

**Dr.Balamurugan**

Assistant Professor – Mechanical Engineering

Coimbatore institute of technology –

Coimbatore – 641 014

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1.1 Area of Specialization : **Heat Power Engineering**

1.2 Field of Interest : Heat Transfer – Thermal – Heat Exchanger –  
Solar Energy – Simulation – Experiments - Optimization

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2. Name of the father : S.Sivaramakrishnan

3. Address for Communication : 5/207, Vadha Nivas, VPK Garden ,  
Mylampatti (Post)  
Coimbatore – 641 023, India  
Mobile: +91 9865062725  
e-mail: [sbalamurugan@cit.edu.in](mailto:sbalamurugan@cit.edu.in) ,  
[balu74\\_cit@yahoo.co.in](mailto:balu74_cit@yahoo.co.in)

4. Date of Birth : 18.06.1974

5. Sex : Male

6. Nationality /Community : Indian / Brahmin

7. Details of Academic Qualifications:

Degree	Branch	University / Board /Institution	Year of Passing	Marks	Class
Ph.D	Mechanical	Anna University	2015		----
M.E	Mechanical – Heat Power Engineering	Anna University – Coimbatore Institute of Technology, Coimbatore	2008	9.07	First Class with Distinction
B.E	Mechanical	Bharathiyar University – Coimbatore Institute of Technology, Coimbatore	2004	89%	First Class with Distinction
DME	Mechanical	K.S.Rangasamy Polytechnic - Directorate of Technical Education – Tamilnadu	1993	86%	First Class
SSLC		Govt.H.S.S – Mallur , Salem State Board – Tamilnadu	1989	72%	Pass

## 8. Thesis Details

- 8.1 Title of thesis at Doctoral level : Investigation on Plasma Transferred Arc Hardfacing of Structural Steel with Titanium Carbide
- 8.2 Title of thesis at Master level : Finite Element Simulation of Hybrid Welding of AISI 304 SS Plates – (Temperature distribution and Heat transfer rate)

## 9. Details of Experience (Both Teaching and Industry):

Name & address of the Institution /Organization	Post Held	Scale of Pay/ Pay Band	Period of Service	Duration (Years)
Coimbatore Institute of Technology	Assistant Professor	21000 +6000 G.Pay: 62,450/-	From 2004 to till date	14
Sam Chemical Pumps, Coimbatore	Trainee	1000/pm	1992-1993	01
P.S.G Industrial Institute, Coimbatore	Jr.Engineer	8000/pm	1993 - 2001	08
Total Experience		Industry		09
		Teaching		14
	Total Experience			23



### Experience in Teaching

#### Theory

- |   |                             |
|---|-----------------------------|
| 1. Applied Thermodynamics                       | 2. Thermal Engineering      |
| 3. Heat and Mass Transfer                       | 4. Turbomachinery           |
| 5. Design and Optimization of Thermal Equipment | 6. Solar Energy Utilization |

#### Laboratory

Heat Transfer Lab - In-charge

- 18 Equipments are Procured
- Prepare Heat Transfer Manual – Conducting Sixteen Experiments

## 10. CONFERENCES ORGANIZED

- Co-Coordinator, One day National Seminar on Advanced in Thermal Engineering (ADTHE-2006), CIT, March ,2006
- Coordinator , One week FDP – Heat Transfer under TEQIP Sponsored Programme – Oct 14 – 20<sup>th</sup>, 2014
- Coordinator, one week STC – Introduction of Numerical Heat Transfer, Fluid Flow and its Applications, AICTE-QIP program organized on 28<sup>th</sup>, May 2018 to 03<sup>rd</sup> June,2018.

- Coordinator, One Week FDP – “Advances in Heat Exchangers” – TEQIP III sponsored to be held on 24<sup>th</sup> – 30<sup>th</sup> September 2018.

## 11. FACULTY DEVELOPMENT / SHORT TERM PROGRAMME ATTENDED:

1. Thinking for Design: “Conceptual and Pedagogical tools for teaching design” organized by Indian Institute of Science, IIT-Madras, TCS and CIT, 29<sup>th</sup> to 30<sup>th</sup>, December, 2006.
2. “Future Electrical Energy Requirement of India and Solution Methods” (Key topics of renewable energy solution and energy economics etc), Nov 17<sup>th</sup> to 30<sup>th</sup>, AICTE Sponsored FDP program, 2008.
3. AICTE – SDP – “Energy Auditing, Conservation and Management in Chemical and Allied Industries” organized by the department of Chemical Engineering, CIT from 16<sup>th</sup> – 22<sup>nd</sup>, May, 2010.
4. QIP – FDP-Short term course on “Introduction to Turbulent Flows and their Prediction” organized by the department of Applied Mechanics, IIT-Madras from 19<sup>th</sup> to 23<sup>rd</sup>, March, 2011.
5. QIP – FDP- Short term course on “Recent Advancement in Microfluidics” organized by Department of Mechanical Engineering, IIT- Guwahati from October 31<sup>st</sup> to November 4<sup>th</sup>, 2011.
6. QIP – FDP-Short term course on “Renewable Energy Materials & Their Industrial Application” organized by Material Science Centre, IIT – KGP from November 05 to 16, 2012.
7. QIP- FDP- Short term course on “Renewable Energy” organized by Pondicherry Engineering College on May 13<sup>th</sup> to 26<sup>th</sup>, 2013.
8. QIP-STC on “ Design Nuances in Incompressible and Compressible Flow Turbomachines” Organized by Indian Institute of Science (IISc) , Bengaluru on October 17<sup>th</sup> to 21<sup>st</sup> , 2016.

## 12. SEMINAR /WORKSHOP ATTENDED

1. Value Engineering held at CIT, Coimbatore, December 2003
2. Management of Renewable Energy Sources for Sustainable Development, Feb 2005, GCT, Coimbatore
3. Advanced in MIG/MAG Welding Process, CIT, Coimbatore , Sep-2005
4. Industrial Design (Criterion and Means of Industrial Design), CIT, Coimbatore, Oct 2005.
5. Technological Forecasting towards Globalization, CIT, Coimbatore, Jan 2006.
6. Recent Trends in Solar Photovoltaic, CIT, Coimbatore, July 2006.
7. Energy Conservation – Socio Economics issues in rural electrification, CIT , Coimbatore, July 2006
8. Advances in Thermal Engineering, CIT, Coimbatore, March 2006.
9. Welding of new generation stainless steel, CIT, Coimbatore, Nov 2006.
10. Collaborative Product Data Management(CPDM), Sep 2008, CIT, Coimbatore

11. International Workshop of “Future Trends in Sustainable Surface Transportation (TrendSST-2009) organized by TEXAS University and CIT, March 17-19, 2009 at CIT, Coimbatore.
12. Mission 10X (High Impact Teaching Skills) workshop from 6<sup>th</sup> -10<sup>th</sup> July,2009,CIT,Coimbatore
13. National Workshop - Surface Engineering(SurE“10) organized by Annamalai University on 9-10, April 2010
14. IBM High Performance Computing (HPC), April 8-9, 2011, CIT,Coimbatore

### 13. PAPER PRESENT IN NATIONAL CONFERENCES

1. G.Ravindra Reddy.,**S.Balamurugan**, “ Heat transfer analysis of a flat plate solar collector at various wind speed and cover plate temperatures” Advances and Challenges in Mechanical Engineering (ACME-2010), organized by Erode Senguthar Engineering College ,Erode on 25 – 26, March 2010
2. S.Balamurugan.,**S.Balamurugan**, “Transient Thermal Simulation of Circular Pin-Fin for Electronic Cooling Applications, organized by Jawaharlal Nehru National College, Shivamogga , Karnataka, 24<sup>th</sup> and 25<sup>th</sup> , Sep 2010.
3. B.Thirumaya Prabhu, **S.Balamurugan**, “Design and Optimization of Tube with Internal Longitudinal Fins” organized by Jawaharlal Nehru National College, Shivamogga, Karnataka, 24<sup>th</sup> and 25<sup>th</sup> , Sep 2010.
4. B.Thirumaya Prabhu, **S.Balamurugan**, “ Design and Optimization of Tube with Internal Longitudinal Fins” , 16<sup>th</sup> ISME Conference on Mechanical Engineering for Sustainable Development , Organized by IIT- DELHI from Dec 2 – 4, 2010

### 14. PAPER PRESENT IN INTERNATIONAL CONFERENCES

1. **S.Balamurugan**, “ Design of Experiment and Optimization of Solar Flat Plate Collector”, International Conference in South Asia on Global Manufacturing Systems & Management (ICGMSM -2011) organized by CIT, August 1- 3, 2011
2. **S.Balamurugan, N.Murugan** , “ A Wear Study on Plasma Transferred Arc Hardfaced Structural Steel with Titanium Carbide”, IEEE International Conference on Energy Efficient Technologies for Sustainability (ICEETS-2013) organized by St.Xavier’s Catholic College of Engineering, Nagercoil – 629 003 on April 10-12, 2013.

## 15. INTERNATIONAL JOURNAL PUBLICATIONS

1. **Balamurugan, S & Murugan, N** 2013, „Design of Experiment and Optimization of Plasma Transferred Arc Hardfacing on Structural Steel with Titanium Carbide“, Research Journal of Applied Sciences, Engineering and Technology, Maxwell Scientific Organization, Print ISSN: 2040-7459, Online ISSN: 2040-7467.
2. **Balamurugan, S & Murugan, N** 2014, „A Wear Study on Plasma Transferred Arc Hardfaced Structural Steel with Titanium Carbide“, World Journal of Modelling and Simulation, World Academic Press, World Academic Union, England, UK, ISSN: 1746 – 7233. – Accepted
3. **Balamurugan, S & Murugan, N** 2014, „A Study on Microhardness, Microstructure and Wear Properties of Plasma Transferred Arc Hardfaced Structural Steel with Titanium Carbide“, Journal of Minerals & Materials Characterization and Engineering (JMMCE): ID No: 2710131- ISSN Print: 2327-4077, ISSN Online: 2327-4085
4. **Balamurugan, S & Murugan, N** 2012, „An Analysis of Plasma Transferred Arc Hardfacing of Structural Steel with Titanium Carbide“, International Journal of Mechanical Engineering, ISSN: 2051-3232, vol.40, Issue.10, Recent Science Publications Archives, pp – 355 to 366 .
5. **Balamurugan, S & Murugan, N** 2013, „Simulation of Plasma Transferred Arc (PTA) Hardfaced on Structural Steel with Titanium Carbide“, Journal of Engineering, Computers & Applied Sciences (JEC&AS), ISSN No: 2319-5606 vol. 2, no.4, Blue Ocean Research Journals, pp.10 – 14.
6. **Balamurugan. S & Selladurai.V**, 2014, „Optimization of Solar Flat Plate Collector“, International Journal of Applied Research and Studies (iJARS), ISSN No: 2278 – 9480, vol.3, Issue 8, August 2014,pp.1-8.
7. **Balamurugan.S & Samsoloman.D.P**, 2014 “Investigation of Shell and Tube Heat Exchangers by using a Design of Experiments”, Journal of Heat and Mass Transfer Research, vol.2, pp. 59 – 66.
8. **Balamurugan.S & Venkatesh.L** , Numerical Simulation of the Effective Thermal Conductivity Of Composite Matrix By Using Design Of Experiments Under review – 02 Papers , Heat Transfer Research – *Under Review*
9. **Balamurugan.S & Praveen Kumar, V**, Numerical study of longitudinal wall conduction effects in three fluid cross flow heat exchangers, Int.Journal of Enhanced Heat transfer, - *Under Review*.
10. **Balamurugan.S & Krishnakanth.K**, Numerical Study of Convective Heat Transfer for Different Shapes of Hot Sources Inside an Enclosure, Research & Reviews: Journal of Engineering and Technology, , ISSN No: 2319 – 9873, vol.4, Issue.3,Sep -2015, pp.18-34.

11. Satheesh kumar.V & **Balamurugan.S**, Investigation of Thermo Physical Properties of Liquids By Using Ultrasonic Method, IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), e-ISSN: 2278-1684,p-ISSN: 2320-334X, Volume 13, Issue 5 Ver. VI (Sep. - Oct. 2016), PP 33-43

**16. GUIDED TO UNDER GRADUATE AND POST GRADUATE**

Final Year (UG)	- 10
Mini Project (UG)	- 04
Post Graduate	- 13

**17. INSTITUTION AND DEPARTMENT COODINATOR**

- Time Table work during the period of 2005 to 2010 – Mech.Dept.
- NBA, AICTE work during the period of 2007 to 2011.- Mechanical Dept.
- AICTE – Confederation of Indian Industry (C.I.I) Survey coordinator from 2<sup>3rd</sup> June,2018 – CIT – Mechanical Department
- CIT -YRC -Student Welfare and Extra Curricular Activities Committee Member from 2017 onwards

**18. MEMBERSHIP IN PROFESSIONAL BODIES**

- Life Member in The Combustion Institute – Indian Section (IIT – Madras)
- Life Member in Indian Society for Heat and Mass Transfer (ISHMT) – IIT-Madras Campus)

**19. RESEARCH INTEREST**

- Heat transfer , Simulation, Optimization

**20. STATEMENT OF RESEARCH INTERESTS:**

I would like to develop the research centre in the area of heat transfer field.

**21. STATEMENT OF TEACHING PHILOSOPHY**

Heat transfer, thermodynamics, thermal science, solar energy

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## **16. FAMILY DETAILS**

Mrs.S.Bhuvaneswari Balamurugan is working as Lecturer from 2008 at CIT Sandwich Polytechnic in Department of Chemistry and god blessed us one Son. His name is Srijith Balamurugan. He is studying Third Standard at Chandrakanthi Public School-Coimbatore.