Curriculum Vitae of Professor Bidyadhar Subudhi

1. Current Affiliation

Professor, Electrical Engineering

Dean(Alumni Relations and Resource Generation)

& Professor-in-Charge, Centre for Industrial Electronics & Robotics

& Co-ordinator, Centre of Excellence, Renewable Energy System

Department of Electrical Engineering

National Institute of Technology Rourkela

Rourkela-769008, Odisha, India

Email: bidyadhar@nitrkl.ac.in, bidyadharnitrkl@gmail.com

Phone: + (91) 661 2462416 (Office); + (91) 661 2463416 (Residence)

Fax: + (91) 661 246 2999 (Office)

3. Educational Qualification

- **Post Doctoral Fellow,** Dept. of Electrical & Computer Engg., **NUS Singapore**, May-Nov 2005

- **PhD** (**Control Systems Engg.**), Dept. of Automatic Control & Systems Engineering, **UNIVERSITY OF SHEFFIELD (UNITED KINGDOM),** July 2002

- **Master of Technology(M.Tech)**, *Control & Instrumentation*, Dept. of Electrical Engg., **INDIAN INSTITUTE OF TECHNOLOGY(IIT), DELHI,** Jan 1993

- **Bachelor of Science(Engineering)**, **Dept. of Electrical Engg.**, Regional Engineering College (presently **National Institute of Technology, NIT**) Rourkela, **July 1988**

4. Professional Career

- Professor, Electrical Engineering, NIT Rourkela, wef 1st July 2008

- Visiting Professor, School of Engineering & Technology, Asian Institute Technology, Bangkok, Jan-May 2013

- Visiting Professor, College of Engineering, University of Saskatchewan, Canada, May-June 2009

- Associate Professor, Electrical Engineering, NIT Rourkela, 4th July 2006 to 30th June 2008

- Assistant Professor, Electrical Engineering, Indira Gandhi Institute of Technology(IGIT) Sarang, 21st Jan 2002 to 3rd July 2006

- Sr. Lecturer Electrical Engg., IGIT, Sarang,13th March 1996 to 20th Jan 2002

- Lecturer Electrical Engg., IGIT, Sarang,13th March 1990 to 12th March 1996

5. Research Interests (Control and Power)

(i) System & Control Theory:

- System Identification
- Adaptive Control
- Robust Control
- Time-delay Compensation

(ii) Control Applications to Power System:

- Active Power Filtering
- Estimation of Harmonics
- Photovoltaic and Wind Energy Power System
- Smart Grid

(iii) Active Noise and Vibration Control:

(iv) Control Application to Robotics

- Underwater Vehicles
- Flexible Robots

(v) Control Applications in Automotive Engineering:

- Hybrid electrical vehicles

(vi) Applications in Process Control:

- Coupled Tank System

(vii) Networked Control System

6. Teaching Assignments

e-learning course development : Currently developing an e-learning course on Advanced Control System under Pedagogy Project

B.Tech Programme

- Basic Electrical Engg.
- Network Theory
- Control System Engineering-I
- Control System Engineering-II
- Adaptive Control & System Identification
- Embedded System
- Microprocessor & Microcontroller

- Electrical Machine-I
- Power Electronics
- Electric Drives & Traction
- Power System Engineering
- Control Lab
- Microprocessor & Microcontroller Lab

M.Tech Programme

- System Identification and Adaptive Control
- Robotics & Automation
- Estimation of Signals & Systems
- Digital Control
- System & Control
- Soft Computing
- Optimal Control
- Automation Technology (at AIT Bangkok, 2013,January- March session)
- Control Lab

7.Guidance of PhD Theses (Completed)

Sl. No.	Name of the Scholar	Title of Thesis	Name of the Supervisor(s)	Year of Award
1	D.Jena	Evolutionary Neuro-computing Approaches to System Identification	B.Subudhi	Sep 2010
2	P.K.Ray	Soft computing and signal processing techniques for frequency and Harmonic estimation in Power system	B.Subudhi & A.M.Panda	June 2011
3	S.Pardhan	Development of new Adaptive Control strategies for a two-link Flexible manipulator	B.Subudhi	April 2013

4	A.K.Swain	Development of Advanced Control Strategies for Flexible Robot Manipulators	B.Subudhi R.S.Rohella	July 2013
5	R.Pradhan	Development of New Parameter Extraction Schemes and Maximum Power Point Controllers for Photovoltaic Power Systems	B.Subudhi	March 2014
6	Dusmanta Kumar Das	New Results on Delay-Dependent Stability anlaysis and stabilization of time-delay systems	S.Ghosh B.Subudhi	June 2015
7	Satyam Bonala	Stability Analysis and Design of Digital Compensators for Networked Control Systems	B.Subudhi S.Ghosh	June 2015
8	B.K.Sahu	Development of Path Following and Cooperative Motion Control Algorithms for Autonomous Underwater Vehicles	B.Subudhi	June 2015
9	Basant Kumar Dash	Development of Control Strategies for Hybrid Electric Vehicles	B.Subudhi R.Reddy	Submitted on 31st July 2014
10	Bikramaditya Das	Coordination Control of Multiple Autonomous Underwater Vehicles with communication Constraints	B.B.Pati B.Subudhi	Submitted in May 2015
11	R.Panigrahi	Development of	B.Subudhi	Submitted

		Robust Control Schemes with New Estimation Algorithms for Shunt Active Power Filter	P.C.Panda	in July 2015

PhD Guidance in Progress

Sl. No.	Name of the Scholar	Title of thesis	Name of the Supervisor(s)	Status
1	D.Atta	Formation Control of Multiple Under Water Robotic Vehicles	B.Subudhi	since Sep 2008 In progress
2	O.P.Suresh	Photo-voltaic System Modelling & Control	B.Subudhi and A.K.Panda(NIST, Berhampur)	July 2010, In progress
3	S.Behera	Active Noise Control	D.Das (IMMT, BBSR)	Since July 2011
4	Ventkat Ratnam	Embbeded Control Design of PV system	K.K.Mahapatra and B.Subudhi	Since july 2011
5	Satyabrata Sahoo	Hybrid Energy System	B.Subudhi G.Panda	Since Jan 2013
6	Raja Rout	Real-time Implementation of Control Algorithms for an AUV	B.Subudhi	Since July 2012
7	Satyajit Mohanty	Control of Grid Connected PV System	B.Subudhi and P.K.Ray	Since Jan 2013
8	Satyajit Dash	Control of Wind Energy System	B Subudhi	Since July 2013
9	Om Prakash Pahari	Active & reactive power control of grid connected PV system	B Subudhi	Since July 2013

10	Subhasisha Mohapatra	Real-time Robust Control of an AUV	B Subudhi	Since july 2013
11	A.Bag	Active Power Filtering with application to Distributed Power Generations	B.Subudhi and P.K.Ray	Wef March 2014
12	Prangya Pradhan	Control Issues in Grid Integration of Wind Energy Conversion System	B Subudhi	Wef July 2014
13	Sudarsan Swain	Real-time Control algorithms for Shunt Active Power Filters	B Subudhi	Wef July 2014
14	Malaya Bhunia	Control of Grid Connected PV System	B Subudhi	Wef July 2014
15	Sonam Srivastav	Control of Smart Grid System	B.Subudhi S.Das	Wef Jan 2015
16	Maddela Chinna Obaiah	Networked Control System	B.Subudhi S.Ghosh	Wef Jan 2015

M.Tech Research Theses Supervision

Sl.No.	Title of Thesis	Student's Name	Supervisor(s)	Remark
1	Fault Diagnosis of Induction Motor using Soft Computing Techniques	R.Dash,	S.Das and B.Subudhi	Awarded in Jan 2011
2	Development and Control of Networked Servo System	Srinibas Bhuyan	B.Subudhi and S.Ghosh	Awarded in Sep 2011 **L&T-ISTE 2nd Prize 2011**
3	Control of Autonomous Underwater Vehicles	Raja Rout	B.Subudhi and S.Ghosh	Awarded in Jan 2013
4	On stabilisation of cart-inverted pendulum system: An Experimental study	T.Rakesh	B.Subudhi	Awarded in Jan 2013

| 5 | Simulation and Experimental Realization of Adaptive Controllers for Shunt Active Power Filter to Improve Power Quality | Sudarsan Swain | P.C.Panda B.Subudhi | Awarded in May 2015 |

8. M.Tech Guidance

Sl.No.	Title	Name of the Scholar	Year of Award	Co-Supervisor
1	Modelling and Control of a Brushless DC Motor	S.Rambabu	2007	
2	Power System Stability using UPFC	J.Pradhan	2007	
3	System Identification Algorithms and their DSP implementation	Harsa Vardhan	2008	
4	Real-time Estimation and Control Induction Motor Drive System	Anish Kumar	2008	
5	Implementation of LMS algorithm in FPGA	O.Suresh	2008	A.K.Panda (NIST)
6	Islanding detection in Distributed Generation,	T.Pujhari	2009	S.R.Samantaray
7	Development of Time Delay Compensation Techniques with Application to Network based Control Design,	Bollepally Raju	2009	Sandip Ghosh
8	DSP implementation of Nonlinear System Identification	S.Bonala	progress	S.Ghosh
9	Analytical Structures of Different Fuzzy Control Paradigms and their	Srikanth M.	2010	A.U.Reddy, Andhra Univ.

	Applications.			
10	Parameter Estimation and Vector Control of an Induction Motor	Sarada Prasanna Sahoo	2010	
11	Model Predictive Networked Control Design and Implementation for Networked Control System	Kuamar Gautam	2010	
12	DSP implementation of Nonlinear System Identification	S.Bonala	2010	S.Ghosh
13	FPGA based active power filter for Harmonic Mitigation	Smrutiranjan Prusty	2011	K.K.Mahapatra
14	Kalman Filter based AUV Navigation	Anil	2011	S.Ghosh
15	Real-time Tip Position Control of a Flexible-Link Robot	Abhisekha Behera	2011	S.Ghsoh
16	Real time navigation control of khepera-iii mobile robot	Kuppili vinodh Kumar	2011	S.Ghosh
17	Control of autonomous underwater vehicle	Koena Mukharjee	2011	S.Ghosh and Veena Sharma(NIT, Hamirpur)
18	Design of robust controllers for Dc-dc converters	Nivedita Pati	2012	
19	Study on Time-Delay Systems with Application to Control a Flexible Robot	Abhsekha Parida	2012	Sandip Ghosh
20	A Comparative Study of Linear and Nonlinear Control	Om prakash Pahari	2012	

	Strategies for DC-DC Switching Converters			
21	Development of an Iterative Learning based Tip Position Controller of a Flexible Link Robot	Nishant Kumar	2012	
22	Formation Control of Multiple AUVs with Limited Communication	Prawesh Kumar Mandhavi	2012	Subhojit Ghosh
23	Modeling and Control of DC-DC converters	P.Suneelraju	2012	
24	Predictive Controller Design for Networked Systems	Ananda Singh	2012	
25	Discrete-Time Slip Control Algorithms for a Hybrid Electric Vehicle	Khusal Chaudhuri	2013	
26	Voltage Control of Dc-Dc Buck Converter and its Real Time Implementation Using Microcontroller	Dipak Kumar Dash	2013	
27	Model Predictive Controllers for A Networked DC Servo System	Ramesh Chandra Khamari	2013	
28	Position and Heading Control of an Autonomous Underwater Vehicle using Model Predictive Control	Pankaj Kumar Jha	2013	
29	Adaptive Iterative Learning Control of a Single-Link Flexible Manipulator Based on an Identified Adaptive NARX Model	Laxmanrao, Mute Dinesh	2013	Subhojit Ghosh
30	Wind Speed Estimation by Neural Networks	Prangya Parimita Pradhan	2014	

31	Modelling of PV System and Prediction of Solar Insolation	Reema Mohanty	2014	
32	Adaptive Depth Control of an AUV	Biranchi narayan Rath	2014	
33	Fuzzy PI Control of WECS	Suchismita Acharya	2014	
34	State Estimation through wireless Communication for a Smart Grid	Joysankar Dwibedy	2014	
35	Superconducting Electromagnets for Wind Energy Conversion System	Vidya Bhusan	2014	
36	Controller design for Magnetic Levitation System	Abhisekha Nayak	2015	
37	Sensor Fusion for Navigation of Autonomous Underwater Vehicle using Kalman Filtering	Akash Agarwal	2015	
38	Modeling and Control of and Aircraft System	Ankit Gupta	2015	
39	Design of a Shunt Active Power Filter with grid connected inverter control for a Photovoltaic System	Biswabharati Majhi	2015	
40	Model Predictive Controller for two link flexible Manipulator	Upsana Gogoi	2015	
41	Time delay compensation in networked Control system	Manas Kumar Das	2015	
42	Use of super conducting magnet for Energy storage in	Pravesh Kumar	2015	

	shunt active power Filter			

9. B.Tech Project Guidance Adjudged as Best BTech Projects

[1]. Shivani Mital, Real-time Liquid Level Control, May 2009 (Adjudged as the Best B.Tech Project), May 2010

[2]. Ladwa, Fault Diagnosis, Design of Control System for INSTRON, Fatigue Machine, May 2010, (Adjudged as the Best B.Tech Project) with Prof. Sandip Ghosh, May 2010

10. Sponsored Research Funding

Sl. No.	Sponsoring Agency	Title of Project	Amount of grant (INR Lakh)	Period	Investigators	Status
1	DST	Development of grid integration strategies for photovoltaic system	128(approx)	2015-2018	B.Subudhi(PI) P.K.Ray(Co-PI) S.Ghosh (Co-PI)	Approved
2	Royal Academy of Engineering, UK(Newton Collaborative Research)	Dynamic path planning for the swarm of unmanned marine vehicles	12000 GBP	2015-2016	B.Subudhi S.K.Sharma(Plymouth Univ., UK)	In Progress
3	DST-RFBR	Development of new control strategies for autonomous underwater robots in uncertain environment	35	2015-2018	B.Subudhi(PI) P.K.Ray(Co-PI) S.Ghosh (Co-PI) Dr. Vladimir Filaretov, Head of Robotic Laboratory, Institute of Automation and Control Processes, 5,	Granted

					Radio str., Vladivostok	
4	DST-RMES (Indo-Russia)	Development of communication and control strategies for new generation Autonomous Underwater Vehicles	56	2014-2017	B.Subudhi(PI) S.Ghosh (Co-PI) Dr. Vladimir Filaretov, Head of Robotic Laboratory, Institute of Automation and Control Processes, 5, Radio str., Vladivostok	In Progress
5	BRFST	Development of soft Computing based Real-time Fault Detection for Tokamak Position Control System	18	2014-2016	B.Subudhi(PI) S.Ghosh (Co-PI)	In Progress
6	DST	Estimation & Filtering with Application to Distributed Generations	38	2013-2016	B.Subudhi(PI) P.K.Ray(Co-PI)	In Progress
7	NPIU	Establishment of Centre of Excellence on Renewable Energy System	500	2013-2015	B.Subudhi(PI) P.K.Ray(Co-PI)	In Progress
8	CPRI	Wide Area Control of Power System	29	2014-2016	S.Ghosh(PI) B.Subudhi(Co-PI)	In Progress
9	DST UKIERI	Modelling & Control of Hybrid Renewable Energy Sources	33	2013-2015	B.Subudhi(Indian Lead) M. H. Shaheed Queen Mary, Univ.of	In Progress

					London(UK-Lead)	
10	CPRI	Study of power quality problems and counter measures in present power systems using power electronics devices,	21	2011-2014	P.C.Panda(PI) B. Subudhi(Co-PI)	In Progress
11	DRDO	Development of a Hardware Setup and real-time implementation of Path Following and Co-operative Motion Control Algorithms for Autonomous Underwater Vehicles	25	2013-2016	B.Subudhi(PI)Collaborator B.V.S.Krishnakume, NSTL, Visakhapatnam	In Progress
12	DRDO	Development of Co-operative Motion Control of Multiple AUVs	16	2008-2012	B.Subudhi(PI)D.R.K.Parhi(Co-PI)	Completed
13	DRDO	Intelligent Control of Multiple Mobile Robots in an Unknown Terrain	9	2009-2011	D.R.K.Parhi(PI) B. Subudhi(Co-PI)	Completed
14	MNRE	Design and Installation of 10kW PV system	12.5	2010-2011	B.Subudhi(PI)	Completed
15	DRDO	Design of an Unmanned Guided Vehicle	4	2010-2011	B.Subudhi(PI)	Completed
16	CSIR	Investigation of Control Issues in Networked Control	16	2010-2013	B.Subudhi(PI)S. Ghosh(Co-PI)	Completed

		System				
17	AICTE	Investigation on Real-time Control of Flexible Robot Manipulators	5	2004-2007	B.Subudhi(PI) K.C.Patra(Co-PI)	Completed

11. Organization of Short Term Courses

i. Estimation and Filtering with Applications, 25-27 Feb 2015

ii. Control of Renewable Power Generation Systems, 7-11 July 2014

iii. Modelling and Control of Renewable Energy Sources, 3-8 June 2012

iv. MATLAB and SIMULINK for Electrical Engineers, 6-11 June 2009

v. AICTE-MHRD Staff Development Programme on Advanced Control & Signal processing techniques with applications, 29 Oct-11 Nov 2008

vi. ISTE-AICTE Short Term on System Identification & Adaptive Control Techniques, 9-13 June 2008

vii. AICTE Staff Development Programme on Advanced Control System techniques and their Industrial Applications, 25th June -7th July 2007

viii. A Short Course on MATLAB, SIMULINK and LABVIEW FOR ENGINEERING APPLICATIONS, 19th to 23rd Feb 2007

ix. ISTE-AICTE Short Term Training on Soft Computing Methods and their Applications, 22 Dec'03-03 Jan' 04

12. Organization of Seminars/Conferences

- Convenor, All India Seminar on Recent Advances in Power Energy & Control, 23-24 Nov 2013, Rourkela

- General Chair, IEEE Sponsored Conf. on Industrial Electronics, Control & Robotics, Dec 27-29, 2010, Rourkela.

- Convenor, Proc. IEEE Sponsored Conf. on Computational Intelligence, Control and Computer Vision in Robotics & Automation, Rourkela, 10-11 March 2008

13. Administration Experience:

- Dean(Alumni Relations and Resource Generation) wef 1st July 2014

- Head, Computer Centre wef 1st July 2012 to 30th June 2014

- Head of Electrical Engg. Dept wef 19th Jan 2009 to 30th June 2012

- Chairman, Curriculum Development Committee wef 1st July 2012 to 30th June 2015

- Coordinator, Centre of Excellence on Industrial Electronics & Robotics since June 2008
- Coordinator, Centre of Excellence, Renewable Energy System since July 2012
- Member of Board of Studies, UG Programme in EE, BPUT
- Chairman, Staff Welfare Committee wef July 2014
- Chairman, DAC(UG), EE Dept.NIT Rourkela
- Chairman, Summer Internship Program, 2009 to 2014
- Chairman, M.Tech Dual Degree Committee, 2009
- Member, Curriculum Committee,2008-2010
- Member, Best B.Tech Project Evaluation Committee,2006-2008
- Expert Committee Member, AICTE
- Evaluator, NBA Proposals
- Member, Building & Works Committee, Central Univ. Koraput

14. Professional Affiliation

- **Fellow, IET(UK),** July 2012
- **Senior Member of IEEE**(USA) [Elevated to Senior Member in June 2008]
- Fellow of the Institution of Engineers (India)
- Fellow of the Institution of Electronics & Telecommunication Engineers (India)
- Life Member of Systems Society of India (SSI)
- Life Member of Indian Society for Technical Education (ISTE)
- Member, Automatic Control & Optimization of Dynamical Systems(ACODS)
- Member, IAENG

Professional Assignments:

- Member, *IEEE Technical Committee on Intelligent Control* (Adaptive Control Group) http://intelligent-control.ieeecss.org/tc-intelligent/tc-members-0
- Honorary Secretary, Institution of Engineers(India), Rourkela Centre since 18th Nov 2012

Reviewer of International Journals:

- IEEE Transactions on Systems Man & Cybernetics
- IEEE Transactions on Control System Technology
- IEEE Transactions on Fuzzy System
- IEEE Transactions on Automation in Science & Engineering
- IEEE Transactions on Intelligent Transportation

- IEEE Transactions on Power Delivery

- IEEE Transactions on Automatic Control

- IEEE Transactions on Neural Networks

- IET Control Theory & Applications

- IET Renewable Power Generation

- International Journal of Systems Science

- Mechatronics (Elsevier)

- Neuro-computing (Elsevier)

- International Journal of Automation and Computing

- Soft Computing (Springer)

- Applied Energy (Elsevier)

Reviewer of Books:

State Variable and Digital Control, M.Gopal, 3rd Edition in 2010

Reviewer & Committee Member of International Conferences

- TECHNICAL PROGRAMME COMMITTEE, 2016 International Conference on Control, Measurement and Instrumentation, Jan 8-10, Kolkata, India

- International Program Committee, IFAC ICONS, Chengdu, 2-9 Sept 2013

- Advisory committee Member, 34TH NATIONAL SYSTEMS CONFERENCE, NSC – 2010 System Solutions for Global Challenges: Energy, Environment and Security 10-12 December, 2010

- FIRA 2010 ,CIRAS Technical Program Committee Member

- Advisory Committee Member, System Society of India, 2011

- 7th International Conference on Computational Intelligence, Robotics and Autonomous Systems (CIRAS 2010, 15-17September 2010 in Bangalore, India

- ASME 2009 International Design Engineering Technical Conferences (IDETC) & Computers and Information in Engineering Conference (CIE),August 30- Sept 2, 2009, San Diego, USA

- Intl. Conf. on Control, Instrumentation & Mechatronics, Engg., CIM 2009, Malyasia, 2009

- Intl. Conf on 2008 IEEE Region 10 Colloquium and the Third International Conference on Industrial and Information Systems, Kharagpur, INDIA December 8 -10, 2008.

- ICEAE 2009 IISc Centenary International Conference and Exhibition on Aerospace Engineering, Indian Institute of Science, Bangalore, India, on 18-22 May, 2009

- Intl. Conf on Applied Modeling and Simulation, Sep 2002, USA.

- Intl. Conf on Modeling, Identification (MIC 2003), Austria, 2003

- Intl. Conf on Modeling, Simulation & Optimization, Intelligence, June-03, Austria

Reviewer of National Conferences

- National Systems Conference, 2003, Kharagapur

- INDICON 2008, Kanpur

- National Conf. on Smart Communication Technologies and Industrial Informatics, Rourkela, 2007

Chaired Technical Sessions

1. Motion Drives and Motion Control-IV, IEEE Intl. Conf. on PEDS-2011, Singapore on 7th Dec 2011

2. Communication-I, International Conf. International Conference on Communication, Computing & Security, 12-Feb-2011 to 14-Feb-2011

3. Robotics Application, Advances in Control & Optimization of Dynamical Systems, Bangalore,16-18, Feb 2012

4. Power Electronics Applications in Renewable Energy System, 3rd IEEE Intl. Conf. on Sustainable Energy, 24-27 Sep 2012, Kathmandu, Nepal

5. Robotics II, IEEE MSC, Hyderabad, 28-30 Aug 2013

15. Awards & Fellowships

- Samanta Chandra Sekhar Award 2013,Orissa Bigyan Academy, Department of Science & Technology, Govt. of Orissa for outstanding contribution in science and technology

- **Fellow, IET(UK),** July 2012

- **Senior Member, IEEE**, June 2008

- **ISTE Best Engineering College Teacher Award for the State of Orissa** for the year 2007 for contribution to students & Academic Community

- ISTE-and L&T award for supervising Best M.Tech Thesis (2nd prize) in Electrical & Electronics Engg., 2011 : Student name: Srinibas Bhuyan, Thesis Title: Development and Control of Networked Servo System

- Fellow of the Institution of Engineers India, 2005

- Fellow of the Institution of Electronics & Telecommunication Engineers (India)

- **Post Doctoral Research Fellowship**, Dept. of Electrical & Computer Engg., **NUS Singapore,** May-Nov 2005

- *University Graduate Scholarship*, University of Sheffield, U.K,1999–2002

- *Overseas Research Student Scholarship*, U.K., 1999–2002.

- *Commonwealth Science Council Travel Award* for attending Intl. Conf. IASTED, 2001, Mexico.

- **Best paper Award** IEE Conf. on Power Enggg. Practices & Energy Management, Jan 05, Patiala

- **CSIR** and **DST Travel Award:** IEEE Intl. Conf. on Intelligent Control & Instrumentation, Singapore, 2-8 July 1995.

- **Merit Scholarship**, 1984-1988, B.Sc (Engg.), REC, Rourkela, Orissa.

- **CSIR** and **Dept. of Science and Technology**, Govt. of Orissa, **Travel Award** for attending IEEE Intl. Conf. on Intelligent Control and Instrumentation, Singapore, 2-8 July 1995.

- **Awarded Gold Medal and First Prize** received from the Orissa Engineering Congress, Bhubaneswar in 15th Jan 1996.

- **Institution Award** received from the Institution of Engineers (India), Orissa Centre 14th Jan 1996.

- **Madhusudan Award** received from the Institution of Engineers (India), Orissa Centre in 1993.

- **Merit Scholarship**, 1984-1988, BSc(Engg.), REC, Rourkela, Orissa.

- **Best paper Award** in National Systems, Conference, Kharagapur, Dec 17-19, 2003

16. Travel Grants

- University of Sheffield Travel Grant for presenting Paper in *IEEE Intl. Conf. on Methods and Models in Automation and Robotics*, 2-5 Sep 2002, Poland.

- *Commonwealth Science Council Travel Grant,* for attending Intl. Conf. IASTED, 2001, Mexico.

- **CSIR** Travel Grant for presenting paper in IEEE Intl. Conf. on Intelligent Control & Instrumentation, Singapore, 2-8 July 1995.

- **DST Travel Award** for presenting paper **in** IEEE Intl. Conf. on Intelligent Control & Instrumentation, Singapore, 2-8 July 1995.

17. Some of the Trainings & Conferences (International & National) Attended

- ACDOS 2014, IIT Kanpur 13-15 2014

- IEEE MSC 2013, Hyderabad, 28-30, August, 2013

- IEEE ICSET 2012, Kathmandu, Nepal, 24-27 Sep 2012.

- IEEE PEDS-2011, Singapore, Dec 2011

- IEEE TENCON, Singapore 2009, Singapore, Nov 2009

- IEEE ICICS 2008, Kharagpur, Dec 2008

- IEEE TENCON 2008, Hyderabad, Nov 2008

- IEEE Workshop on Numerical Linear Algebra in Signals Systems & Control, IIT Khragapur, 9-11, Jan 2007

- One Week Course on System Identification & Adaptive Control, IIT Madras, Dec 1995

- 7th IEEE Intl. Conf. on Methods and Models in Automation and Robotics, Poland, 28-31, Aug'01
- Intl. IASTED Conf. on Robotics & Manufacturing, May 21-24 2001, Cancun, Mexico.
- UK SIMULATION Conf. March 28-30 2001, Cambridge, U.K.
- Intl. Conf. on Trends in Industrial Measurements & Automation, 3-7 Jan 1996, Madras
- IEEE Intl. Conf. on Intelligent Control & Instrumentation, Singapore, 2-8 July 1995
- 4th IEEE Symposium on Intelligent Systems, Bangalore, India,1994
- National Systems Conference, Kharagapur, India, Dec 2003

18. ASSIGNMENTS IN ABROAD

Sl. No.	From	To	Institute & Country	Purpose of Visit
1.	1st July 1995	8th July 1985	Singapore	To present a paper in IEEE Intl. Conf. on Control & Instrumentation
2.	April 1999	August 2002	University of Sheffield, UK	To pursue PhD study
3.	May 2001	May 2001	Cancun, Mexico	To present a paper in IASTEAD Conf. on Robotics & Manufacturing
4.	August 2002	August	Poland	To present a paper in IEEE Intl. Conf. on Control & Instrumentation
5.	May 2005	November 2005	NUS Singapore	Post Doctoral Fellowship
6.	13 July 2007	8 August 2007y	Texas University, Arlington, USA	Research Visit
7.	May 2009	June 2009	Univ of Saskatchewan Canada	Visiting Professor
8.	Nov 2009	Nov 2009	Singapore	To present a paper in IEEE Intl. Conf. on TENCON
9.	Nov 2011	Nov 2011	Singapore	To present a paper in IEEE Intl. Conf. on PEDS
10.	24 Sep 2012	27 Sep 2012	Kathmandu	To present a paper in IEEE ICSET 2012
11.	8 Jan 2013	9 March 2013	School of Engineering & Technology, Asian Institute Technology, Bangkok	Visiting Professor

12.	25 Nov 2013	8 Dec 2013	Queen Mary Univ. of London, UK	Research Exchange visit under DST-UKIERI Scheme
13.	8th May 2014	21 May 2014	Queen Mary Univ. of London, UK	Research Exchange visit under DST-UKIERI Scheme
14	June 2014	June 2014	Far East Federal University, Vladivostok, Russia	Joint Research Project
15	July 2015	Aug 2015	Plymouth University, UK	Newton Fellowship

19.Some Invited Talks Delivered

Sl.No	Title of the Talk	Organization	Course	Date
1	Control & Guidance of Vehicles/Robots	NSTL Vizag	Cooperative Control Algorithm" under CEP Course	27th July 2011
2	Formation Control of AUVs	NSTL Vizag	Cooperative Control Algorithm" under CEP Course	27th July 2011
3	Soft Computing Approaches & Applications	IGIT Sarang	Staff Dev Propgramme	22nd April 2011
4	Adaptive Control	NIT Rourkela	Staff Dev Propgramme	Nov 2008
5	System Identification and Control of Switching Mode Power Converters	NIT Rourkela	NAMPET Short Course	April 2014
6	Control of PV Power System	NIT Rourkela	Short course on Control of Renewable Power Generation Systems	July 2014

20.Patents:

Bidyadhar Subudhi, Navin Kumar and Toshali Mohanty, A Gasoline and Electric Powered Two Wheeler Hybrid Vehicle, 181/KOL, 2015, Filed on 16th Feb 2015

21. Details of Publications

Book Chapters:

[1]. A.S.Morris and B.Subudhi, Chapter-1, Use of singular perturbation techniques in the modelling and control of flexible robot manipulators, Robot Manipulators: New Research, pp1-32, NOVA Science Publisher, Inc., USA, 2005,

[2]. B.Subudhi, Chapter -4, Robust neuro-$H\infty$ control schemes for a manipulator with flexible links and joints, Computational Intelligence, Control and Computer Vision in Robotics & Automation, Narosa Publisher, Delhi, 2008

[3]. Emmanuel A. Merchán-Cruz, Javier Ramírez Gordillo and B.Subudhi,Chapter-5 soft-computing techniques in the Trajectory planning of multi-robot manipulators systems,

[4]. Subudhi B., Ghosh S., Raju Bollepally, S.Bhuyan, M.M.Gupta , Chapter-10,Smith Predictor based Time Delay Compensation in Networked Control of Digital Servo motor, Innovations and Advances in Communications, Information and Network Security, Editors, P.Garag, S.Routray and M.M.Gupta, Macmillan, 2010

Books

1. Computational Intelligence, Control and Computer Vision in Robotics & Automation, Narosa Publisher, May 2009, New Delhi, India

2. Computational Intelligence Applications in Bioinformatics, IGI Publisher, USA(S.Dash, and B.Subudhi Editors)

JOURNAL PAPERS:

INTERNATIONAL

[1]. R.Panigrahi, B.Subudhi and P.C.Panda, A Robust LQG Servo Control Strategy of Shunt Active Power Filter for Power Quality Enhancement" **IEEE Transactions on Power Electronics**[In Press]

[2]. R.Pradhan and **B.Subudhi**, Double Integral Sliding Mode MPPT Control of a Photovoltaic System, IEEE Trans. on Control Systems Technology, [In Press]

[3]. R.Panigrahi, B.Subudhi and P.C.Panda, Model Predictive based Shunt Active Power Filter with a New Reference Current Estimation Strategy, IET Power Electronics,2015, vol. 8, issue. 2, pp. 221–233

[4]. B.Das, B.Subudhi and B.B.Pati, Co-operative control coordination of a team of underwater vehicles with communication constraints, Transactions of the Institute of Measurement and Control, 1–19, 2015, DOI: 10.1177/0142331215590010

[5]. VR Kolluru, K Mahapatra, B Subudhi,Real-Time Digital Simulation and Analysis of Sliding Mode and P&O MPPT Algorithms for a PV System, International Journal of Emerging Electric Power Engineering (In Press)

[6]. B.Sahu, B.Subudhi and M.M.Gupta, "Stability Analysis of an Underactuated Autonomous Underwater Vehicle using Extended-Routh's Stability Method", International Journal of Automation and Computing (Springer) [in press]

[7]. R.Pradhan and **B.Subudhi**, Design and Real-time Implementation of a New Auto-tuned Adaptive MPPT Control for a Photovoltaic System, **Int. Journal of Electrical Power and Energy Systems(Elsevier)**, vol.64, pp.792-803,2015

[8]. D.K.Das, S.Ghosh and **B.Subudhi**, 2014,An improved robust stability analysis for systems with two delays by extracting overlapping feature, Journal of Control and Decision,vol.2, no.2,pp. 124-141,2015

[9]. P.K.Ray and **B.Subudhi**, Neuro-Evolutionary Approaches to Power System Harmonics Estimation, **Int.Journal of Electrical Power and Energy Systems(Elsevier)**, vol.64, pp. 212–220,2015

[10]. R.Panigrahi, B.Subudhi and P.C.Panda A comparative assessment of hysteresis and dead beat controllers for performances of three phase shunt active power filtering,Journal of Power Technologies, 94 (4), 286-295,2014

[11]. S.K.Pradhan and **B.Subudhi,** Nonlinear Adaptive Model Predictive Controller for a Flexible Manipulator: An Experimental Study, **IEEE Trans. on Control System Technology, vol.22, no.5,pp.1754-1768, sep 2014**

[12]. S.Behera, D.Das and **B.Subudhi**, Functional link artificial neural network applied to active noise control of a mixture of tonal and chaotic noise, **Applied Soft Computing(Elsevier)**,vol.23,pp.51–60,2014

[13]. S. Bonala, **B.Subudhi** and S.Ghosh, Stability analysis of smith predictor based networked control systems with time-varying delays, **Control & Intelligent System, ACTA Press,** vol.42, 2014

[14]. M. Khairudin, Z. Mohamed, A. R. Husain and **B.Subudhi**, LMI-Based Robust PD Control of a Two-Link Flexible Manipulator, **Journal of Vibration and Control**, pp.1-13,2014, doi:10.1177/1077546314536427

[15]. D.K.Das, S.Ghosh and **B.Subudhi**, Stability Analysis of Linear Systems with Two Delays of Overlapping Ranges, **Applied Mathematics and Computation**(Elsevier), vol.243,pp.83-90,2014

[16]. B.Sahu and **B.Subudhi**, Adaptive Tracking Control of an Autonomous Underwater Vehicle, **International Journal of Automation and Computing (Springer)** vol.11, no.3, June 2014, pp.299-307

[17]. R.Panigrahi, P.C.Panda and **B.Subudhi,** A Robust Extended Complex Kalman Filter and Sliding Mode Control based Shunt Active Power Filter, **Electric Power Components and Systems,** vol.42,no.5,pp.520–532, 2014

[18]. D.K.Das, S.Ghosh and **B.Subudhi**, Tolerable delay-margin improvement for systems with input-output delays using dynamic delayed feedback controllers, **Applied Mathematics and Computation**(Elsevier), vol.230, pp.57–64,2014.

[19]. **B.Subudhi** and S.Ranasingh, Evolutionary computing approaches to optimum design of fuzzy logic controller for a flexible robot system, **Journal of Archives of Control Sciences**, *v*ol.23(LIX), 201,no. 4, pp. 395–412, 2013

[20]. **B.Subudhi** and R.Pradhan, A Comparative Study on Maximum Power Point Tracking Techniques for Photovoltaic Power System, **IEEE Trans. Sustainable Energy**, vol.4, no.1, pp.89-98, Jan 2013.

[21]. D.Atta and **B.Subudhi**, Decentralized formation control of multiple autonomous underwater vehicles, **International Journal of Robotics and Automation, ACTA Press**, vol.28, no.4, pp.303-310, 2013

[22]. **B.Subudhi**; K.Mukherjee and S.Ghosh, A Static Output Feedback Controller for Path Following of AUV in Vertical Plane, **Ocean Engineering, Elsevier** vol.63, 1, pp.72–76, May 2013

[23]. **B. Subudhi** and S.S. Ge, Sliding mode Control and observer based slip ratio control of Electric and Hybrid Electric Vehicles, **IEEE Trans. on Intelligent Transportation System**, vol.13, no.4, pp.1617-1626,2012

[24]. S.K.Pradhan and **B.Subudhi**, Real-Time Adaptive Control of a Flexible Manipulator using Reinforcement Learning , **IEEE Trans. on Automation Science and Engineering**, vol. 9, no.2, pp.237-249, 2012.

[25]. P.K.Ray and **B.Subudhi**, Ensemble Kalman Filtering Algorithm applied to Power System Harmonics Estimation, **IEEE Trans. on Instrumentation and Measurement** , vol.61, no.12, pp.3216-3224, 2012

[26]. A.Ghosh, R.Krishnan and **B. Subudhi**, Robust PID Compensation of an Inverted Cart-Pendulum System: An Experimental Study, **IET Control Theory & Applications**, Vol. 6, Iss. 8, pp. 1145–1152, 2012

[27]. **B. Subudhi**, P. K. Ray and S. Ghosh, "Variable Leaky LMS Algorithm Based Power System Frequency Estimation" **IET Science, Measurement & Technology**, vol.6, issue 4, pp. 288-297, 2012

[28]. P.K.Ray and **B.Subudhi,** BFO optimized RLS algorithm for Power System Harmonics Estimation, **Applied Soft Computing (Elsevie**r), 12 (2012) 1965–1977

[29]. B. Subudhi and R.Pradhan**,** A Comparative Study on Solar Array Parameter Extraction Methods*,* ***International Journal of Renewable Energy Technology (Inderscience)***, vol.3, no.3, pp-315, 2012

[30]. B.K. Dash and B.Subudhi, Comparison of two controllers for directional control of a hybrid electric vehicle, ***Journal of Archives of Control Sciences***, vol.22(LV-III), no.2, 2012, pp.125-149.

[31]. B.Subudhi and D.Jena, Nonlinear System Identification Using Memetic Differential Evolution Trained Neural Networks, **Neuro-Computing** (Elsevier), vol.74,pp.1696-1709, 2011

[32]. **B.Subudhi** and D.Jena, Differential Evolution Based Neural Network Approach to Nonlinear System Identification, ***Applied Soft Computing (Elsevier),***, vol. 11, pp. 861–87, 2011

[33].   R.Dash and B.Subudhi, Stator inter-turn fault detection of an induction motor using neuro-fuzzy techniques, Journal of Archives of Control Sciences, vol.20 (LVI), 2010, no.2, pp.363-376.

[34].   B.Subudhi and D.Atta, Design of a path following controller for an underactuated AUV, Journal of Archives of Control Sciences, vol.19 (LV), 2009, no.4, pp.355-368.

[35].   B.Subudhi and D.Jena, Differential evolution computation applied to parameter estimation of induction motor, Journal of Archives of Control Sciences, vol.19 (LV), 2009, no.1, pp.5-26.

[36].   B.Subudhi, P.K.Ray, S.R.Mohanty and A.M.Panda, A comparative study on estimation techniques with applications to power signal frequency, Journal of Archives of Control Sciences, vol.18 (LIV), 2008, no.1, pp.5-13.

[37].   D.Atta, **B.Subudhi,** and Madan M. Gupta, "Cohesive Motion Control Algorithm for Formation of Multiple Autonomous Agents," ***Journal of Robotics***, vol. 2010, Article ID 360925, 12 pages, 2010. doi:10.1155/2010/360925

[38].   **B.Subudhi**, P.K.Ray, S.R.Mohanty and A.M.Panda, A comparative study on different power system frequency estimation techniques, ***International Journal of Automation and Control(Inderscience) 2009 - Vol. 3, No.2/3 pp. 202 -215.***

[39].   **B.Subudhi** and D.Jena, An Improved Differential Evolution Trained Neural Network Scheme for Nonlinear System Identification***, International Journal of Automation and Computing (Springer), vol.6, No.2, pp.137-14, 2009.***

[40].   **B.Subudhi** and D.Jena, Nonlinear System Identification using Opposition Based Learning Differential Evolution and Neural Network Techniques, ***IEEE Journal of Intelligent Cybernetic Systems, Issue.1, pp.1-13, March 2009.***

[41].   **B.Subudhi** and A.S.Morris, Soft Computing Methods applied to Control Flexible Manipulators, ***Applied Soft Computing (***Elsevier), vol.9, pp.149-158, 2009

[42].   **B.Subudhi** and D.Jena, Differential Evolution and Levenberg Marquardt Trained Neural Network Scheme for Nonlinear System Identification, ***Neural Processing Letters***, (Springer), vol.27, Issue-3, June 2008, pp.285-296.

[43].   **B.Subudhi** and A.S.Morris, Singular perturbation based neuro-H$_\infty$ control scheme for a manipulator with flexible links and joints, ***Robotica*** (**Int. Journal of Information, Education and Research in Robotics and Artificial Intelligence**),(UK), *vol.24, no.2, pp.151-161, 2006.*

[44].   **B.Subudhi** and A.S.Morris, Singular perturbation approach to trajectory tracking of flexible robot with joint elasticity, ***International Journal of Systems Science** (Taylor & Francis)(UK), Vol.34, No.3, pp.167-179,* 2003.

[45].   **B.Subudhi** and A.S.Morris, Fuzzy and neuro-fuzzy approaches to control a flexible-link manipulator, ***Journal of Systems and Control Engineering, Proceedings of the IMechE(UK)**, Vol.217, Part I, pp.387-399,* 2003.

[46]. **B.Subudhi** and A.S.Morris, Dynamic modelling, simulation and control of a manipulator with flexible links and joints, *Robotics and Autonomous Systems, (Elsevier), vol.41, No.4, pp.257-270,* 2002. *& IEE Inspec, Robotics & Control, Issue: 2003-013*

[47]. **B.Subudhi** and A.S.Morris, On the singular perturbation approach to control of a multi-link manipulator with flexible links and joints, *Journal of Systems and Control Engineering, Proceedings of the IMechE(UK)*, vol.215, no.16, pp.587-598, 2001.

[48]. A.K.Swain and B.Subudhi, Computer control of cement raw mill with an improved material mix control scheme, **Jou. of Archives of Control Sciences, Poland**, vol.5 (XLI), no.1-2, pp.121-123, 1996.

[49]. B Subudhi, A.K.Swain and N.Ahmad, A genetic fuzzy adaptive controller for liquid level control system, **Jou. of Archives of Control Sciences, Poland**, vol. 5(XLI), no.3-4, pp.297-310, 1996.

NATIONAL

[1]. **B.Subudhi**, Modelling, Control and Experimental Facility for a Flexible Manipulator, **Journal of Systems Science & Engineering** (**Paritantra**), *vol.15, no.1,pp.40-48,* 2007.

[2]. **B.Subudhi** and A.S.Morris, On H$_\infty$ Controller for Flexible Robotic Manipulator, J**ournal of Systems Science & Engineering (Paritantra)**, *vol.10, no.1, pp.21-28*, Nov 2004.

[3]. **B. Subudhi**, An overview of soft computing paradigms in intelligent control, *Journal of Institution of Engineers (India), Electronics and Telecommunication Engg., vol. 79, pp. 30-37, March 1999.*

[4]. **B.Subudhi** and A.K.Swain, Optimisation of membership functions of fuzzy logic controller for controlling liquid level, *Journal of Indian Institute of Science (Special Issue on Intelligent Systems), India*, vol.77, no.1, pp. 5-14, 1997.

[5]. A.K.Swain and **B.Subudhi**, Artificial neural network approach for parameter estimation of exponentially damped sinusoids using linear prediction, *Journal of Indian Institute of Science (Special issue on Intelligent Systems), India,* vol.77, no.1, pp.63-70, 1997.

[6]. **B.Subudhi** and A.K.Swain, An expert system approach for fault diagnosis in a sub-system of power plant, *Indian Journal of Power & River Valley Development*, Feb 1996.

[7]. A.K.Swain and **B.Subudhi**, Fuzzy logic based cement kiln control, *Journal of Institution of Engineers (India), Electrical Engg., vol. 77, pp. 58-61, 1996.*

[8]. A.K.Swain and **B.Subudhi** and R.K.Swain, Industrial pollution control using intelligent controllers, *Journal of Industrial Pollution Control*, vol.11, no.1, pp.23-28, 1995.

[9].**B.Subudhi** and A.K.Swain, Genetic algorithm based fuzzy logic controller for real-time liquid level control, *Journal of Institution of Engineers (India), Electrical Engg., vol.76, pp.96-100, 1995.*

Revision in Review

[1]. B.Das, B.Subudhi and B.B.Pati, Co-operative Control of a Team of Autonomous Underwater Vehicles in an Obstacle Rich Environment, Computers and Electrical Engineering, Elsevier.

[2]. P.Pradhan, B.Subudhi and B.Biswal, Effective Wind Speed Forecasting Using Recurrent Wavelet Neural Network, Applied Soft Computing

[3]. R.Rout and B.Subudhi, Inverse Optimal Self-Tuning PID Control Design for an Autonomous Underwater Vehicle, Intl. Journal of System Science

International Conference Papers

[1]. Malaya Bhunia, Rajesh Gupta and B.Subudhi,sCascaded DC-DC Converter for a Reliable Standalone PV fed DC load, Allahabad, 2015

[2]. Chhavi Suryendu, Sandip Ghosh, Bidyadhar Subudhi, Online Delay Estimation and Guaranteed Cost Control of Temperature Control System with Network in Feedback Loop, IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES),2015.

[3]. Zuev, Alexander, Filaretov, Vladimir , Zhirabok, Alexey, Procenko, Alexander Subudhi, Bidyadhar , *Development of Synthesis Method of Fault Tolerant Systems for Autonomous Underwater Robots with Navigation Sensors Failures,* 23rd Mediterranean Conference on Control and Automation,June 16-19, 2015, Meliá Costa del Sol, Torremolinos, Spain

[4]. Soumya Ranjan Mahapatro, Bidyadhar Subudhi, Subhojit Ghosh,Adaptive Fuzzy PI Controller Design for Coupled Tank System: An Experimental Validation, Intl. Conf. on Advances in Control and Optimization of Dynamical Systems, 13-15 March 2013, Kanpur

[5]. S.Pradhan and B.Subudhi, Fuzzy Learning Based Adaptive Control of a Flexible Manipulator, IEEE Multi-Conference on Systems and Control, August 28-30, 2013 Hyderabad

[6]. B.K.Dash and B.Subudhi, A Fuzzy Adaptive Sliding Mode Slip Ratio Controller of a HEV, 2013 IEEE Intl. Conf. on Fuzzy Systems (FUZZ-IEEE 2013), Hyderabad, India July 2013

[7]. B.Sahu and B.Subudhi, Flocking Control of Multiple Autonomous Underwater Vehicles, India Conference (INDICON), 2012 Annual IEEE, 2012 , Kochi, 7-10 Dec. 2012

[8]. S.Bhuyan, B.Subudhi and S.Ghosh, Networked Control System: Uncertainty Modeling and Stabilization, Procedia Engineering, Vol.38, 2012, pp.3662–3667,International conference on modelling optimization and computing

[9]. S.Bonala, B.Subudhi and S.Ghosh, Stability Analysis of a Time-Delay System, India Conference (INDICON), 2012 Annual IEEE, 2012 , Kochi, 7-10 Dec. 2012

[10]. R.Pradhan and B.Suudhi, An Adaptive Prediction Error Filter for Photovoltaic Power Harvesting Applications, India Conference (INDICON), 2012 Annual IEEE, 2012, Kochi, 7-10 Dec. 2012

[11]. B.K.Dash and B.Subudhi, Effect of Sliding Surface on Slip Ratio Control Performance of a HEV, India Conference (INDICON), 2012 Annual IEEE, 2012, Kochi, 7-10 Dec. 2012

[12]. O.P.Suresh and B.Subudhi, Sliding mode approach to torque and pitch control for an wind energy system using FPGA, India Conference (INDICON), 2012 Annual IEEE, 2012 , Kochi, 7-10 Dec. 2012

[13]. D.K.Dash, S.Ghosh and B.Subudhi, India Conference (INDICON), 2012 Annual IEEE, 2012 , Kochi, 7-10 Dec. 2012

[14]. R.Pradhan and B.Subudhi, A Steepest-Descent based Maximum Power Point Tracking Technique for a Photovoltaic Power System, Intl Conf. Allahabad, 2012

[15]. R.Pradhan and B.Subudhi, A New Digital Double Integral Sliding Mode Maximum Power Point Tracker for Photovoltaic Power Generation Application, 3rd IEEE International Conference on Sustainable Energy Technologies, IEEE ICSET 2012, Kathmandu, Nepal, 24-27 Sep 2012.

[16]. R.Panigrahi, P.C.Panda and B.Subudhi, Comparison of Performances of Hysteresis and Dead Beat Controllers in Active Power, 3rd IEEE International Conference on Sustainable Energy Technologies, IEEE ICSET 2012, Kathmandu, Nepal, 24-27 Sep 2012.Kathmandu

[17]. R.Panigrahi, P.C.Panda and B.Subudhi, New strategy for generation of reference current in active power filters with distortion in line voltage, IEEE Conf. Madras, 2012

[18]. B.Subudhi, S.Bonala, S.Ghosh, and R.Dey, Robust Analysis of Networked Control Systems with Time-Varying Delays, Preprints of the 7th IFAC Symposium on Robust Control Design, The International Federation of Automatic Control, Aalborg, Denmark, June 20-22, 2012

[19]. S.K. Pradhan and B.Subudhi, NARMAX modeling of a two-link flexible robot India Conference (INDICON), 2011 Annual IEEE , Hyderabad, Dec 2011

[20]. T. Rakesh Kumar, A.Ghosh and B.Subudhi, Periodic Compensation of an Inverted Cart-Pendulum System, Intl. Conf. on Advances in Control & Optimization of Dynamical Systems, Bangalore,16-18, Feb 2012

[21]. B.Subudhi and B.Sahu, Adaptive Formation Control of Multiple Autonomous Underwater Vehicles, Intl. Conf. on Advances in Control & Optimization of Dynamical Systems, Bangalore,16-18, Feb 2012

[22]. S.K.Pradhan and B.Subudhi, Nonlinear Self-Tuning PID Controller for a Flexible Manipulator based on NARMAX Model, Intl. Conf. on Advances in Control & Optimization of Dynamical Systems, Bangalore,16-18, Feb 2012

[23]. Adaptive Path Following Control of an Autonomous Underwater Vehicle, Intl. Conf. on Advances in Control & Optimization of Dynamical Systems, Bangalore,16-18, Feb 2012

[24]. B.Subudhi and R.Pradhan, Characteristics Evaluation and Parameter Extraction of a Solar Array based on Experimental Analysis, IEEE PEDS-2011, Singapore

[25]. Madhu Singh, Kanungo Barada Mohanty and B.Subudhi, Sliding Mode Control of a Feedback Linearized Induction Motor using TS Fuzzy Base Adaptive Iterative Learning Controller, IEEE PEDS-2011, Singapore

[26]. R.Dash, B.Subudhi, S.Das, "Induction Motor Stator Inter-Turn Fault Detection Using Wavelet Transform Technique", 5th IEEE International Conference on Industrial and Information Systems (ICIIS - 2010) NIT Surathkal, Jul 29- Aug 01, 2010.

[27]. Saswat Kumar Ram, Smruti Ranjan Prusty, Prabhat Kumar Barik, K.K. Mahapatra ,B.D. Subudhi, FPGA Implementation of Digital Controller for Active Power Line Conditioner using SRFTheory, Environment and Electrical Engineering (EEEIC), 2011 10th International Conference on Date:8-11 May 2011, Rome, Italy.

[28]. Smruti Ranjan Prusty, Saswat Kumar Ram, B.D.Subudhi and K.K.Mahapatra, Performance Analysis of Adaptive Band Hysteresis Current Controller for Shunt Active Power Filter, Proceedings of ICETECT 2011

[29]. B.Subudhi, and Santanu Kumar Pradhan "Direct Adaptive Control of a Flexible Robot using Reinforcement Learning", International Conference on Industrial Electronics, Control and Robotics, pp.129-136, Rourkela, 27-29 Dec 2010.

[30]. R.Dash, B. Subudhi and S.Das,"A comparison between MLP NN and RBF NN techniques for the detection of stator inter-turn fault of an induction motor, International Conference on Industrial Electronics, Control and Robotics, pp.251-256,Rourkela, 27-29 Dec 2010.

[31]. B. Subudhi and P.K.Ray, "A Hybrid Adaline and Bacterial Foraging Approach to Power System Harmonics Estimation", International Conference on Industrial Electronics, Control and Robotics, pp.236-242, Rourkela, 27-29 Dec 2010.

[32]. B.Subudhi, B.Amarendra Reddy and S.Monangi, Parallel Structure of Fuzzy PID Controller under Different Paradigms, International Conference on Industrial Electronics, Control and Robotics,114-121, Rourkela, 27-29 Dec 2010.

[33]. Ki-Young Song, Madan M. Gupta, D.Jena and B.Subudhi, Design of a Robust Neuro-Controller for Complex Dynamic Systems, 28th North American Fuzzy Information Processing Society Annual Conf., Cincinnati, OH, USA, June 14-17, 2009

[34]. B.Subudhi, Anish Kumar A.K.and D.Jena, dSPACE implementation of Fuzzy Logic based Vector Control of Induction Motor, IEEE Conf. TENCON, Hyderabad (18-21 Nov 2008).

[35]. B. Subudhi, D.Jena and M. M. Gupta, Memetic Differential Evolution Trained Neural Networks for Nonlinear System Identification, 2008 IEEE Region 10 Colloquium and the Third International Conference on Industrial and Information Systems, Kharagpur, INDIA December 8 -10, 2008.pp1-6.

[36]. B.Subudhi and D.Jena , A Combined Differential Evolution and Neural Network Approach to Nonlinear System Identification, IEEE Conf. TENCON, Hyderabad (18-21 Nov 2008)

[37]. B.Subudhi, P.K.Ray S.R. Mohanty and A.M.Panda, Parameter Estimation Techniques Applied to Power networks, IEEE Conf. TENCON, Hyderabad (18-21 Nov 2008)

[38]. B.Subudhi , A.Patra N. Bhattacharya, and P. Kuanar, Embedded Design of a Remote Voice Control and Security System, IEEE Conf. TENCON, Hyderabad (18-21 Nov 2008)

[39]. Ramirez-Gordillo, J.; Merchan-Cruz, E.A.; Lugo-Gonzalez, E.; Ponce-Reynoso, R.; Rodriguez-Canizo, R.G.; Urriolagoitia-Sosa, G.; Subudhi, B., The Laplacian Artificial Potential Field (LAPF) for the Path Planning of Robotic Manipulators, Electronics, Robotics and Automotive Mechanics Conference, 2008. CERMA apos;08Volume , Issue , Sept. 30 2008-Oct. 3 2008 Page(s):508 – 513

[40]. S.Bhowmik, Dayal R. Parhi, B. Subudhi & Mukesh Kumar Singh, Swarming Of

Multiple Mobile Robots For Searching Operation Using ACO, *Intl. Conference On Soft Computing And Intelligent Systems*, ICSCIS 07,(27-29 December 2007), Jabalpur

[41]. S.Bhowmik, Dayal R. Parhi, B. Subudhi & Mukesh Kumar Singh, Formation Control of Multiple Mobile Robots using Fuzzy Logic Approach, *Intl. Conference On Soft Computing And Intelligent Systems*, ICSCIS 07,(27-29 December 2007),Jabalpur

[42]. S.Bhowmik, B.Subudhi, D.R.K.Parhi, Coordinated Motion Control of a Mobile Manipulator, *Intl Conf. on "Emerging Trends In Electrical Engineering*, Kolkata, 2-14 January, 2007, pp.124-131.

[43]. B.Subudhi, A.S.Morris and E.A.Merchan-Cruz, Singular perturbation modelling and neural network control schemes for a manipulator with flexible links and joints, *Proc. 8th IEEE Intl. Conf. on Methods and Models in Automation and Robotics*, 2-5 Sep 2002, Poland.

[44]. B.Subudhi and A.S.Morris, Neural network based singular perturbation control of a manipulator with link and joint flexibility, *Proc. 7th IEEE Intl. Conf. on Methods and Models in Automation and Robotics, Poland,* 28-31 August 2001, pp.671-675.

[45]. Morris, A.S. and Subudhi, B, A generalised model formulation for manipulators with flexible links and joints´, *Proc of 4th IMACS Symp on Mathematical Modelling (MATHMOD4)*, Vienna, 2003, pp 1202-1211 [ISBN 3-901608-24-9].

[46]. B.Subudhi, A.S.Morris and Vidyashankar B.R, Neural network based singular perturbation control of a multiple flexible link and joint manipulator, *Proc. Intl. Conf. on Computational Intelligence for Modelling Control and Automation, Las Vegas, USA*, pp.9-19, 9-11 July 2001,

[47]. B.Subudhi, A.S.Morris and Vidyashankar B.R, Flexible link and joint robot control using singular perturbation technique, *Proc. Intl. IASTED Conf. on Robotics & Manufacturing, Cancun, Mexico,* May 21-24 2001, pp.47-52.

[48]. B. Subudhi and A. S. Morris, On the two-time-scale singular perturbation approach to control of a multi-link manipulator with flexible links and joints, *Proc. UKSIM Conf*., March 28-30 2001, Cambridge, U.K, pp.88-93.

[49]. B.Subudhi, N.Karnachi and Ken Dutton, Modelling and position control of flexible manipulator using ANNs, *Proc. of the 2001, WSES NNA Intl. Conference, Spain*, pp.4561-4566, 2001.

[50]. A.K.Swain, B.Subudhi and N.Ahmad, A modified raw material mix control scheme for cement plant automation, *Proc. Intl. Conf. on Trends in Industrial Measurements and Automation*, Jan 3-7, 1996, pp.298-302.

[51]. A.K.Swain and B.Subudhi, A hybrid fuzzy-PID control scheme for cement kiln control, *Proc. Intl. Conf. on Automation*, Indore, India, Dec 12-14, 1995.

[52]. A.K.Swain and B.Subudhi, Fuzzy-PID hybrid control for cement kiln control, *Proc. IEEE Intl. Conf. on Intelligent Control and Instrumentation, Singapore,* 2-8 July 1995, pp.103-107.

National

[1]. B.Subudhi and R.Pradhan, Comparative Study on Solar Array Parameter Extraction Methods, **NSC-2010**,10-12,Dec-2010, Surathkal

[2]. B.Subudhi and S.Pradhan, Reinforcement Learning Based Adaptive Control of a Flexible Manipulator, **NSC-2010**, 10-12,Dec 2010, Surathkal

[3]. B.Subudhi, Anish Kumar A.K, Debashisha Jena, DSP Based Control and Identification of Induction Motor for Industrial Drives, *Proc. IEEE Sponsored Conf. on Computational Intelligence, Control and Computer Vision in Robotics & Automation*, Rourkela, 10-11 March 2008

[4]. A.K. Patra, N. Bhattacharya, P. Kuanar and B. D. Subudhi, **Development of a DSP based Remote Voice Control and Security System** , *Proc. IEEE Sponsored Conf. on Computational Intelligence, Control and Computer Vision in Robotics & Automation,* Rourkela, 10-11 March 2008

[5]. B.Subudhi and D.Jena, A State of the Art on Hybrid Soft Computing Techniques Towards Identification of Nonlinear Dynamical System *Proc. IEEE Sponsored Conf. on Computational Intelligence, Control and Computer Vision in Robotics & Automation, Rourkela*, 10-11 March 2008

[6]. B.Subudhi, D.Jena, An Improved Differential Evolution trained Neural Network Scheme for Nonlinear System Identification, *Proc. National System Conference, NSC 2007*, 14-15 Dec 2007, Manipal

[7]. B.Subudhi, P.K.Ray, S.R. Mohanty and A.M.Panda, Estimation of Power System Frequency Using RLS Technique, *Proc. Seminar, Energy Environment and Economics*, 3-4, Nov 2007, Rourkela

[8]. B.Subudhi and P.Das, A Combined Neural Networks and H_∞ approach for Precision Motion Control Systems, *National Conf on Recent Advances in Power Signal Processing and Control,* Rourkela, Nov 6-17, 2004, pp.108-114.

[9]. B.Subudhi, A.S.Morris, On H_∞ Controller for a Flexible Link Robotic Manipulator, *Proc. National Systems, Conference*, Kharagapur, Dec 17-19, 2003, pp.179-184.

[10]. B.Subudhi, P.K. Ray, K.C. Patra and P.Das , Soft computing approaches to controller design for a complex multivariable system" **National Conference on Soft Computing and machine learning for Signal Processing, Control, Power and Telecommunications,** 24-26 March' 2006., Bhubaneswar.

[11]. S. Behera, B. Subudhi, S. P. Das, and S. R. Doradla, Fuzzy Logic Controller-based High Performance Induction Motor Drive, **Conf. Proceedings of IEE Sponsored National Conference on Power Engineering Practices and Energy Management-2005**, TIET, Patiala, pp. 51-54, Jan. 28-29, 2005. (Adjudged the Best Technical Paper in the Session - "Power Electronics and Electric Drives")

[12]. A.K.Swain and B.Subudhi, A novel raw mix proportion control for cement plant automation, *Proc. National Systems Conference-94*, Dayalbag, India, Jan 18-19, 1995.

[13]. A.K.Swain and B.Subudhi, Neural Network based intelligent control for process industries, *Proc. National Systems Conference-94*, Dayalbag, India, Jan 18-19, 1995.

[14]. B.Subudhi and A.K.Swain and N.Ahmad, A Robust Fuzzy Logic Controller for Real-Time Liquid Level Control, *Proc. 4th IEEE Symp. Intelligent Systems*, Bangalore, India, Nov-21-24,1994.

[15]. A.K.Swain and B.Subudhi, Neural network based cement kiln control, *Proc. Intl. Conf. on Automation*, Indore, India, Dec 12-14, 1995, pp.155-158.