

## Dr. Gautam Sarkar

Professor, Department of Electrical Engineering  
Electrical Engineering Department  
Jadavpur University  
kolkata - 700032



### Education

Degree	Year	University
Ph.D.	2015	Jadavpur University
M.Tech	2001	Calcutta University
B.Sc	1996	Calcutta University
B.Tech	1999	Calcutta University

### Teaching Experience (5)

Name Of The Institution	Position Held	Period
Jadavpur University	Professor	2018 to Till Date
Jadavpur University	Associate Professor	2015 to 2018
Jadavpur University	Assistant Professor	2010 to 2015
Jadavpur University	Lecturer (Sr. Scale)	2007 to 2010
Jadavpur University	Lecturer	2002 to 2007

### Field of Specialization

Electrical Measurement and Instrumentation

### Courses Taught/Teaching

Electrical Measurements and Measuring Instruments  
Process Instrumentation and Control  
Electrical Instrumentation  
Introduction to Computing  
Programmable Logic Controller  
Microcontroller

### Research Area

Electrical Capacitance Tomography  
Robust and Nonlinear Control Systems

Modern Electrical Sensors  
Medical Imaging

## Experience

21 Years

## Conference Papers Published (40)

Title of the paper	Conference	Year	Role	Vol Number- Page Name
Spatial Attention Enhanced Network for Segmentation of Exudate	Proceedings of CALCON 2022 Conference	2022	Souvik Maiti, Debashis Maji, Ashis Kumar Dhara and Gautam Sarkar	-
Channel Attention Enhanced Deep Network for Segmenting Exudate	Proceedings of CATCON 2022 Conference	2022	Souvik Maiti, Debashis Maji, Ashis Kumar Dhara and Gautam Sarkar	-
Elimination of Initial undershoot of Non-minimum Phase System using Model Reference Adaptive Control	IEEE Second International Conference on Control, Measurement and Instrumentation (CMI)	2021	M. Pal, R. K. Barai, G. Sarkar and T. Roy	-
Model Reference Adaptive control of Wheel Mobile Robot	Michael Faraday IET International Summit	2020	M. Pal, G. Sarkar, R. K. Barai, and T. Roy	-
Segmentation Of Pulmonary Nodules Based on Modified Framework Using Hybrid Level-Set	Proceedings of IEEE 16th International Symposium on	2019	Mainak Biswas, Debasis Maji,	-

Biomedical  
Imaging (ISBI  
2019)

Ashis  
Kumar  
Dhara  
and  
Gautam  
Sarkar

-

#### Journal Papers Published (26)

Title of the paper	Journal of publication	Year	Role	Vol Number-Page Name
<a href="#">Nested U-Net for Segmentation of Red Lesions in Retinal Fundus Images and Sub-image Classification for Removal of False Positives</a>	Journal of Digital Imaging, Springer	2022	Swagata Kundu, Vikrant Karale, Goutam Ghorai, Gautam Sarkar, Sambuddha Ghosh and Ashis Kumar Dhara	-
<a href="#">Automatic Detection and Segmentation of Optic Disc using a modified Convolution</a>	Biomedical Signal Processing and Control, Elsevier	2022	Souvik Maiti, Debasis Maji, Ashis Kumar Dhara and Gautam Sarkar	74-
<a href="#">Machine Learning Based Illuminance Estimation from RGB Sensor in a Wireless Network</a>	Wireless Personal Communication, Springer	2022	Arijit Ghosh, Parthasarathi Satvaya. Palash Kumar Kundu, Gautam Sarkar	-
Automatic grading of retinal blood vessel tortuosity using Modified CNN in deep retinal image	Biomedical Signal Processing and Control, Elsevier	2022	Debasis Maji, Souvik Maiti, Ashis Kumar Dhara and	74-103514

diagnosis

Gautam  
Sarkar

Two-Degree-of-  
Freedom based

Model Reference  
Adaptive Control  
of-Minimum Phase  
System

IETE Journal of  
Research 2021

M. Pal, G.

Sarkar, R.

K. Barai and

T. Roy

Doi:

10.1080/03772063.2021.1939802-

Ph.D. Thesis Guidance (10)

Name Of The Scholar	Title Of The Thesis	Co-Supervisor	Status	Year
Mita Pal	Model Reference Two-Degree-of-Freedom Adaptive Control for Non-minimum Phase system	Dr. Ranjit Kumar Barai & Dr. Tamal Roy	Complete	2023
Debprasad Sinha	Deep Learning for Follow-up Study of Cornea Infection		Ongoing	2020
Santanu Chattapadhyay	Wavelet decomposition based study and classification of Electrocardiogram signal for diagnosis of various heart diseases	Dr. Arabinda Das	Complete	2020
Arijit Ghosh	Estimation of Illuminance for Automated Monitoring of Indoor Space using Wireless Sensor Network	Dr. Palash Kumar Kundu	Ongoing	2019
Subhra Jyoti Sarkar	Development of Power System Operational Data Management System using Cloud Server	Dr. Palash Kumar Kundu	Complete	2019

Name Of The Scholar	Title Of The Thesis	Co-Supervisor	Status	Year
---------------------	---------------------	---------------	--------	------

Mainak Biswas	Development of A Computer-Aided Diagnosis System for Screening of Lung Cancer	Dr. Ashis Kumar Dhara	Ongoing	2017
Sandip Sadhukhan	Development of Algorithms For Automatic Computation of Arteriolar-Venular Ratio in Retinal Fundas Images	Dr. Ashis Kumar Dhara	Ongoing	2017
Debasis Maji	Automatic Grading of Vassel Tortuosity in retinal Fundus Images	Dr. Ashis Kumar Dhara	Ongoing	2017
Goutam Kumar Ghorai	Automatic Detection of Red Lesions in Retinal Fundus Images	Dr. Ashis Kumar Dhara	Ongoing	2016

Souvik Maiti	Automatic Detection of Exudates from Retinal Fundus Images	Dr. Ashis Kumar Dhara	Ongoing	2016
--------------	--	-----------------------	---------	------

#### Project Works (4)

Project Title	Worked As	Funding Agency	Amount	Duration	Period	Status
Knowledge Based Design Optimization, Real-Time Adaptation and Configuration Management of Gas Turbine Controller	Co-Investigator	RUSA 2.0, Jadavpur University	7,40,000	9 Months	2019 to 2020	Ongoing
Deep Learning for Computer-aided Diagnosis of Diabetic Retinopathy	Principal Investigator	RUSA 2.0, Jadavpur University	5,25,000	9 Months	2019 to 2020	Ongoing
Robustness analysis of AFADEC control laws covering redundancy management	Co-Investigator	GTRE, DRDO, Ministry of Defense, Govt. of India, Bengaluru	24,78,000	24 Months	2018 to 2020	Ongoing
Development and Validation of Algorithm for Estimation and Tracking of High Velocity Manoeuvring Targets	Co-Investigator	DRDL, Ministry of Defense, Govt. of India, Hyderabad	21,53,000	22 Months	2018 to 2020	Ongoing

#### Membership Of Learned Societies (3)

##### Title

Institution of Engineers (I)

Institution of Electronics and Telecommunication Engineers (IETE)

Institute of Electrical and Electronics Engineers (IEEE)

**Seminar/Conference/Workshop (20)**

<b>Program Name</b>	<b>Organised By</b>	<b>Venue</b>	<b>Year</b>	<b>Type Of Participation</b>
Three Days National Workshop on Internet of Things for Industrial Applications	SSN College of Engineering, Kalavakkam	CSIR-CEERI Centre, Chennai	2017	Participated
2nd International Conference for Convergence in Technology (I2CT 2017)	IEEE	Pune, India	2017	Participated and Paper presented
Two Days Workshop on Power Quality (PQ) challenges with RE integration in Smart Grid	CPRI, Bengaluru	CPRI, Bengaluru	2017	Participated
Short Term Course on Smart Grid	CPRI, Bengaluru	CPRI, Bengaluru	2016	Participated
Two Days Workshop on Recent Trends in Signal Processing	TEQIP-II, Jadavpur University	Dept. of Electronics and Telecommunication Engineering, Jadavpur University	2016	Participated