

**Bio Data**  
**Of**  
**Dr. Jaspal Singh**

1. **Name:** Dr. Jaspal Singh
2. **Qualification:** M.Sc. (Physics), Ph.D.(UGC Regulations 2009)
3. **Designation:** Assistant Professor in Physics
4. **Date of Birth:** 25/05/1981
5. **Permanent Address:** VPO Hiron Kalan, Dist. Mansa (151504)
6. **Contacts:** Mb. 9478011059, Email: jaspalsliet@gmail.com
7. **Specialization/Research Topic:** Generation of Thermo EMF Under The Dynamics of Electric And Magnetic Fields
8. **Teaching Experience:**
  - a) Lecturer Physics (Adhoc) SLIET Longowal (July 2009 to 31<sup>st</sup> May 2010) ICD, B.Tech
  - b) Lecturer Physics (Adhoc) Multani Mall Modi College, Patiala (July 2010 to March 2011)UG
  - c) Lecturer Physics (Contract) ADC Mastuana (August 2011 to 3<sup>rd</sup> July 2013) UG
  - d) Assistant Professor in Physics (Regular) Mata Sundri University Girls College, Mansa ( 11<sup>th</sup> July 2013 till date)UG

**Academic Achievements**

- Papers Presented in Conferences/Seminars: 16 (Till February 2018)
- Papers Published in National Research Journals: 03
- Papers Published in International Research Journals: 05
- Books Published: 01 (Text Book of Applied Physics ISBN 978-81-8411-621-2)  
Sonal Publications New Delhi
- Magazine Articles: 06
- Newspaper Articles: 20 (Till Feb. 2018)
- Any Other Information: *Life Time Member of Punjab Academy of Sciences*

## LIST OF PUBLICATIONS

### 1. Journal Publications:

- i) *“Effect of Magnetic and Electric Field Dynamics on Iron-Copper Thermocouple Performance”* Asian Journal of Chemistry Vol.21, No.10 (2009) S056-S061
- ii) *“Performance Comparison of Some Common Thermocouples for Waste Heat Utilization”* Asian Journal of Chemistry Vol.21, No.10 (2009) S062-S065 (**One Citation: J. Electromagnetic Analysis & Applications, 2010, 2, 549-556.**)
- iii) *“Effect of Mechanical stress on the generation of thermo-emf for copper-constantan thermocouple”* Indian Journal of Engineering, Science, and Technology ISSN: 0973-6255 Vol. 4 No.1 January- June 2010 (104-107)
- iv) *“Effect of operating parameters on the performance of thermocouples”* International Journal of Applied Engineering Research (IJAER) ISSN 0973-4562 Volume 5 Number 17(2010) pp. 2957-2964
- v) *“Magnetic Field Dynamics of Thermo-Emf Generation in the High Temperature Range”* Research Journal of Engineering and Technology(RJET), Vol.2, Issue 4,Oct-Dec 2011, ISSN 0976-2973, pp.207-212
- vi) *“Energy Conversion Efficiency Of The Advanced Thermocouples Under The Influence Of Applied Electric Field”* Research Journal of Engineering and Technology (RJET) 3(3),July-Sept. 2012, ISSN 0976-2973, pp.221-226.
- vii) *“Energy conversion efficiencies of thermoelectric pallets under the influences of electric and magnetic fields”* AIP Conference Proceedings 1536, 1213 (2013); <https://doi.org/10.1063/1.4810676>
- viii) *“A Comparison of Figure of Merit for Some Common Thermocouples in the High Temperature Range”* Global Journal of Researches in Engineering Electrical and Electronics Engineering Volume 13 Issue 11 Version 1.0 Year 2013

**2. Paper in the Proceeding of International Conference:** World Spring Congress on Engineering & Technology (SCET-2012) held in Xian (China) from 27<sup>th</sup> May to 30<sup>th</sup> May 2012 and present the paper (Oral Presentation) of title “Semiconducting Pallets ( $\text{Bi}_2\text{Te}_3$ ,  $\text{Pb}_2\text{Te}_3$  and  $\text{Bi}_2\text{Pb}_3$ ): As the Thermo Power Generation Elements” this paper is published in the IEEE proceeding ISBN 978-1-4577-1963-<http://www.engii.org/scet2012/>

### 3. Papers in Conference Proceedings:

- a) *“Effect of Magnetic and Electric Field Dynamics on Iron-Copper Thermocouple Performance”* poster presentation in National Conference on Advanced Materials and Radiation Physics (AMRP-09) March 9-10, 2009 held at SLIET, Longowal (Punjab).
- b) *“Performance Comparison of Some Common Thermocouples For Waste Heat Utilization”*, poster presentation in National Conference on advanced Materials and Radiation Physics (AMRP-09) March 9-10, 2009 held at SLIET, Longowal (Punjab).
- c) *“Waste Heat Utilization and Thermoelectricity”*, Presented in ISTE Sponsored 4<sup>th</sup> National Conference “Innovative Developments in Engineering Applications “ 26-27 March 2009, held at BGIET, Sangrur (Punjab).

- d) *“Investigations on the Thermoelectric Performance of Some Common Thermocouples”* abstract accepted in International Conference on Thermoelectricity (**ICT-09**) 26-30 July, **Germany**.
- e) *“Thermoelectric power generation with electroceramics”* abstract accepted in international conference on electroceramics (ICE-09) 13-17 Dec. 2009, at Delhi University; Delhi (India).
- f) *“Effect of mechanical stress on the generation of thermo emf for the copper- Constantan thermocouple”* accepted in National Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (February 19-20, 2010) at Yadwindra College of engineering, Talwandi Saabo (Bathinda).
- g) National Seminar on, “Chemical Industries in India: Opportunities’ and Challenges” CIIOC-2010 held on 5-6 March 2010, organized by department of Chemical Technology SLIET Longowal (Deemed to be University) Sangrur (Pb) and presents a paper of title *“Utilization of Industrial waste Heat by thermoelectricity”*.
- h) 2<sup>nd</sup> National Conference on Precision Metrology (NCPM-2010) 26-27 March 2010 organized by department of Mechanical Engineering SLIET Longowal, Sangrur (Punjab) and presents the paper of title *“Effect of operating parameters on the performance of thermocouples”*.
- i) **International Conference on Renewable Energy (ICRE-2011)** 17-21 January, 2011 held at University of Rajasthan, Jaipur (Rajasthan), India and presents the paper of title *“Magnetic Field dynamics of thermo emf generation in the high temperature range”*
- j) National Conference on Recent Trends in Material Science, 8-10 October 2011(RTMS-2011) held at Jaypee University of Information Technology, Wahnaghat (HP) and presents a paper of title *“Influence of Electric Field Dynamics On The Generation of Thermo emf By Few Advanced Thermocouples in the High Temperature Range”*
- K) National Conference on Advanced Materials and Radiation Physics, 4-5 November 2011(AMRP-2011) held at Sant Longowal Institute of Engineering and Technology (Deemed to be University) Longowal, Dist. Sangrur (Punjab) and presents a paper of title *“Thermo Power Generation In  $Bi_2Te_3$ ,  $Pb_2Te_3$  and  $Bi_2Pb_3$  Pallets”*
- l) National Symposium on Radiation Physics and Nano materials, 04-05 February, 2011 held at Physics Dept. Punjabi University Patiala and presents a paper of title *“Improving the Thermo Power Generation through the Nano Materials”*
- m) **World Spring Congress on Engineering & Technology (SCET-2012) held in Xian (China) from 27<sup>th</sup> May to 30<sup>th</sup> May 2012 and present the paper (Oral Presentation) of title “Semiconducting Pallets ( $Bi_2Te_3$ ,  $Pb_2Te_3$  and  $Bi_2Pb_3$ ): As the Thermo Power Generation Elements” Funded by DST and PSCST.**

#### 4. Magazine Articles:

(a) *“Thermoelectric Cooling”*, COOLING INDIA, vol.4 No6. P no35 Jan-Feb’09

(b) *“Usage of Waste Heat”*, CHEMICAL BUSINESS, vol.23 No1P no30. Jan’09

- (c) “*Solar Thermoelectric Refrigeration*” RENEWABLE ENERGY AKSHAY URJA Volume 3, Issue 5 April 2010
- (d) “*Utilization of Industrial Waste Heat by Thermoelectricity*” COOLING INDIA, Vol. 7 No. 7, P no.22, Oct 2011
- (e) “*A Green approach: Towards Refrigeration by Thermoelectric Materials*” COOLING INDIA, Vol. 7 No.9 P no72, December 2011
- (f) “Advances in Nano-Thermoelectricity” COOLING INDIA, P. no.32, April 2012

## 5. List of Conferences/Workshops attended

1. Instructional Workshop on Computational Aspects of Mathematics (IWCM-09) 22-26 December 2008, held at SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY, Longowal (Punjab).
2. National Conference on advanced Materials and Radiation Physics (*AMRP-09*) 9-10 March 2009, held at SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY, Longowal (Punjab).
3. ISTE Sponsored 4<sup>th</sup> National Conference “Innovative Developments in Engineering Applications” 26-27 March 2009, held at BHAI GURDAS INSTITUTE OF ENGINEERING AND TECHNOLOGY, Sangrur (Punjab).
4. National Workshop on Plasma Surface Interactions and Processing (NWPSIP-09) 25-27 May 2009, held at NATIONAL INSTITUTE OF TECHNOLOGY, Hamirpur (HP).
5. National Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (February 19-20, 2010) at Yadwindra College of engineering, Talwandi Saabo (Bathinda)
6. National Seminar on, “Chemical Industries in India: Opportunities’ and Challenges” CIIOC-2010 held on 5-6 March 2010, organized by department of Chemical Technology SLIET Longowal (Deemed to be University) Sangrur (Pb)
7. 2<sup>nd</sup> National Conference on Precision Metrology (NCPM-2010) 26-27 March 2010 organized by department of Mechanical Engineering SLIET Longowal, Sangrur (Punjab)
8. ***International Conference on Renewable Energy (ICRE-2011)*** 17-21 January, 2011 held at University of Rajasthan, Jaipur (Rajasthan), India.
9. National Conference on Recent Trends in Material Science, 8-10 October 2011(RTMS-2011) held at Jaypee University of Information Technology, Wahnaghat (HP)
10. National Conference on Advanced Materials and Radiation Physics, 4-5 November 2011(AMRP-2011) held at Sant Longowal Institute of Engineering and Technology (Deemed to be University) Longowal, Dist. Sangrur (Punjab).
11. National Symposium on Radiation Physics and Nano materials, 04-05 February, 2011 held at Physics Dept. Punjabi University Patiala

12. Camp on Astronomy and Astrophysics from 20<sup>th</sup> to 22<sup>nd</sup> September 2010, held at Multani Mall Modi College, Patiala and organized by Punjab State Council For Science & Technology.
13. **World Spring Congress on Engineering & Technology (SCET-2012)** held in Xian (China) from 27<sup>th</sup> May to 30<sup>th</sup> May 2012
14. National Conference on Advanced Materials and Radiation Physics (AMRP-2013)” organised by the Department of Physics, SLIET Longowal  
November 22-23, 2013
15. National Conference on Advanced Materials and Radiation Physics (AMRP-2015)” organised by the Department of Physics, SLIET Longowal  
March 13-14, 2015
16. Punjab Academy of Sciences held on 7-9 February 2018 at College of Agriculture Punjab Agriculture University, Ludhiana (Punjab)