

## RESEARCH

### Recent Research Publications

Sudipta Ghosh, Partha Das, Anirban Sarkar, Soumyadeep Halder, Debasish Kundu, Sauvik Das Gupta, "A Novel Approach towards detecting Faces using Skin Segmentation and Template Matching", Accepted for oral presentation at the *Second International Conference on Signal Processing and Integrated Networks (SPIN – 2015)* & subsequent publication in *IEEE Xplore Digital Library*.

Sudipta Ghosh, Abhinaba Bhattacharjee, Indrani Jana, Ankana Das, Debasish Kundu, Sauvik Das Gupta, "A Novel Probabilistic approach of Colored Object detection and design of a Gesture based Real-time Mouse Tracking along with Virtual Teaching intended for Color-Blind people", Accepted for oral presentation at the *Second International Conference on Signal Processing and Integrated Networks (SPIN – 2015)* & subsequent publication in *IEEE Xplore Digital Library*.

Sudipta Ghosh, Partha Das, Annesha Mukherjee, Aniruddha Dey, Debasish Kundu, Sauvik Das Gupta, "A Hybrid Color Plane approach towards Color based Object Detection and Modeling of a Real-time Gesture based Intelligent Virtual Aid using Artificial Neural Network", Accepted for oral presentation at the *First International Conference on Computing, Communication, Control And Automation*, & subsequent publication in *IEEE Xplore Digital Library*.

Sudipta Ghosh , Nabanita Das, Debasish Kundu, Dr.Gopal Paul "Fault Detection in Engineering Application using Fuzzy Petrinet and Abduction Technique" *Journal of Mechanics of Continua And Mathematical Sciences*(ISSN 0973-8975),vol.9,no.2,pp 1368-1376, January 2015.

Sudipta Ghosh, Gopal Paul, "A Type-2 Approach in Emotion Recognition and an Extended Type-2 Approach for Emotion Detection". *Fuzzy Information and Engineering Fuzzy*,vol 7,issue 4, pp.475-498 (2015) ,

Sudipta Ghosh, Shilpi Samajpati, Balaram Kar,Debasish Kundu, Nabanita Das,"Optimum Location of Distributed Energy Resources In Distributed Network". *Journal of Mechanics of Continua And Mathematical Sciences*,vol.10,no.1,pp.1451-1463, July.2015.

Sudipta Ghosh, Arpan Dutta Shilpi Samajpati, Balaram Kar, Debasish Kundu" Present Valu Calculation with Disimilarity in Expected Rate and Discounting Rate". *Journal of Mechanics of Continua And Mathematical Sciences*, vol.10,no.1,pp.1481-1486, July.2015.

Anuradha Saha, Amit Konar, Mainak Dan and Sudipta Ghosh" Decoding of Motor Imagery Potentials in Driving Using DE-Induced Fuzzy-Neural Classifier" Accepted for oral presentation at the *2015 IEEE 2nd International Conference on Recent Trends in Information Systems (ReTIS)* & subsequent publication in *IEEE Xplore Digital Library*.

Sudipta Ghosh Joshita Majumdar, Souvik Tewary, Shreyosi Chakraborty, Debasish Kundu, , Sauvik Das Gupta "An Automated Graphical User Interface based System for The Extraction of Retinal Blood Vessels Using Kirsch's Templates" *International Journal of Advanced Computer*

*Science and Applications* , Volume 6, Issue 6, pp 86-93, June 2015

Pratyusha Das, Arup Kumar Sadhu, Amit Konar and Sudipta Ghosh” Adaptive Fuzzy Type-I Based Person Identification” *Proceedings of Michael Faraday IET International Summit-2015* Volume 1, Paper Id:205, pp.611-616, also got best paper awarde.

Sudipta Ghosh, Debasish Kundu and Sauvik Das Gupta “Image Processing based Customized Image Editor and Gesture Controlled Embedded Robot coupled with Voice Control features” *International Journal of Advanced Computer Science and Applications*, Volume 6, Issue 11, pp 91-96, 2015.

Sudipta Ghosh, Abhinaba Bhattacharjee, Partha Das, Debasish Kundu and Sauvik Das Gupta “A Real-Time Face Motion Based Approach towards Modeling Socially Assistive Wireless Robot Control with Voice Recognition” *International Journal of Advanced Computer Science and Applications* , Volume 6, Issue 10, pp 205-220, 2015.

Soumen Sardar , Sudipta Ghosh, Binanda Kishore Mondal, Souvik Chatterjee, Debasish Kundu” Solving Real-World Constrained Handling Optimization Problems Using Gradient Repair Differential Evolution” *International Journal of Computer Science and Information Security*, vol.14,no.9 pp.14-34, 2016.

Sudipta Ghosh, Gopal Paul, Debasish Kundu,” A Fuzzy Logic Approach in Emotion Detection and Recognition and Formulation of an Odor based Emotional Fitness Assistive System” *International Journal of Synthetic Emotions* , vol.6,no.12 pp.14-34, 2016.

Sudipta Ghosh, Debasish Kundu, Joshita Majumdar, Souvik Tewary, Shreyosi Chakraborty, Rahul Majumber and Sauvik Das Gupta “A Novel Approach towards designing a Wearable Smart Health Monitoring System measuring the Vital Parameters and Emergency situations in Real-Time and providing the necessary Medical Care through Telemedicine” Accepted for oral presentation at the *2016 IEEE 3rd International Students’ Conference on Electrical, Electronics and Computer Science (SCEECS-2016)* & subsequent publication in *IEEE Xplore Digital Library*.

Sk. Zeeshan Murshed , Anwasha Dutta , Sombuddha Chatterjee , Ishani Mondal, Aroni Saha , Souradeep Saha , Debasish Kundu , Sudipta Ghosh and Sauvik Das Gupta . “Controlling an Embedded Robot through Image Processing based Object Tracking using MATLAB” Accepted for oral presentation at the *2016 IEEE 10th international conference on intelligent system and control (ISCO)* & subsequent publication in *IEEE Xplore Digital Library*.

Sudipta Ghosh, Debasish Kundu, Binanda Kishore Mondal, Souvik Chatterjee, “Application of Fuzzy Abduction Technique in Aerospace Dynamics”. *International Journal of Advanced Computer Science and Applications* , Volume 7, Issue 5, pp 243-248, (2016).

Rituparna Halder, Sushmit Sengupta, Arnab Pal, Sudipta Ghosh, Debashish Kundu “Real time facial emotion recognition based on image processing and machine learning”. *International*

*Journal of Advanced Computer Applications* , vol.139,no.11,pp.16-18, April.2016.

Rituparna Halder, Sushmit Sengupta, Sudipta Ghosh, Debashish Kundu “Artificial Intelligent Home Automation System Based on Arduino as the Master Controller”, *International Journal of Computer of Engineering and Science*, vol.5,no.2,pp.41-45, Feb.2016.

Rituparna Halder, Sushmit Sengupta, Sudipta Ghosh, Debashish Kundu” A secure Image steganography based on RSA algorithm and hash-lsb technique” *IOSR Journal of Computer Science*,vol.18,no.1,pp.39-43, Feb.2016 .

Abhishek Kumar Kashyap, Binanda Kishore Mondal, Souvik Chatterjee and Sudipta Ghosh “A New Approach To Improve The Performance Of Position Control Of DC Servo Motor By Using Fuzzy Logic Controller” *Journal of Mechanics of Continua And Mathematical Sciences*(ISSN 0973-8975),vol.10,no.2,pp 1551-1557, January.2016.

Sudipta Ghosh, Mostafizur Rahaman Laskar, Debjit Mukherjee , Somiha Chakraborty Subhadip Mondal, Debasish Kundu “Identification of Aeroplanes using Fuzzy Abduction by Max-Min Inverse Fuzzy Relation”. *International Journal of Computer Science and Information Security* , vol.14,no.11,pp.500-506, 2016.

Sudipta Ghosh ” Development of a Character Recognition Software to solve a Sudoku Puzzle” Accepted for oral presentation at the 2016 7<sup>th</sup> *IEEE Annual Information Technology, Electronics Mobile communication Conference (IEEE IEMCON) & subsequent publication in IEEE Xplore Digital Library.(13-15 October 2016)*

Debargha Chakraborty, Binanda Kishore Mondal, Souvik Chatterjee, Sudipta Ghosh “An Approach to Improve the Performance of a Position Control DC Motor by Using Digital Control System”.*Journal of Mechanics of Continua And Mathematical Sciences*, vol.11,no.1,pp 21-33, July 2016.

M Rahaman Laskar, S Ghosh, S Dasgupta,Subhadip Mondal “Design and Development of DAS for Cardiac Research – Part I: Embedded Design for Bio Acoustic Signal Acquisition”. *International Journal of Computer Science and Information Security* , vol.14,no.12,pp.500-506, 2016.

M Rahaman Laskar, S Ghosh, S Dasgupta “Design and Development of DAS for Cardiac Research – Part I: Embedded Design for Bio Acoustic Signal Acquisition”. 2nd International Conference on [Devices for Integrated Circuits \(DevIC 2017\)](#), 23-24th March 2017.

R. Bhattacharya<sup>1</sup>, K. Sarkar<sup>1</sup>, M. Kumar<sup>1</sup>, B. Chatterjee<sup>2</sup> and K. P. Ghatak<sup>1,\*</sup> “Nanostructures, Magnetic Field and Electron Energy Spectra” in journal of Quantum Matter of American Scientific Publishers of USA.

R. Bhattacharya<sup>1</sup>,K. P. Ghatak<sup>2</sup> “HeavilyDoped Nano-structures and 2-D Effective Mass” Invited Chapter in the Encyclopedia in Nanoscience and Nanotechnology”.

R. Bhattacharjee<sup>a</sup> and K. P. Ghatak<sup>b,\*</sup> “Entropy, Electric Field and Heavily Doped Nanowires” In the Journal of Nanoscience & Nano technology(JNN, SCI Journal).

M. Mitra<sup>1</sup>, T. N. Sen<sup>2</sup>, T. Datta<sup>3</sup>, R. Bhattacharjee<sup>4</sup>, and K. P. Ghatak<sup>3\*</sup> “Heisenberg’s Uncertainty Principle, Intense Electric Field, Heavily Doped Optoelectronic Quantized Structures and the Electron Statistics “ In the Journal of Nanoscience & Nano technology(JNN, SCI Journal).

Swarup Das, Debasis Mitra, and Sekhar Ranjan Bhadra Chaudhuri, “Design of UWB Planar Monopole Antennas with Etched Spiral Slot on the Patch for Multiple Band-Notched Characteristics,” International Journal of Microwave Science and Technology, vol. 2015, Article ID 303215, 9 pages, 2015. doi:10.1155/2015/303215

Swarup Das, Debasis Mitra, and Sekhar Ranjan Bhadra Chaudhuri, “I-Shaped fractal slot loaded Multiband Microstrip Patch Antenna for Wireless Applications”, International Conference of Computer, Electrical and Communication Engineering (ICCECE) held on Dcember,2016 at Kolkata,India---will be available in IEEE Xplore.

Tanima Kole Bhowmik, Anagha Bhattacharya, Nabanita Nath Chowdhury “Design of wind speed estimator using ANN techniques for WECS” In IEEE International Conference on Electrical ,Electronics and optimization Techniques(ICEEOT),PAGES:2741-2746.

Tanima Kole Bhowmik, Anagha Bhattacharya, S.K. Goswami “Developing an optimization method for Bidding strategies in an open electricity market” in International Conference on Computer and Electrical Engineering will be published in journal shortly .(IJOEE,ISSN:2301-3656)

Anupa Chatterjee, M.Midya, M.Mitra.”Design and study of spiral-slotted Inset-fed Rectangular Patch antenna for WLAN Application” International conference on microwave, Antenna, Propagation and remote sensing.

### **Books/Book Chapters**

Sudipta Ghosh, Soumen Sardar ” Solving Real-World Constrained Handling Optimization Problems Using Gradient Repair Differential Evolution”. LAP LAMBERT Academic Publishing.

## **Patents**

Patent Filing in INDIA:

Title of the Innovation: High DOF Interpreted EMG Knowledge Based Prosthetic Arm.

File no. 201631017724 A. Date: 30/09/2016.

Indian Patent Journal no. 41/2016.

Patent Filing in INDIA:

Title of the Innovation: Thought Concentration Controlled Dexterous Prosthetic Arm for Handicapped.

File no. 201631017174. Date: 24/06/2016.

Indian Patent Journal no. 26/2016.

Patent Filing in INDIA:

Title of the Innovation: Cognitively Velocity Controlled Vehicle.

File no. 201631017186 A. Date: 24/06/2016.

Indian Patent Journal no. 26/2016.