

Mr. Tapas Roy

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Assistant Professor-I

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#### INTERESTED RESEARCH AREAS:

Multilevel Inverters, DC-DC converter, Matrix converter, Z-source Inverter, Switched capacitor converters

#### SCHOOL LEVEL RESPONSIBILITY:

Co-coordinator for Research Lab-3, Member of M.Tech evaluation committee, Faculty In – charge of Microprocessor and microcontroller Lab

#### ACADAMIC DETAILS :

S.NO	DEGREE	INTITUTION NAME	YEAR OF PASSING
1	X	Jateswar High School, WB	2003
2	XII	Jenkins School, WB	2005
3	B.E.E	Jadavpur University	2009
4	M.E.E	IISc Bangalore	2013

#### EXPERIENCE:

##### 1 INDUSTRIAL:

- Six month industrial experience at CIL, India
- Industrial training at D.T.P.S, DVC

##### 2. TEACHING:

3 years teaching experience at SOEE, KIIT University

#### PUBLICATION:

- Tapas Roy**, Neha Aarzo, **Pradip Kumar Sadhu**, Citralekha Jena and Srikanta Mohapatra, “ A novel symmetrical switched capacitor based three-phase cascaded multilevel inverter,” accepted for publication in PEDES-2016 on DEC-2016. (SCOPUS)
- Sourav Karmakar, **Tapas Roy**, **Pradip Kumar Sadhu**, “Analysis and simulation of a new topology of single phase multilevel inverter,” IEEE International Conference on Power Electronics Intelligent Control and Energy System 2016 (ICPEICES), July 4-6, 2016 at DTU. (SCOPUS)
- Biswajit Mondal, **Tapas Roy**, **Pradip Kumer Sadhu**, “Switched Capacitor Z-Source Inverter”, ICPEICES 2016. (SCOPUS)

4. Priyanka Priyadarsini, **Tapas Roy, Pradip Kumar Sadhu**, Srikanta Mohapatra, “ Analysis and simulation study of extended boost Z-source sparse matrix converter,”-ICPEICES 2016 at DTU. (SCOPUS)
5. Shouvik Mondal, **Tapas Roy, Pradip Kumar Sadhu, Abhijit Dasgupta**, “Study of a New Single Phase Multilevel Inverter Based on Switched Capacitor Units” ICPEICES 2016 at DTU. (SCOPUS)
6. Rakesh. K. Dhal and **Tapas. Roy**, "A comparative study between different multi level inverter topologies for different types of bus clamping PWM techniques using Six Region Selection Algorithm," *Michael Faraday IET International Summit 2015*, Kolkata, 2015, pp. 392-398
7. Ipsita Das and **Tapas Roy**, "A new Multi-Device Boost Converter topology with reduced switching stress and high voltage gain," *Michael Faraday IET International Summit 2015*, Kolkata, 2015, pp. 380-386
8. Debanjan Roy and **Tapas Roy**, "A new technique to implement conventional as well as advanced Pulse Width Modulation techniques for multi-level inverter," *2014 IEEE 6th India International Conference on Power Electronics (IICPE)*, Kurukshetra, 2014, pp. 1-6. (SCOPUS Index)
9. Sangeeta DebBarman and **Tapas Roy**, "Advanced Pulse Width Modulation technique for Z-Source Inverter," *2014 IEEE 6th India International Conference on Power Electronics (IICPE)*, Kurukshetra, 2014, pp. 1-6. (SCOPUS Index)
10. Sangeeta Debbarman, **Tapas Roy**, “Different Types of PWM Techniques analysis for Z-Source Inverter”-, IOSR journal, 2014
11. **Tapas Roy**, Pavan Hari, G. Narayanan, “ Study on the effect of dead time and its compensation for bus clamping PWM”-NPEC-2013, IIT Kanpur

#### M.Tech THESIS GUIDED:

YEAR :2014	
S.NO	TITLE
1	Advanced Pulse Width Modulation Technique for Z-Source Inverter
2	A New Technique To Implement Conventional Space Vector as Well as Bus Clamping Pulse Width Modulation For Multilevel Inverter
YEAR: 2015	
1	A Comparative Study between Different Multi-Level Inverter Topologies for Different Types of Bus Clamping PWM Techniques
2	A New Multi-Device Boost Converter Topology with Reduced Switching Stress and High Voltage Gain
3	Analytical and Simulation study of sparse matrix converter
4	Analysis and Simulation of CZSI and q-ZSI Using Advanced PWM Techniques
YEAR: 2016	
1	Simulation And Hardware Implementation of A New Hybrid Multilevel Inverter
2	Analytical and Simulation Study of a Novel Z-source Sparse Matrix Converter
3	Study of a novel Z-source inverter topology based on switched capacitor boost converter
4	Simulation and hardware implementation of a new single phase multilevel inverter

**B.Tech PROJECTS GUIDED:**

YEAR :	
S.NO	TITLE
1.	A new topology on cascaded multilevel inverter with less number of switches and more output voltage levels
2	Z-source DC-DC converter
3	Power supply regulator

**CONFERENCE/WORKSHOPS ORGANIZED/ATTANDED:**

S.NO	Title	Attended/or ganized	YEAR
1.	National Power Electronics Conference (NPEC)	Attended at IIT Kanpur	Dec., 2013
2.	IEEE 6th India International Conference on Power Electronics (IICPE)	Attended at NIT Kurukshetra	Dec., 2014
3.	Power quality issues	Attended at ISM Dhanbad	July,2015
4.	National conference on restructuring in Indian power sector and smart grid	Organised at SOEE, KIIT University	April, 2016

**SUBJECTS TAUGHT:**

S.NO	SUBJECT CODE	SUBJECT NAME
1.	EE3003	Linear Control Theory
2.	EE2003	Network Theory
3.	EE710	Advanced Power Electronics
4.	EE2004	Electrical Measurement and Instrumentation
5.	EE2001	Electric Machine-1
6.	EE3093	Microprocessor Lab
7.	EE2094	Digital Electronics Lab
8.	EE3095	Control System Lab