Profile Page



Name	:	Dr Karan Jain
Designation	:	Assistant Professor Grade-ii
Department	:	Instrumentation & Control Engg.
Qualification	:	 Ph.D. Broad research area: Biomedical Engineering (Indian Institute of Technology Kharagpur) M.Tech Instrumentation (Indian Institute of Technology Kharagpur) B.Tech Instrumentation and Control Engineering (Dr B R Ambedkar National Institute of Technology Jalandhar)
Address	:	 Office # 504 A, Department of Instrumentation and Control Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar Jalandhar City, Punjab - 144027
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Research Interests :

Modeling of physiological systems and associated diseased conditions; cardiovascular system dynamics; applications of machine learning in clinical predictions; investigation of mental health issues.

Other Profile Links :

Google Scholar Link :

Dr. Karan Jain Click Here

Journal Publications :

Year	Journal	Publication
2023	Biomedical Signal Processing and	Pankaj Kumar Sahu, Karan Jain, "Corrigendum to "Artificial intelligence
	Control (Available online 10	system for verification of schizophrenia via theta-EEG rhythm"
	February 2023, In press)	
2022	Biomedical Signal Processing and	Ashutosh Dash, Karan Jain, Nirmalya Ghosh, and Amit Patra,
	Control, Vol. 77, pp. 103781	"Non-invasive detection of coronary artery disease from
		photoplethysmograph using lumped parameter modelling."
2021	Biomedical Signal Processing and	Karan Jain, Suchi Jain, Arijit Guha, and Amit Patra, "An approach to
	Control, vol. 68	early stage detection of atherosclerosis using arterial blood pressure
		measurements."

2019	International Journal of	Karan Jain, Arijit Guha, and Amit Patra. "A particle filter based
	Prognostics and Health	framework for the prognosis of atherosclerosis via lumped cardiovascular
	Management, vol. 10 (Special	modeling."
	Issue PHM for Human Health and	
	Performance) 002, pages: 9.	
2018	Mathematical Biosciences, vol.	Karan Jain, Srinivasu Maka, and Amit Patra. "Modeling of cardiovascular
	304, pp. 79-88.	circulation for the early detection of coronary arterial blockage."

Conference Publications :

Year	Conference	Publication
2019	41st Annual International Conference of the IEEE	Ashutosh Dash, Karan Jain, Nirmalya Ghosh, Amit
	Engineering in Medicine & Biology Society (EMBC),	Patra, Anirban D. Choudhury. "Blood Pressure
	Berlin, Germany.	Estimation Based on Pulse Arrival Time and Heart
		Rate: A Correlation Analysis for Critically Ill
		Patients."
2018	18th IFAC Symposium on System Identification	Karan Jain, Amit Patra, and Srinivasu Maka.
	(SYSID), Stockholm, Sweden.	"Modeling of the human cardiovascular system for
		detection of atherosclerosis."
2016	Systems in Medicine and Biology (ICSMB), 2016	Karan Jain, and Srinivasu Maka. "Sensitivity analysis
	International Conference on. IEEE. Kharagpur, India.	and parameter estimation of cardiovascular model."
2016	Systems in Medicine and Biology (ICSMB), 2016	Tanmay Pal, Karan Jain, and Srinivasu Maka. "Delay
	International Conference on. IEEE. Kharagpur, India.	dependent analysis of respiratory system- Application
		to obstructive sleep apnea."
2014	Students' Technology Symposium (TechSym), 2014	Karan Jain, Tanmay Pal, and Srinivasu Maka.
	IEEE. Kharagpur, India.	"Stability issues in a cardiovascular circulation."
2014	Students' Technology Symposium (TechSym), 2014	Tanmay Pal, Karan Jain, and Srinivasu Maka.
	IEEE. Kharagpur, India.	"Stability analysis of Human Respiratory System."

Events Organized :

Category	Туре	Title	Venue	From	То	Designation
STC	National	Modeling and	Online Mode	27-07-20	31-07-20	Convener
		Identification of				
		Physiological Systems				
		(MIPS-2020)				
STC	National	Cryogenics &	Online Mode	03-08-20	07-08-20	Coordinator
		Composites: Theory &				
		Applications				
		(CCTA-2020)				
STC	National	Recent Advances in	Online Mode	15-10-20	19-10-20	Coordinator
		Sensor Design and				
		Interface Circuits				
		(RASIC-2020)				
STC	National	Modeling and	Online Mode	20-10-21	24-10-21	Coordinator
		Identification of				
		Physiological Systems				
		(MIPS-2021)				
STC	National	Optimization and	Online Mode	23-05-22	27-05-22	Coordinator
		Control Design				
		Techniques Innovations				
		and Challenges				
		(OCDT-2022)				

Professional Affiliations :

Designation	Organization
Member	IEEE

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Pankaj Kumar	Development of Affordable Artificial Intelligence	Comprehe	2019	
Sahu	based Brain Machine Interface for Real Time	nsive		
	R.P.M. Control of BLDC Motor for Industrial	seminar		
	Applications	(Done)		

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Sagar Saha	Detecting cardiac conditions using ECG		2021-22	
	measurements			
Amandeep	An approach to detect coronary artery disease	On-going	2021-22	
Minhas	using arterial blood pressure and PPG signals			

Patents :

Name	Reg./Ref. No.	Date of	Organization	Status
		Award/Filling		
SYSTEM FOR MODELLING	202031015867	7-9-2019	INDIAN	Application
BAROREFLEX MECHANISM OF			INSTITUTE OF	number allotted
A HUMAN SUBJECT DURING			TECHNOLOGY,	on 13.4.2020;
POSTURAL CHANGES			KHARAGPUR	Patent initially
			and TATA	filed on 7th
			CONSULTANC	September 2019
			Y SERVICES	
			LIMITED	

Admin. Responsiblities :

Position Held	Organization	From	То
Associate Lab. Incharge, Procees	Dr B R Ambedkar NIT Jalandhar	2020	Present
Control Lab., ICE Dept.			
Co-cordinator, UG Accreditation	Dr B R Ambedkar NIT Jalandhar	2020	Present
(ICE Dept.)			
Co-cordinator, Departmental	Dr B R Ambedkar NIT Jalandhar	2020	Present
information, newsletter and			
website (ICE Dept.)			
Co-coordinator, Alumni Relations	Dr B R Ambedkar NIT Jalandhar	2020	Present
(Department-level)			