ANIRBAN MUKHERJEE

Department of Electrical Engineering, Indian Institute of Technology Kharagpur, Kharagpur, 721302, WB, INDIA

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CONTACT ADDRESS

Office	N-243, Department of Electrical Engineering, IIT Kharagpur, Kharagpur, 721302, WB, INDIA
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Residence	$C_1 - 94$, IIT Kharagpur Campus, Kharagpur, 721302, WB, INDIA
Alternative E-mail	manirban13@gmail.com

IDENTIFICATION NUMBERS

ORCID	0000-0002-8463-4347
Web of Science ResearcherID	AAI-2378-2019
Scopus Author ID	55796079000
Google Scholar ID	GfTZoYEAAAAJ
Vidyan ID	158139

RESEARCH GROUP

Information Processing and Machine Learning Group

Department of Electrical Engineering,
Indian Institute of Technology Kharagpur,
Kharagpur, 721302, WB, INDIA

Web: `www.facweb.iitkgp.ac.in/~manirban/IPML.html`

RESEARCH INTEREST AND FOCUS

Signal Processing and Machine Learning

The focus of the research of Information Processing and Machine Learning Group is on the integration of data, knowledge, and tools necessary for efficient knowledge discovery in the decision-making process associated with information extraction and computational intelligence. The group's research addresses the design and development of signal processing and machine learning techniques and the interpretation of signals and systems to improve monitoring, diagnosis and prognosis. The group explores new methodologies for multimodal, multi-scale and multi-channel acquisition, processingand interpretation of information.

MEMBERSHIP OF PROFESSIONAL SOCIETIES

Senior Member, Institute of Electrical and Electronics Engineers (IEEE), (Membership No. 80722130)

EDITORIAL SERVICES

Associate Editor, IEEE Transactions on Instrumentation and Measurement (2017 - 2021)

Associate Editor-in-Chief, IEEE Transactions on Instrumentation and Measurement (2021 - 2023)

EDUCATION

Indian Institute of Technology Kharagpur, Kharagpur, India   *July 2000 - February 2005*
Doctor of Philosophy
Department of Electrical Engineering   Area: Image Processing

Indian Institute of Technology Kharagpur, Kharagpur, India   *July 1998 - June 2000*
Master in Technology (Instrumentation)
Department of Electrical Engineering   Overall CGPA: 9.0/10.0

Jadavpur University, Kolkata   *July 1994 - June 1998*
Bachelor of Electrical Engineering
Department of Electrical Engineering   Overall Percentage: 79.2

RESEARCH EXPERIENCE

Technical University Darmstadt, Germany   *January 2012 - December 2012*
BOYSCAST Fellowship   Area: Machine Learning in Computational Biology

Technical University Darmstadt, Germany   *May 1999 - February 2000*
IIT-DAAD Sandwich Fellowship   Area: Image Watermarking

RESEARCH GRANTS

SPONSORED PROJECTS

Principal Investigator, Classification and Progression Modelling of Cardiovascular and Pulmonary Diseases using Advanced Data Analytics and Machine Learning Techniques, IoTimize LLC, USA, 2016 - 2021.

Principal Investigator, Smart Phone enabled Spirometer and Respiratory Sound-based Point of Care Systems, ICMR, Govt. of India, 2017 - 2020.

Principal Investigator, Compressed Sensing-based Fetal ECG monitoring for Point-of Care Applications, MHRD, Govt. of India, 2015 - 2018.

Principal Investigator, Design of Robust Biochemical Networks, CSIR, Govt. of India, 2012 - 2015.

Principal Investigator, Identification of Motifs in Integrated Cellular Networks, CSIR, Govt. of India, 2011 - 2014.

Principal Investigator, A New Gene Selection and Maximal Margin Cancer Classification Scheme for High Throughput Microarray Data, SERB, DST, Govt. of India, 2009 - 2013.

Co-Principal Investigator, Development of Advanced Halter Monitor with Extended Recording and Episode Detection, MHRD, Govt. of India, 2017 - 2020.

Co-Principal Investigator, Development of A Remote Healthcare Delivery System: Early Diagnosis, Therapy, Follow-Up and Preventive Care for Non-Communicable Diseases (Cardio-Pulmonary), MHRD, Govt. of India, 2017 - 2020.

Co-Principal Investigator, A Deep Learning Framework for Restoration of Damaged Heritage Antiquities using Low-Cost, Hand-Held, Time-of-Flight (Tof)/ Light Field Depth Sensors, MHRD, Govt. of India, 2017 - 2020.

Co-Principal Investigator, Development of Evolutionary Algorithms For Hyperspectral Image Processing and Analysis, DST, Govt. of India, 2016 - 2019.

Co-Principal Investigator, Identifying the Role of Positive Feedback in Biological Systems-A Control Theoretic Perspective, CSIR, Govt. of India, 2013 - 2016.

Co-Principal Investigator, Design of an Embedded System For On-Board Assessment of Level of Alertness in Human Drivers, DIT, 2010 - 2013.

Co-Principal Investigator, Virtual Laboratory Phase-I, MHRD, 2008 - 2011.

CONSULTANCY PROJECTS

Co-Consultant, Development of Online Surface Inspection System for Hot Rolled Flat Products, Steel Authority of India Limited, Govt. of India, 2006 - 2008.

SOFTWARE DEVELOPMENT

Principal Developer, NIDAN - Nidan Kendra, adopted by AIIMS Bhubaneswar , India.

Principal Developer, ORDIS - Orphan and Rare Diseases Information System, adopted by AIIMS Bhubaneswar, India.

Co-Developer, MERS - Medication Error Reporting System, adopted by AIIMS Bhubaneswar, India.

TEACHING/RESEARCH LABORATORY DEVELOPMENT

Principal Developer, Information Processing and Machine Learning Laboratory, IIT Kharagpur, 2013-2014.

Co-Developer, Development of a Laboratory on Novel Electronics Control and Software for Transport by Electric Vehicle, IIT Kharagpur, 2018-2019.

DISTINGUISHED LECTURES

Guest Lecture, Introduction to Biomedical Signals and Systems, Department of Physiology, AIIMS Bhubaneswar, February 2019.

Invited Talk, Signal Processing from the Linear Algebraic Point of View, National Institute of Technology Nagaland, India, June 2017.

Invited Talk, Heart-Lung Sound-based Signal Acquisition and Processing, College of Engineering & Management Kolaghat, India, January 2017.

Invited Talk, Design and Development Biomedical Signal Acquisition Platform for Low Resource Settings, Pt. J. N. M. Medical College Raipur, India, December 2016.

Invited Talk, Sparse Signal Processing : Theory and Applications, National Institute of Technology Raipur, India, December 2016.

Invited Talk, Compressed Sensing: A New Sampling Paradigm, National Institute of Technology Durgapur, India, June 2016.

Invited Talk, Compressed Sensing from the Perspective of Biomedical Signal Processing, National Institute of Technology Meghalaya, India, June 2016.

Invited Talk, Sensors and Signal Processing, Analog Devices Pvt. Limited, Bangalore, India, June 2016.

Invited Talk, Compressed Sensing in Signal Processing, National Institute of Technology Patna, India, January 2016.

Invited Talk, Machine Learning and Application to Industrial Machine Vision Systems, Short-term Course and Workshop on Machine Learning and Complex Networks, IIT Kharagpur, India, March 2015.

Invited Talk, Learning with Proximal Kernel Classifiers for DNA Microarray Data, Institute for Signal Processing, University of Lubeck, Germany, December 2012.

Invited Talk, Camera-based Industrial Surface Inspection Systems for Defect Detection and Classification in Integrated Steel Plants, Asansol Engineering College, India, October 2006.

CONFERENCE MANAGEMENT

Program Committee Member, 2021 IEEE International Conference on Power Systems, ICPS-2021, India, December, 2021.

Session Chair, IEEE International Conference on Power Systems, ICPS-2021, India, December, 2021.

Program Committee Member, 2021 IEEE Second International Conference on Control, Measurement and Instrumentation, CMI-2021, India, January, 2021.

Session Chair, 26th National Conference on Communications, IIT Kharagpur, India, February, 2020.

Technical Program Committee Member, 2017 IEEE INDICON, IIT Roorkee, India, December 2017.

Co-Convener, 2016 International Conference on Systems in Medicine and Biology (ICSMB), IIT Kharagpur, India, January 2016.

Session Chair, 22nd National Conference on Communications, IIT Guwahati, India, March, 2016.

Program Committee Member, 2016 IEEE First International Conference on Control, Measurement and Instrumentation, CMI-2016, India, January, 2016.

Technical Program Co-Chair, 2010 International Conference on Systems in Medicine and Biology (ICSMB), IIT Kharagpur, India, December 2010.

Registration Chair, 2009 Third International Conference on Power Systems (ICPS), IIT Kharagpur, India, December 2009.

RESEARCH SUPERVISION

DOCTORAL THESIS   Completed [# 09]

- **Venkatesh Vakamullu**, Phonocardiogram Signal Analysis and Learning, 2014 - 2024.
- **MD. Afaque Azam**, Signal Processing for Massive MIMO, 2017 - 2022, (Joint Supervisor: Dr. Amit Dutta, G. S. Sanyal School of Telecommunication, IIT Kharagpur).
- **Maitreya Maity**, Integrated Malaria Diagnosis on Edge Devices, 2016 - 2022, (Joint Supervisor: Dr. Jyotirmoy Chatterjee, School of Medical Science and Technology, IIT Kharagpur).
- **Madhusudhan Mishra**, Phonocardiogram Signal Analysis for Well-being Assessment, 2014 - 2020.
- **Priya Ranjan Muduli**, Sparsity-Driven Signal Recovery Methods, 2013 - 2019.
- **Arpan Guha Mazumder**, Imaging Attributes and Spectropathological Signatures for Early Stage Diabetic Retinopathy Diagnosis, 2012 - 2018, (Joint Supervisor: Dr. Jyotirmoy Chatterjee, School of Medical Science and Technology, IIT Kharagpur).
- **Surajit Panja**, Regulation and Robustness of Synergism and Saturation System of a Class of Metabolic Pathways, 2009 - 2015, (Joint Supervisor: Dr. Pranab K. Dutta, Department of Electrical Engineering, IIT Kharagpur).
- **Supratim Gupta**, Eye Image-based Algorithms to Estimate Percentage Closure of Eye and Saccadic Ratio for Alertness Detection, 2006 - 2013, (Joint Supervisor: Dr. A. Routray, Department of Electrical Engineering, IIT Kharagpur).
- **Santanu Ghorai**, Learning with Proximal Kernel Classifiers", 2006 - 2011. (Joint Supervisor: Dr. Pranab K. Dutta, Department of Electrical Engineering, IIT Kharagpur).

DOCTORAL THESIS   Ongoing [# 01]

- **Jessy Rimaya Khonglah**, Graph Signal Processing , 2016 - 2023.

MS THESIS (By Research)   Completed [# 03]

- **Supratim Manna**, Graph-based Learning using Multiple Views, 2017-2021.
- **Sudipto Trivedy**, Spirometry Classification for Point-of-Care Applications, 2017-2021.
- **Aniruddha Maiti**, Mining of Motifs in Omics Networks, 2012 - 2014, (Joint-Supervisor: Dr. Niloy Ganguly, Department of Computer Science and Engineering, IIT Kharagpur).

MTECH THESIS   Completed [# 08]

- **Akhilesh Kumar**, Tracking of Vehicles and Estimation of Speed using Radar Duet, May 2019.
- **Yash Murat**, Single Microphone Speech Enhancement using Two Step Noise Reduction and Harmonic Noise Regeneration, May 2018.
- **Atindra Kanti Mandal**, Development of a Spirometer for Point of Care Applications, May 2017.
- **Sachin Tom John**, Fetal Electrocardiography Monitoring for Point-of-Care Applications, May 2016.
- **Ramakanth Reddy**, Sparse Signal Recovery Using Mixed Norm Optimization Techniques, May 2015.
- **Satyendra Prasad**, Realtime Processing and Analysis of Biomedical Signal, May 2014.
- **Sathishkumar. P**, Realtime Processing and Analysis of ECG Signal, May 2012.
- **Ravi Kumar Pandit**, Microcontroller-based Patient Monitoring System using Wireless Sensors, May 2011.
- **Shivashanker Reddy**, Segmentation of Microscopic Images under Varying Degree of Staining, May 2007.

VISITING RESEARCH STUDENTS & INTERNSHIP

- **Md Hadiul Islam**, Development of Dynamic Web Application for Uploading Medical Information into a Remote Server Database, SRM Institute of Science and Technology Chennai, May - June 2019.
- **Sumit Mahapatra**, Development of Database Schemas and Queries using MySQL 5, NIT Rourkela, May - June 2019.
- **Sayan Banerjee**, Development of Medical Data Annotation Tool using Python 3 and QT 5, NIT Durgapur, May - June 2019.
- **Sagnik Dutta**, Detection of Third Heart Sound Using Variational Mode Decomposition, IIEST Shibpur, May - June 2017.
- **Atasi Sarkar**, School of Medical Science and Technology, IIT Kharagpur, 2016 - 2017.
- **Rahul Chakraborty**, Development of a Peak Flowmeter for Point of Care Applications, Jadavpur University, Kolkata, May - July 2014.
- **Muzaffer Ahmed**, Machine Learning Applications to Computational Biology, AIIMS New Delhi, April - May 2014.

WORK EXPERIENCE

Indian Institute of Technology Kharagpur, Kharagpur India   Oct. 2023 - till date
Professor

Teaching and Research Coordination of Information Processing and Machine Learning Group in the Department of Electrical Engineering, IIT Kharagpur, India

Indian Institute of Technology Kharagpur, Kharagpur India   Jul. 2014 - Oct. 2023
Associate Professor

Teaching and Research Coordination of Information Processing and Machine Learning Group in the Department of Electrical Engineering, IIT Kharagpur, India

Indian Institute of Technology Kharagpur, Kharagpur India   Sep. 2005 - Jun. 2014
Assistant Professor

Teaching and Research Coordination of Information Processing and Machine Learning Group in the Department of Electrical Engineering, IIT Kharagpur, India

Tata Consultancy Services (TCS), Mumbai, India   Feb 2004 - Aug 2005
Assistant Systems Engineer

Coding, Debugging, Unit Testing, System Integration, Quality Control as Project Manager in Embedded Systems Group in TCS Kolkata, India

AWARDS AND ACCOLADES

Deutscher Akademischer Austauschdienst (DAAD) Fellowship, 1999 - 2000

Better Opportunities for Young Scientists in Chosen Areas of Science and Technology (BOYSCAST) Fellowship, Government of India, 2011

ADMINISTRATIVE ACHIEVEMENTS

Recognized as one of the top 70 most-productive Associate Editors of IEEE Transactions on Instrumentation and Measurement during 2013-2020 on its 70th anniversary.

Outstanding Associate Editor of IEEE Transactions on Instrumentation and Measurement, 2021.

Outstanding Associate Editor of IEEE Transactions on Instrumentation and Measurement, 2019.

Outstanding Associate Editor of IEEE Transactions on Instrumentation and Measurement, 2018.

Outstanding Reviewer of IEEE Transactions on Instrumentation and Measurement, 2017.

TECHNICAL REFEREE

REVIEW OF PAPERS IN JOURNALS, CONFERENCES & BOOK CHAPTERS

- IEEE Transactions on Instrumentation and Measurement, 2016 - till date
- Sadhana, Indian Academy of Sciences, 2015 - 2016
- IEEE INDICON, 2018
- International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS-2018), 2018
- International Conference on Pattern Recognition Applications and Methods, 2015 - 2017
- International Conference on Distributed Computing and Networking (ICDCN 2017)
- International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS-2016), 2016

REVIEW OF GRANT PROPOSALS

- Science and Engineering Research Board (SERB), Department of Science and Technology (DST), Govt. of India, http://www.serb.gov.in.
- Netherlands Organisation for Scientific Research, Domain Applies and Engineering Sciences

TEACHING - FULL-SEMESTER COURSES

Spring 2023 - 2024
Statistical Signal Processing (EE60102)
Machine Learning for Signal Processing Lab. (EE69210)

Autumn 2023 - 2024
Signals and Systems (EE21201)

Spring 2022 - 2023
Electrical Technology (EE11003)

Autumn 2022 - 2023
Electrical Technology (EE11003)
Signal Processing Systems Design Lab. (EE69205)

Spring 2021 - 2022
Electrical Technology (EE11003)

Autumn 2021 - 2022
Electrical Technology (EE11003)

Spring 2020 - 2021
Data Communication (IE30006),
Real Time Signal Processing Lab. (EE69014)

Autumn 2020 - 2021
Digital Signal Processing (EE41013),
Signals and Networks Lab. (EE29001)

Spring 2019 - 2020
Advanced Estimation Theory (EE60052),
Real Time Signal Processing Lab. (EE69014)

Autumn 2019 - 2020
Comput. Meth. and Algo. in Signal Proc. (EE60015),
Signals and Networks Lab. (EE29001)

Spring 2018 - 2019
NIL

Autumn 2018 - 2019
Electrical Technology Lab. (EE19001),
Signals & Networks Lab. (EE29001)

Spring 2017 - 2018
Advanced Estimation Theory (EE60052),
Real Time Signal Processing Lab. (EE69014),
Measurements and Electronic Instruments Lab. (EE29004)

Autumn 2017 - 2018
Signals & Networks (EE21101),
Signals & Networks Lab. (EE29001)

Spring 2016 - 2017
Advanced Estimation Theory (EE60052),
Statistical Signal Processing (EE60102),
Measurements and Electronic Instruments Lab. (EE29004)

Autumn 2016 - 2017
Signals & Networks (EE21101),
Signals & Networks Lab. (EE29001)

Spring 2015 - 2016
Statistical Signal Processing (EE60102),
Electrical Technology Lab. (EE19001)

Autumn 2015 - 2016
Comput. Meth. and Algo. in Signal Proc. (EE60015),
Electrical Technology Lab. (EE19001)

Spring 2014 - 2015
Electrical Technology (EE11001),
Electrical Technology Lab. (EE19001)

Autumn 2014 - 2015
Comput. Meth. and Algo. in Signal Proc.,
Electrical Technology (EE11001),
Electrical Technology Lab. (EE19001)

Spring 2013 - 2014
Electrical Technology (EE11001),
Real Time Signal Processing Lab. (EE69014),
Electrical Technology Lab. (EE19001)

Autumn 2013 - 2014
Electrical Technology (EE11001),
Electrical Technology Lab. (EE19001),
Instrumentation Lab. I (EE69019)

Spring 2012 - 2013
Electrical Technology (EE11001),
Data Communication (IE30006),
Measurements and Electronic Instruments Lab. (EE29004),
Electrical Technology Lab. (EE19001)

Autumn 2012 - 2013
NIL

Spring 2011 - 2012
NIL

Autumn 2011 - 2012
Digital Signal Processing (EE60033),
Signals & Networks Lab. (EE29001)

Spring 2010 - 2011
Data Communication Networks (IE30004),
Advanced Digital Signal Processing (EE60076),
Instrumentation Lab.-II (IE39002)

Autumn 2010 - 2011
Industrial Instrumentation (EE41001),
Signals & Networks Lab. (EE29001)

Spring 2009 - 2010
Data Communication Networks (IE30004),
Embedded Systems Laboratory (EE39004),
Measurements and Electronic Instruments Lab.
(EE29004)

Autumn 2009 - 2010
Industrial Instrumentation (EE41001),
Signals & Networks Lab. (EE29001)

ACADEMIC RESOURCE GENERATION/REVISION

CREATION OF NEW SUBJECTS

    Computational Methods and Algorithms in Signal Processing (EE60015)
    Statistical Signal Processing (EE60102)
    Biomedical Signal Processing (EE60094)
    Distributed Signal Processing in Sensor Networks (EE60008)
    Time-Frequency and Multi-Resolution Signal Analysis (EE61013)
    Machine Learning for Signal Processing (EE60020) (with Prof. Debdoot Sheet)
    Convex Optimization in Control and Signal Processing (EE61012) (with Prof. Sourav Patra)
    Linear Algebra in Signals and Systems (EE60037) (with Prof. Sourav Patra)
    Audio Signal Processing and Machine Learning (EE60204)

REVISION OF EXISTING SUBJECTS

    Advanced Estimation Theory (EE60052)

CONTINUING EDUCATION COURSE ORGANIZATION

Coordinator & Instructor, Signal Processing Spring School, under TEQIP-II, March 2017.

Instructor, Instrumentation and Signal Processing Winter School, under TEQIP-II, March 2015.

ADMINISTRATIVE RESPONSIBILITY - ACADEMICS

Post-Graduate Programme Coordinator, Signal Processing and Machine Learning, Department of Electrical Engineering, 2023 - 2024.

Graduate Research Coordinator, Instrumentation and Signal Processing, Department of Electrical Engineering, 2013 - 2016.

Departmental Coordinator, FIST Grant in Electrical Engineering, 2014 - 2019.

Website In-charge, Department of Electrical Engineering IIT Kharagpur, 2015 - till data.

Coordinator, M. Tech Admission Interview, Department of Electrical Engineering IIT Kharagpur, 2013, 2017, 2018.

Founder Chair, IEEE Engineering in Medicine and Biology Society Chapter of Kharagpur Section, India, 2016 - 2017.

Advisor, IEEE Signal Processing Society Chapter of IIT Kharagpur Student Branch, India, 2017 - 2020.

Faculty Advisor, M. Tech Program in Instrumentation and Signal Processing, Department of Electrical Engineering, IIT Kharagpur, 2012 - 2015.

Executive Committee Member, IEEE Kharagpur Section, 2016 - 2018.

ADMINISTRATIVE RESPONSIBILITY - OTHERS

Departmental Graduate Research Coordinator, Electrical Engineering, IIT Kharagpur, 2015 - 2020.

Departmental Website Representative, Electrical Engineering, IIT Kharagpur, 2015 - 2020.

Warden, Vidyasagar Hall of Residence, IIT Kharagpur, 2014 - 2017.

Centre Representative (In Charge), GATE Examination - 2017, 2018.

Departmental ERP Representative, Electrical Engineering, IIT Kharagpur, 2009 - 2011.

Departmental Timetable In Charge, Electrical Engineering, IIT Kharagpur, 2006 - 2008.

Assistant Warden, Madan Mohan Malviya Hall of Residence, IIT Kharagpur, 2006 - 2007.

President, B. C. Roy Hall of Residence, IIT Kharagpur, 2001 - 2002.

COUNTRIES VISITED

Czech Republic, France, Germany, Italy, Luxembourg, Malaysia, New Zealand, Switzerland and USA.

PERSONAL DATA

Date of Birth: 13 January, 1976

Citizenship : Indian

Passport No.: R7589493

*"**List of Publications**" overleaf ...*

LIST OF PUBLICATIONS

STATISTICS

Research Monographs - 1

Journal Papers - 44

Conference Papers - 36

h-index - 17

Google Scholar Profile -

DOCTORAL THESIS

Two Dimensional Object-based Representation and Coding of Shape, Motion and Texture. IIT Kharagpur, 2005.

BOOKS AND RESEARCH MONOGRAPHS

M-1. Santanu Ghorai, Anirban Mukherjee and Pranab K Dutta; Advances in Proximal Kernel Classifiers, Lambert Academic Publishing, Germany, 2012, ISBN 978-3-659-27836-5.

JOURNAL PAPERS - PUBLISHED

J-44. Jessy Rimaya Khonglah and Anirban Mukherjee; Kernel-Based Multilayer Graph Signal Recovery via Median Truncation of Gradient Descent, IEEE Trans. Signal and Information Processing over Networks, vol. 9, pp. 268-279, 2023.

J-43. MD Afaque Azam, Amit Kumar Dutta and Anirban Mukherjee; Performance analysis and precoder design for IRS-assisted MIMO system with non-linear power amplifiers, Physical Communication, Elsevier, vol. 55, 101928, 2022.

J-42. MD Afaque Azam, Amit Kumar Dutta and Anirban Mukherjee; Downlink Precoding for Hybrid Fully Connected Linear Subarrays in mmWave With Rainfall Scattering and Hardware Impairments, IEEE Trans. Vehicular Technology, vol. 71, no. 5, pp. 5143-5155, 2022.

J-41. MD Afaque Azam, Amit Kumar Dutta and Anirban Mukherjee; Performance Analysis of Dipole Antenna Based Planar Arrays With Mutual Coupling and Antenna Position Error in mmWave Hybrid System, IEEE Trans. Vehicular Technology, vol. 70, no. 10, pp. 10209-10221, 2021.

J-40. Supratim Manna, Jessy Rimaya Khonglah, Anirban Mukherjee, and Goutam Saha; Robust Kernelized Graph-based Learning, Pattern Recognition, vol. 110, Elsevier, 2021.

J-39. MD Afaque Azam, Amit Kumar Dutta and Anirban Mukherjee; Uplink Channel Estimation with Hardware Imperfections, Antenna Position Error and Channel Correlation for Nested and Linear Array Antennas, IEEE Trans. Vehicular Technology, vol. 69, no. 12, pp. 15412-15426, 2020.

J-38. Sudipto Trivedy, Manish Goyal, Prasanta R. Mohapatra and Anirban Mukherjee; Design and Development of Smartphone-enabled Spirometer with a Disease Classification System Using Convolutional Neural Network, IEEE Trans. Instrumentation and Measurement, vol. 69, no.9, pp. 7125-7135, 2020.

J-37. Maitreya Maity, Ayush Jaiswal, Kripasindhu Gantait, Jyotirmoy Chatterjee and Anirban Mukherjee; Quantification of Malaria Parasitaemia using Trainable Semantic Segmentation and Capsnet, Pattern Recognition Letters, Elsevier, vol. 138, pp. 88-94, 2020.

J-36. Madhusudhan Mishra, Sawon Pratiher, Hrishikesh Menon and Anirban Mukherjee; Identification of S1 and S2 Heart Sounds using Spectral and Convex Hull Features, IEEE Sensors Journal, vol. 20, no. 8, pp. 4311-4320, 2020.

J-35. Priya Ranjan Muduli and Anirban Mukherjee; A Moreau Envelope-based Nonlinear Filtering Approach to Denoising Physiological Signals, IEEE Trans. Instrumentation and Measurement, vol. 69, no. 4, pp. 1041-1050, 2020.

J-34. Priya Ranjan Muduli and Anirban Mukherjee; A Robust Estimator-Based Nonlinear Filtering Approach to Piecewise Biosignal Reconstruction, IEEE Trans. Instrumentation and Measurement, vol. 69, no. 2, pp. 362-370, 2020.

J-33. Madhusudhan Mishra, Hrishikesh Menon, and Anirban Mukherjee; Characterization of S1 and S2 Heart Sounds using Stacked Autoencoder and Convolutional Neural Network, IEEE Trans. Instrumentation and Measurement, vol. 68, no. 9, pp. 3211-3220, 2019.

J-32. A. Guha Mazumder, S. Banerjee, F. Zevictovich, S. Ghosh, Anirban Mukherjee, and J. Chatterjee; Fourier-transform-infrared-spectroscopy based metabolomic spectral biomarker selection towards optimal diagnostic differentiation of diabetes with and without retinopathy, Spectroscopy Letters, DOI: 10.1080/00387010.2018.1471510, 2018.

J-31. Madhusudhan Mishra, Sanmitra Banerjee, Dennis Thomas, Sagnik Dutta, and Anirban Mukherjee; Detection of Third Heart Sound using Variational Mode Decomposition, IEEE Trans. Instrumentation and Measurement, vol. 67, no. 7, pp. 1713 - 1721, 2018.

J-30. Biswajit Kar, Anirban Mukherjee, and Pranab K. Dutta; Stroke Point Warping based Reference Selection and Verification of Online Signature, IEEE Trans. Instrumentation and Measurement, vol. 67, no. 1, pp. 2 - 11 2018.

J-29. A. Guha Mazumder, S. Chatterjee, S. Chatterjee S, J. J. Gonzalez, S. Bag, S. Ghosh, Anirban Mukherjee, and J. Chatterjee; Spectropathology-corroborated multimodal quantitative imaging biomarkers for neuroretinal degeneration in diabetic retinopathy, Clinical Ophthalmology, vol. 11, pp. 2073 - 2089, 2017.

J-28. Priya Ranjan Muduli, Atindra Kanti Mandal, and Anirban Mukherjee; An Anti-Noise-Folding Algorithm for the Recovery of Biomedical Signals from Noisy Measurements, IEEE Trans. Instrumentation and Measurement, vol. 66, no. 11, pp. 2909 - 2916, 2017.

J-27. Priya Ranjan Muduli and Anirban Mukherjee; A Subspace Projection-based Joint Sparse Recovery Method for Structured Biomedical Signals, IEEE Trans. Instrumentation and Measurement, vol. 66, no. 2, pp. 234 - 242, 2017.

J-26. Atasi Sarkar, Sanghamitra Sengupta, Anirban Mukherjee and Jyotirmoy Chatterjee; Fourier transform Infra-red Spectroscopic Signatures for Lung Cells' Epithelial Mesenchymal Transition: A Preliminary Report, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, vol. 173, pp. 809 - 816, 2017.

J-25. Arpan Guha Mazumder, Sambuddha Ghosh, Swarnendu Bag, Sumanta Bera, Srutarshi Ghosh, Anirban Mukherjee and Jyotirmoy Chatterjee; 1H-NMR based Serum Metabolomic Signatures Imperative in Retinalneurodegeneration and Development of Diabetic Retinopathy, International Journal of Medical Research and Review,vol. 4, no. 6, pp. 976 - 981, 2016.

J-24. Atasi Sarkar, Ananya Barui, Biswajoy Ghosh, Anirban Mukherjee, Ripon Sarkar, Sanghamitra Sengupta and Jyotirmoy Chatterjee; Autofluorescence Signatures for Classifying Lung Cells during Epithelial Mesenchymal Transition, RSC Advances, Royal Society of Chemistry, vol. 6, pp. 77953 - 77962, 2016.

J-23. Surajit Panja, Sourav Patra and Anirban Mukherjee; Tweaking Metabolic Networks: A Design Method, INAE Letters, Springer, pp. 1 - 6, DOI 10.1007/s41403-016-0005-5, 2016.

J-22. Aniruddha Maiti, Ramakanth Reddy and Anirban Mukherjee; Structural Prediction of Dynamic Bayesian Network with Partial Prior Information, IEEE Trans. on NanoBioscience, vol. 14, no. 1, pp. 95 - 103, 2015.

J-21. Aniruddha Maiti and Anirban Mukherjee; On the Monte-Carlo Expectation Maximization for Finding Motifs in DNA Sequences, IEEE Journal of Biomedical and Health Informatics, vol. 19, no. 2, pp. 677 - 686, 2015.

J-20. Surajit Panja, Sourav Patra, Anirban Mukherjee, Madhumita Basu, Sanghamitra Sengupta and Pranab K. Dutta; A Closed-loop Control Scheme for Steering Steady States of Glycolysis and Glycogenolysis Pathway, IEEE/ACM Trans. on Computational Biology and Bioinformatics, vol. 10, no. 4, pp. 858 - 868, 2013.

J-19. Surajit Panja, Sourav Patra, Anirban Mukherjee, Madhumita Basu, Sanghamitra Sengupta and Pranab K. Dutta; Robustness of TCA Cycle at Steady-State: An LMI-based Analysis and Synthesis Framework, IEEE Trans. NanoBioscience, vol. 12, no. 2, pp. 128 - 134, 2013.

J-18. Surajit Panja, Sourav Patra, Anirban Mukherjee, Madhumita Basu, Sanghamitra Sengupta and Pranab K. Dutta; An Optimization-based Design Framework for Steering Steady-States and Improving Robustness of Glycolysis-Glycogenolysis Pathway, IEEE Trans. Biomedical Engineering, vol. 60, no. 2, pp. 554 - 561, 2013.

J-17. Supratim Gupta, Aurobinda Routray and Anirban Mukherjee; A New Method for Edge Extraction in Images using Local Form Factors, Intl. Journal of Computer Applications, vol. 21, no. 2, pp. 15 - 22, 2011.

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