bengali Text	icece0080	Md. Ahsanur Rahman and Md. Abdus Sattar	628
A 7-Segment Display for Bangla, English and Other Indian Numerals	icece0135	M Midul Islam, Mohammad Kabir Hossain, Khondker Shajadul Hasan and Abul L. Haque	631
A Proposal for a Generic Multimedia Framework with a view to facilitate easy middleware development	icece0143	Sachin P. Kamat	636
Segmentation of Printed Bangla Characters Using Structural Properties of Bangla Script	icece0182	Mohammad Isbat Sakib Chowdhury, Barnali Dey and Md. Saifur Rahman	639
Bangla Numeral Recognition Engine (BNRE)	icece0197	Mohammed Moshikul Hoque, Md. Rezaul Karim, Md. Gahangir Hossain, Md. Shamsul Arefin and Md. Monjur-Ul-Hasan	644
Application of Artificial Neural Network in Social Computing in the Context of Third World Countries	icece0216	Md. Shamsuzzoha Bayzid, Anindya Iqbal, Chowdhury Sayeed Hyder and Mohammad Tanvir Irfan	648
Performance Comparison of Fuzzy Queries on Fuzzy Database and Classical Database	icece0237	A. H. M. Sajedul Hoque, Md. Sadek Ali, Md. Aktaruzzaman, Sujit Kumer Mondol and Babul Islam	654
A Solution to the Security Issues of an E-Government Procurement System	icece0253	Md. Sadiqul Islam, Sanjoy Dey, Gourab Kundu and A. S. M. Latiful Hoque	659

SESSION 2A2 (2:15PM-4:15PM) MONDAY 22 DECEMBER 2008**POWER SYSTEMS AND DRIVES**

SESSION CHAIR: MD. QUAMRUL AHSAN, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Voltage Mode Control of Single Phase Boost Inverter	icece0476	Ainul Anam Shahjamal Khan and Kazi Mujibur Rahman	665
Development of Control Strategy for Load Sharing in Grid-Connected PV Power System	icece0489	Muhammad Quamruzzaman and Kazi Mujibur Rahman	671
A Sensor-less Adaptive Rotor Parameter Estimation Method for Three Phase Induction Motor	icece0544	Rajib Mikail and Kazi Mujibur Rahman	676
Measured Impedance by Distance Relay Elements in a Single Phase to Ground Fault	icece0243	H. Shateri and S. Jamali	682
Saving of Natural Gas Through Optimal Operation of Bangladesh Power System	icece0380	Mohammad Tawhidul Alam and Q. Ahsan	688
Lightning Surge Impedance Measurement on Control Building Using Electromagnetic Transient Program	icece0381	Md. Mostafizur Rahman, M.O. Goni, Kazutaka Mitobe and Masafumi. Suzuki	694
Voltage Fluctuations in a Remote Wind-Diesel Hybrid Power System	icece0404	Sheikh Mominul Islam, M. Tariq Iqbal and John E. Quaicoe	699
Monte-Carlo and Recency-Weighted Learning Methods for Conjectural Variations in Dynamic Power Markets	icece0516	P. N. Vali and A. R. Kian	706
Research for Data acquisition equipment with micro-Grid system	icece0522	Tae-young Lee, Kwang-ho Ha, Hyun-jea Yoo, Jong-wan Seo and Myong-chul Shin	712
Furan Measurement in Transformer Oil by UV-Vis Spectral Response Using Fuzzy Logic	icece0541	Sin Pin Lai, Ahmed Abu-Siada and Syed Islam	716

SESSION 2B2 (2:15PM-4:15PM) MONDAY 22 DECEMBER 2008**VLSI – II**

SESSION CHAIR: DIDAR ISLAM, MD & CEO, POWER IC, BANGLADESH

Title	Paper ID	Authors	Page
An Application Specific Integrated Circuit for Optimization of Fixed Polarity Reed-Muller Expressions	icece0078	Tahseen Kamal and Mozammam H. A. Khan	721
Micro Heat Pipes – A Promising Means of Thermal Solution for Desktop Computers	icece0361	Ahmed Imtiaz Uddin and Chowdhury Md. Feroz	727
A Low-Cost Realization of Quantum Ternary Adder Using Muthukrishnan-Stroud Gate	icece0424	Md. Mehedi Hasan	732
Novel C-Testable Design for H.264 Integer Motion Estimation	icece0467	Po-Yu YEH, Bo-Yuan YE, Sy-Yen KUO and Shyue-Kung LU	735
Modified Physical Configuration to Compensate Parasitic Effects in High Speed Systems	icece0532	Saad Bin Abul Kashem, Salahuddin Raju and Md Ishfaqur Raza	741
Improved VLSI Circuit Performance using Localized Power Decoupling	icece0533	Laila S. Sraboni, Ophelia Mohaimen, Rezwana H. Mustazir, S. M. Salahuddin and Md Ishfaqur Raza	745
Jitter Analysis of a Mixed PLL-DLL Architecture	icece0539	Md. Sayfullah, Barth Roland and Arpad L. Scholtz	750

SESSION 2C2 (2:15PM-4:15PM) MONDAY 22 DECEMBER 2008**MICROWAVE AND RF SYSTEMS**

SESSION CHAIR: A. H. M. ZAHIRUL ALAM, ECE, IUM, MALAYSIA

Title	Paper ID	Authors	Page
Dual Beam Phased Array Antenna with Wide Scan Angle For Repeater Applications	icece073	Ashraf Uz Zaman, Lars Manholm and Anders Derneryd	755
Circularly Polarized Compact Passive RFID Tag Antenna	icece0153	Hidayath Mirza, Mohd Imran Ahmed and Mohammad Fazleh Elahi	760

A UHF-RFID Tag Antenna for Commercial Applications	icece0154	Hidayath Mirza and Mohammad Fazleh Elahi	764
Calibrated_Time-Frequency_MUSIC Method for Direction of Arrival Measurement of Pilot Signals	icece0155	A. K. M. Baki, K. Hashimoto, N. Shinohara, T. Mitani, M. Matsumoto and H. Matsumoto	768
New and Improved Method of Beam Forming with Reduced Side Lobe Levels for Microwave Power Transmission	icece0160	A. K. M. Baki, Kozo Hashimoto, Naoki Shinohara, Tomohiko Mitani and Hiroshi Matsumoto	773
Analysis of Wire Antennas by Solving Pocklington's Integral Equation Using Wavelets	icece0293	Bindubritta Acharjee and Md. Abdul Matin	778
Stacked Multiple Slot Microstrip Patch Antenna for Wireless Communication System	icece0297	Mohammad Tariqul Islam, Norbahiah Misran, Mohammed Nazmus Shakib and Baharudin Yatim	783
Wave-Particle Interaction in an Unstable Plasma – Four-Particle Approach	icece0412	Md. Abdul Matin, Imtiaz Ahmed and Rummana Matin	787
Rain Fade Analysis on Earth-Space Microwave Link in a Subtropical Region	icece0503	Md. Rafiqul Islam, Md. Arafatur Rahman, SK. Eklas Hossain and Md. Saiful Azad	793
Design, Simulation and Fabrication of a Microstrip Patch Antenna for Dual Band Application	icece0526	Md. Fokhrul Islam, M. A. Mohd. Ali, B. Y. Majlis and N. Misran	799

SESSION 2D2 (2:15PM-4:15PM) MONDAY 22 DECEMBER 2008

THIN FILM TECHNOLOGY

SESSION CHAIR: MD. SHAFIQL ISLAM, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
An Experimental Approach of DLC Film Deposition on Metal Substrates	icece0017	Md. Mahmud Hasan, Muhammad Athar Uddin and S. M. Mominuzzaman	803
Crystalline and the luminescence characteristics of β -FeSi ₂ in photonics formed by pulsed laser deposition	icece0108	M. Zakir Hossain, T. Mimura and S. Uekusa	807

Interpretation of Cu(111)/Nb(110) Growth on SiO ₂ by Transmission Electron Microscopy	icece0163	Md. Maniruzzaman and Atsushi Noya	812
Vibrational Modes in Ga _x Mn _{1-x} Sb Studied by Raman Spectroscopy	icece0169	M. M. Hasan, M. R. Islam, N. F. Chen and M. Yamada	816
Raman Spectroscopic Determination of Hole Density in Diluted Magnetic Semiconductor Ga _x Mn _{1-x} Sb	icece0170	M. M. Hasan, M. R. Islam, N. F. Chen and M. Yamada	821
Modeling and Numerical Analysis of Thermal Treatment of Granulated Porous Particles by Induction Plasma	icece0218	M. Mofazzal Hossain, Y. Yao, M. Rafiqul Alam, M. Maksud Alam and T. Watanabe	827
1.54 μm Lasing from Silicon in Presence of Erbium Doping	icece0368	M. Q. Huda and M. Z. Hossain	833
Dielectric study of hafnium oxide thin film annealed in oxygen and deposited using RF sputtering system having MIM configuration	icece0446	A. Srivastava, R. K. Nahar, C.K Sarkar and Vinay Gupta	838
Comparison of Photo response Characteristics between Nitrogen and Phosphorous Doped n-C/p-Si Heterostructure	icece0493	Ahmed Tasnim Rasin and Sharif Mohammad Mominuzzaman	842
Semiconducting Carbon Thin Film Deposition on Silicon by Electroplating	icece0512	Muhammad Athar Uddin and Sharif M Mominuzzaman	846

SESSION 2A3 (5:30PM-6:30PM) MONDAY 22 DECEMBER 2008

CONTROL SYSTEMS AND POWER CONVERTERS

SESSION CHAIR: MD. ENAMUL BASHER, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Three-Dimensional Motion Control using Embedded Controller and FPGA Technology	icece0001	Satyam, R. D. Kamble, Dhanashri and V. K. Sharma	851
Situational Awareness Based on Neural Control of an Autonomous Helicopter During Hovering Manoeuvres	icece0027	Igor Astrov and Andrus Pedai	857
A Set of Stabilizing PD Controllers For Multi-Input-Multi-Output Systems	icece0063	Leena G , K. B. Dutta and G Ray	861
A Novel Approach for Complete Identification of Dynamic Fractional Order Systems Using Stochastic Optimization Algorithms and Fractional Calculus	icece0101	Deepyaman Maiti, Mithun Chakraborty and Amit Konar	867

Adaptive Template Based Object Tracking with Particle Filter	icece0136	Md. Zahidul Islam and Chil-Woo Lee	873
Microprocessor based Temperature Monitoring and Control System using Fuzzy Logic Controller	icece0401	Md. Rabiul Islam, M. A. Goffar Khan and M. F. Rahman	878
Cognitive-Based Teaching of Power Electronics	icece0021	Muhammad H. Rashid	883
Applications and Market Analysis of DC-DC Converters	icece0022	S. D. Mitchell, S. M. Ncube, T. G. Owen and M. H. Rashid	887

SESSION 2B3 (5:30PM-6:30PM) MONDAY 22 DECEMBER 2008

COMMUNICATION SYSTEMS AND NETWORKS

SESSION CHAIR: S. P. MAJUMDER, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Performance Analysis of a MIMO-OFDM Wireless Communication System With Convolutional Coding	icece0474	Kazi Mostaq Ahmed and Satya Prasad Majumder	892
Noise Optimized Minimum Delay Spread Equalizer Design for DMT Transceivers	icece0531	Toufiqul Islam , Satya Prasad Majumder and Md. Kamrul Hasan	898
Finding a Unique Association Rule Mining Algorithm Based on Data Characteristics	icece0538	Mohammed M. Mazid, A.B.M. Shawkat Ali and Kevin S. Tickle	902
ALEACH: Advanced LEACH Routing Protocol for Wireless Micro sensor Networks	icece0450	Md. Solaiman Ali, Tanay Dey, and Rahul Biswas	909
Publish/Subscribe based Reprogramming of Sensor Networks	icece0473	Sazia Parvin	915
Load Balancing in DHT based P2P Networks	icece0519	Md. Ahsanur Rahman	920
A Generic Framework For Defining Security Environments Of Wireless Sensor Networks	icece0527	Ali Nur Mohammad Noman	924

SESSION 2C3 (5:30PM-6:30PM) MONDAY 22 DECEMBER 2008**MATERIALS AND SEMICONDUCTOR DEVICES**

SESSION CHAIR: QUAZI D. M. KHOSRU, EEE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
Effect of 3 wt.% Bi in Sn-Zn solder on the interfacial reaction with the Au/Ni metallization in Microelectronic Packaging	icece0162	Md. Obaidul Haque and Ahmed Sharif	930
Design, Simulation and Application of a NovelCompound MOSFET for Emerging CMOS Technology	icece0402	Shuza Binzaid and John O. Attia	936
Active-Region-Cutout-Enclosed-Layout-TransistorDevice Applications in Electronics	icece0463	Shuza Binzaid and John O. Attia	941
1.55 μm Laser Using InN-Based Quantum Well Heterostructure	icece0477	Md. Tanvir Hasan, Md. Azim Ullah, Md. Asaduzzaman and Ashraful G. Bhuiyan	946
Effects of Phosphorus Doping on J-V and C-V Characteristics of Pulsed Laser Deposited Camphoric Carbon/P-Silicon Heterojunction Device	icece0513	M. Zahurul Islam and Sharif Mohammad Mominuzzaman	949
Effect of Gate Bias on Channel in Depletion-All-Around Operation of the SOI Four-Gate Transistor	icece0525	Shafat Jahangir, Quazi Deen Mohd Khosru, and Anisul Haque	953

SESSION 2D3 (5:30PM-6:30PM) MONDAY 22 DECEMBER 2008**COGNITIVE INTELLIGENCE AND DATABASE SYSTEMS – II**

SESSION CHAIR: MD. SAIDUR RAHMAN, CSE, BUET, BANGLADESH

Title	Paper ID	Authors	Page
A Range Key Query Scheme for Multidimensional Databases	icece0285	K. M. Azharul Hasan, Tatsuo Tsuji and Ken Higuchi	958
A Linear Algorithm for Floor plan Compaction	icece0312	Md. Wasi-ur-Rahman, Nusrat Sharmin Islam and Md. Saidur Rahman	964
A Behavioral Model of Writing	icece0364	M. Naghibolhosseini and F. Bahrami	970

A New Approach of Dynamic Encoded Bitmap Indexing Technique based on Query History	icece0426	Md. Golam Rabilul Alam, Mohammed Yasir Arafat, and Mohammed Kamal Uddin Iftekhar	974
Design of Smart Card for Automated Toll Collection at Jamuna Multipurpose Bridge in Bangladesh	icece0481	Md. Arafatur Rahman, Md. Saiful Azad, Farhat Anwar and Md. Rafiqul Islam	980
SET Based Logic Realization of a Robust Spatial Domain Image Watermarking	icece0492	D. Samanta, A. Basu, T. S. Das, V. H. Mankar, Ankush Ghosh, Manish Das and Subir K Sarkar	986
Agent's Decision Making Based on Cultural Values	icece0498	Zeinab Mazadi, Nasser Ghasem-Aghaee and Mohammad Ali Nematbakhsh	994