National Institute of Technology, Tiruchirappalli:
Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Brief Profile: 1-2 paragraphs (not exceeding 500 words)

Prof. S. Arul Daniel completed his M.E. Power Systems from the Regional Engineering College, Tiruchirappalli,in 1991 and Ph.D. from the same Institution under Bharathidasan University. He joined as a Lecturer in the Department of Electrical and Electronics in 1994, where he is currently a Professor.

He was selected for training in the University of Manchester, UK as a British Council Study Fellow under the Auspices of the Indo-UK RECs project in 1997. His areas of research are power electronics applications to renewable energy systems, micro-grids and smart-grids. Dr. S. Arul Daniel has been consistently contributing to evolving new hybrid energy systems.

He had served as Head of the Department of EEE, ICE and also as Associate Dean(Academic). Presently he is the Dean(Academic) of NITT.

1. Name: Dr. S. Arul Daniel
2. Designation: Professor
3. Office Address: Dept. of EEE, NIT, Trichy - 15
4. Telephone (Direct) (Optional): (431)2503256

   Telephone : Extn (Optional):

   Mobile (Optional):
5. Email (Primary):daniel@nitt.edu Email (Secondary)

6. Field(s) of Specialization:

   Power Systems and

   Power Electronics in Renewable Systems

7. Employment Profile

Job Title	Employer	From	To
Professor	NITT	5-9-2010	Till date
Associate Professor	NITT	5-9-2007	4-9-2010
Asst Professor	NITT	5-9-2004	4-9-2007

Senior Lecturer	NITT	5-9-1999	4-9-2004
Lecturer	NITT	5-9-1994	4-9-1999

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	REC, BDU	2003		Electrical Engineering
M.E.	REC, BDU	1991	I Class	Power Systems
B.E.	GCT,BU	1988	I Class	ECE
HSC	State	1984	Distn	Maths, Phy. Chem
SSLC	State	1982	Distn.	Maths, Sci, His&Geo

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Dean (Academic)	NITT	14-1-2014	Till date
HoD	ICE	Nov.2012	May 2013
HoD	EEE	Jan. 2009	Jan 2012
Assoc Dean(Acad)	NITT	Dec. 2005	Sep. 2008

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Member, BoS	PSG Tech. Coimbatore	2016	Till date
Member, BoS	GCT, Coimbatore	2016	Till date
Member, Academic Council	Bishop Heber College, Trichy	2016	Till date
Member, Academic Council	Kalasalingam University	2016	Till date

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2014	Golden Jubilee Distinguished Alumni Award	RECAL, NITT
1982	Merit Certificate for rank in SSLC	Govt. of TN

12. Fellowships

13. Details of Academic Work

(i) Curriculum Development

Introduced a new course on Renewable Energy in 1998
Introduced a new course on Networks and Linear Systems 1999
BoS member for State Govt. Colleges

(ii) Courses taught at Postgraduate and Undergraduate levels

UG: Circuit Theory, Networks and Linear Systems, Linear Integrated Circuits, Power System Operation, Power System Analysis,

PG: Advanced Power system Analysis, Distribution Systems, Smart Grid, Power System Reliability, Power System Operation and Control

(iii)Projects guided at Postgraduate level

Fault detection in power system network using FUZZY LOGIC approach
Voltage control of a wind-driven permanent magnet alternator without battery storage
PV fed Z – Source inverter for lighting loads
Fault diagnosis in micro-grid network using HYBRID FUZZY – GA approach
Analog voltage controller for a stand-alone wind-driven permanent magnet alternator without battery storage
Z – Source inverter for PV application
Design methodology for autonomous operation of a radial distribution network
Two phase Z – Source inverter for PV array
Grid connected Z – Source inverter
Peak power tracking of a PV fed inverter driven single phase induction motor
Design methodology for autonomous operation of a radial distribution network
Impact of distributed resources on power system planning
Current controlled voltage source inverter for integration of photovoltaic array to grid
Impact of micro grid on the life of distribution transformers
Economic load dispatch with security and environmental constraints
Economic load dispatch with security constraints by using soft computing techniques
Current controlled voltage source inverter for integration of photovoltaic array to grid

Improvement in the life of a distribution transformer by optimal sizing of embedded generation
Maximum power extraction from integrated SOLAR – WIND energy system
Congestion management with integration of wind energy
Wind and thermal coordination system scheduling based on PSO
Studies on an analog proportional – hysteresis current controller for grid integrated voltage source inverter
MOEA method for congestion management of transmission network with integration of wind energy
Short term generation scheduling of a microgrid

(iv) Other contribution(s)

Class Committee Chairman,
Member, Dept. Project Evaluation Committee

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Neural controller for integrated wind/solar system for battery charging (Along with Dr.N.Ammasai Gounden)	Thrust Area Project, MHRD	2000-	2002	Completed
Control of a hybrid wind-driven induction generator and PV array distributed generator for the isolated and grid-connected operations	Thrust Area Project, MHRD	2004	2006	Completed
Third party evaluation of electrical design, commissioning and testing of 125	Govt. of TN	2010	2011	Completed

MLD and 45.7 MLD sewage treatment plant for Madurai Corporation-Total amount mobilized including civil work evaluation (undertaken by CE dept.) is 15Lakhs Ph.D. Guided				

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
Dr.(Smt.) M.Arutchelvi-	Autonomous and Non-Autonomous Operation strategies for hybrid Wind-PV Dispersed generators using Power Electronic Controllers	Supervisor	2007
Dr. H. Habibullah Sait [with Dr. C. Nagamani as co-guide]	Control strategies for inverters integrated to the utility network and fed from renewable sources	Supervisor	2010
Dr.(Ms.) M.Venkatakirthiga	Studies on development and operation of a sustainable autonomous micro-grid	Supervisor	2014
Dr.(Smt.) K. Padmavathy	Certain investigations on autonomous and grid connected solar PV systems	Supervisor	2015
Dr. M.M.Rajan Singaravel	Sizing of storage and investigations on power electronic interfaces for hybrid Wind-PV energy conversion systems	Supervisor	2015

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)- 2015-16 only

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
1	ABET workshop	National	Participant	ABET and IEEE, Chennai	Chennai
2	Conference	International	Keynote speaker	Anna University,	Trichy

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Two days workshop on Distributed Generation during (organized along with Ms.M.Venkatakirthiga and Mr.P.Raja)	National	Dec.14th and 15th 2007	Organizer & Resource Person	NITT
Two days short-term training programme Integrated wind-solar power systems (Self-financed scheme).	National	January 6th and 7th, 2012.	Organizer & Resource Person	NITT
Two days short-term training programme Renewable autonomous power plants and micro-grids(self-financed), during (organized along with Ms.M. Venkatakirthiga).	National	February 4th and 5th, 2012	Organizer & Resource Person	NITT

18. Invited Talks delivered (2016)

Topic	Date	Inviting Organization
Smart Grid Technologies	28th Nov 2016	Pondichery Engg. College, Pondichery

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life	ISTE	LM 31301
Ordinary Member	IEEE	90581959

20. Academic Foreign Visits

Country	Duration of Visit	Programme
UK	Jan-June 1997	Indo-UK RECs project
Singapore	One month 2007	TEQIP study programme
Israel	One week	IEEE conference in Eilat

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
S. Arul Daniel, N. Ammasai Gounden	A novel hybrid isolated generating system based on PV fed inverter-assisted wind-driven induction generators	IEEE Transactions on Energy Conversion	19(2)	416-422	2004	2.596
M Venkata Kirthiga, S Arul Daniel, S Gurunathan	A methodology for transforming an existing distribution network into a sustainable autonomous micro-grid	IEEE Transactions on Sustainable Energy	4(1)	31-41	2013	3.727
MM Rajan Singaravel, S Arul Daniel	MPPT with Single DC–DC converter and inverter for grid-connected hybrid wind-driven PMSG–PV system	IEEE Transactions on Industrial Electronics	62(8)	4849-4857	2015	6.383

H Habeebullah Sait, S Arul Daniel	New control paradigm for integration of photovoltaic energy sources with utility network	International Journal of Electrical Power & Energy Systems (Elsevier)	33(1)	86-93	2011	2.587
K.Padmavathi, S Arul Daniel	Performance analysis of a 3MW p grid connected solar photovoltaic power plant in India	Energy for Sustainable Development (Elsevier)	17(6)	612-625	2013	2.379
M Arutchelvi, S Arul Daniel	Voltage control of an autonomous hybrid generation scheme based on PV array and wind-driven induction generators	Electric power components and systems (Taylor & Francis Group)	34(7)	759-773	2006	1.35
M Arutchelvi, S Arul Daniel	Composite controller for a hybrid power plant based on PV array fed wind-driven induction generator with battery storage	International journal of energy research	31 (5),	515-524	2007	1.86
MMR Singaravel,	Studies on battery storage	Energy Conversion	67(1),	34-43	2013	4.801

SA Daniel	requirement of PV fed wind-driven induction generators	and Management				
K Padmavathi, SA Daniel	Studies on installing solar water pumps in domestic urban sector	Sustainable Cities and Society	1 (3),	135-141	2011	1.044
S Arul Daniel, N Ammasai Gounden	Simulation of photovoltaic array-driven electric machines with power electronic interfaces	Simulation	86 (11),	699-711	2010	0.640
MMR Singaravel, SA Daniel	Sizing of hybrid PMSG-PV system for battery charging of electric vehicles	Frontiers in Energy	9 (1),	68-74	2015	
P Muthuvel, SA Daniel, DG Yazhini	Retrofitting domestic appliances for PV powered DC Nano-grid and its impact on net zero energy homes in rural India	Engineering Science and Technology, an International Journal	19 (4),	1836-1844	2016	

(B) Conferences/Workshops/Symposia Proceedings (2015)

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
R Kappagantu, SA Daniel, A Yadav	Power Quality Analysis of Smart Grid Pilot Project, Puducherry	Procedia Technology Vol.21,	560-568	Smart Grid Technologies		2015
R Kappagantu, SA Daniel, M Venkatesh ,	Analysis of Rooftop Solar PV System Implementation Barrier in Puducherry Smart Grid Pilot Project	Procedia Technology Vol.21,	490-497	Smart Grid Technologies		2015