

**Brief Bio-data of Prof.Suman Bala Beri**  
**Physics Department**  
**PANJAB UNIVERSITY, CHANDIGAH**

**Educational background**

- M.Sc (Hons.School) Physics, Panjab University, Chandigarh (1970)
- Ph.D Panjab University, Chandigarh (1976)

**Professional background**

- Teaching Assistant 1974-80
- Lecturer/Assistant Professor 1981 – 1989
- Guest Scientist, TIFR, Mumbai 1988-89
- Reader/Associate Professor 1989 – 1996
- Guest Scientist, Fermilab, USA 1994-95
- Professor 1996 – 2009
- Professor (Re-employed) 2009 -2014
- Awarded CSIR Emeritus Scientist in 2012
- Awarded UGC Emeritus Fellowship 2015 - 2017
- Member International Collaborations :  
Dzero,USA and CMS ,Geneva,Switzerland

**(HH) RESEARCH**

Experimental High Energy Particle Physics

Participating actively in frontline International High Energy Particle Physics Experiments and member of International **D0 Collaboration,Fermilab,USA** and **CMS Collaboration, CERN, Geneva, Switzerland .**

Principal Investigator (PI) of three major DST Projects

Supervised a number of M.Phil and Ph.d students.

Number of students completed Ph.D during 2011-12 : Seven (7)

Number of students working at present : Three (3)

Total : 12

Number of M.Phil Students ~ 12 + many students for M.Sc projects

**DST Research Projects:**

***DST projects:***

1. Characteristics of top quark and search for new particles/phenomena at Dzero experiment at Fermilab (PI - **Suman Bala Beri**) successfully completed in Sept 2010.
2. India LHC Grid Collaboration – Enhancement of Regional World wide Computing

- Grid (WLCG) (PI [CMS] - **Suman Bala Beri**). Dated 17-03-2010 - **continuing**
- 3 . Study of New Particles with CMS Detector at Large Hadron Collider and Heavy Ion Physics using LHC at CERN – CMS Experiment (PI's –J.B.Singh and **Suman Bala Beri** ) –worth **9.11 crores** – Successfully Completed
  - 4 “Updating and Operation of Regional WLCG Grid System” **Suman B. Beri** 58.27 Lacs - continuing

**List of publications** (papers in journals, articles in magazines, newspapers, books, etc.)

Total **No. of Publications** (as co-author) : **1100**

No. of Analysis Notes during last 3 - 4 years : **80**  
List of selected 20 publications attached

**As per HT news published my name was on the top in whole Panjab University who has maximum published work in journals with highest Impact parameter.**

## **ACADEMIC ACTIVITY OR ACHIEVEMENT**

Earlier acted as:

- Director, SERC School on Experimental High Energy Physics., Sponsored by DST and held in Physics department P.U (March 7-27,2005).
- President, Physics Association for about 10 years, Conducted various activities – academic, cultural, sports etc. of students of Physics Department.
- Visit to CERN, Geneva (Switzerland) to participate in CMS collaborative Research Work (visiting each year since 1999 – to date)
- Member of Subject Expert Committee for evaluation of DST projects (WOS)
- Worked earlier as incharge EHEP group.
- Participation in India-CMS meetings and DST meetings.
- Co-author of Top Quark Discovery Paper
- Co-author of Single Top Discovery Paper
- Co-author of Higgs Discovery Paper
- Course- coordinator in two Refresher courses conducted by Academic Staff College in 2002 and 2003
- Based on Research work and being the first girl to do Ph.d from physics department, Panjab University – obtained the **Best Citizen of India Award in 2006** by International Publishing house

## **Achievement - being part of Research Team for Discovery of Higgs boson announced on 4<sup>th</sup> July,2012 world wide.**

### **International Visits for Research work**

- Invited to Fermilab, U.S.A for Dzero Research Collaborative work for :8 months in 1994,then subsequently for period of two months each in 1996,1998,2000,2003,2006,2008,2009 as visiting/Guest scientist.
- Invited (a number of times for two month(s) each year) to CERN.Geneva,Switzerland during **1999,2000,2002,2003,2004,2005,2006,2007 and 2008 ,2009,2010,2011,2012,2013,2014,2015,2016 for collaborative CMS Research Work.**

### **List of Honours & Awards conferred, with dates:**

- Awarded Best Citizen of India by International Publishing House in 2006.
- Invited to Fermilab ,USA and CERN, Geneva, Switzerland as Guest Scientist and Visiting Scientist. Visited Fermilab and CERN a number of times for participation in International research collaborative work during the years 1994.1995,1996,1999 and from 2000 to 2011 each year.
- My biodata had been included in 1977-78 in India's who is who and Asia who 's who for my research work and being the first girl to do Ph.D from Physics department, Panjab University.
- Member Subject Expert Committee in Physics for DST Scheme WOS-A for last four years. Also member of various selection committees.
- A number of invited talks of my research work delivered at college and University level.
- Also I have been resource person in refresher and orientation courses and Inspire programs in various Institutes in addition to being co-ordinator of two refresher courses in years 2003 and 2004.Also director SERC school in EHEP in 2005.
- Vice President of society for promotion of Science and Technology in India.
- Principal Investigator/Co PI of three DST projects: CMS and Grid and also completed successfully Dzero DST project in 2010, LHC-CMS project (DST) on going.
- Awarded CSIR Emeritus Scientist 2012
- Awarded UGC Emeritus Fellowship 2015-2017
- Adjunct Professor , Shoolini University,Solan
- Honorary Chairperson of Chandigarh Dhyana Kendra of YSS/Self Realization Fellowship

### **Invited Talks (2011-2016)**

**A number of invited talks delivered on the topic of Higgs boson/God**

**Particle/ Creation /understanding Universe and LHC Experiment at various forums, schools, colleges and Universities.**

**To name a few places**

- 1.DAV college , Jalandhar
- 2.Gujarat Science City
- 3.Kurukshetra (school)
- 4.Bhiwani (school)
- 5.Sonapat (Women University)
- 6.HMV college,Jalandhar
- 7.GNDU,Amritsar
- 8.Rotary Club,Chandigarh
9. Hyderabad University (Statistical Institute)
- 10.Shoolini University,Solan
- 11.Manav Rachana International University, Faridabad
- 12.DAV college,Chandigarh
- 13.MCM DAV college,Chandigarh
- 14.GGDSD college,Sector 32-C,Chandigarh
- 15.Indian Science Congress Association, Chandigarh Chapter,PU
- 16.Govt.College for Girls,Sector-11,Chandigarh
- 17.Govt.College,Sector 43,Chandigarh
- 18.The National Academy of Sciences, Chandigarh Chapter,SGGSC,Chandigarh
19. Indian Science Congress
20. Arya P.G College, Panipat
21. NSS , Panjab University
22. Teachers Skill development workshop, Post Graduate Govt. College for Girls, Sector 43, Chandigarh
23. Society for Promotion of Science & Technology lecture series

24. India-CMS meeting/workshop
25. Indian National Science Congress, Jammu
26. Punjabi University, Patiala
27. Punjab Agricultural University, Ludhiana
28. State Council of educational Research and Training, Sector 32, Chandigarh

## List of some selected 20 Publications of Suman B. Beri out of 1100 publications as co-author

1. [Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC](#)  
 CMS Collaboration ( [Serguei Chatrchyan](#) ( [Yerevan Phys. Inst.](#) ) *et al.* ). Jul 2012. 42 pp. Published in **Phys.Lett. B716 (2012) 30-61**  
 e-Print: [arXiv:1207.7235](#) [hep-ex] | [PDF](#)  
 Cited by 2137 records 1000+
2. [Observation of a new boson with mass near 125 GeV in pp collisions at  \$s\sqrt{=7}\$  and 8 TeV](#)  
 CMS Collaboration ( [Serguei Chatrchyan](#) ( [Yerevan Phys. Inst.](#) ) *et al.* ). Mar 19, 2013. 117 pp. Published in **JHEP 1306 (2013) 081**  
 e-Print: [arXiv:1303.4571](#) [hep-ex] | [PDF](#)  
 Cited by 96 records 50+
3. [Search for the standard model Higgs boson decaying to a  \$W\$  pair in the fully leptonic final state in  \$pp\$  collisions at  \$s\sqrt{=7}\$  TeV](#)  
 CMS Collaboration ( [Serguei Chatrchyan](#) ( [Yerevan Phys. Inst.](#) ) *et al.* ). Feb 2012. Published in **Phys.Lett. B710 (2012) 91-113**  
 e-Print: [arXiv:1202.1489](#) [hep-ex] | [PDF](#)  
 Cited by 132 records 100+
4. [Combined results of searches for the standard model Higgs boson in  \$pp\$  collisions at  \$s\sqrt{=7}\$  TeV](#)  
 CMS Collaboration . Feb 2012.  
 Published in **Phys.Lett. B710 (2012) 26-48** e-Print:  
[arXiv:1202.1488](#) [hep-ex] | [PDF](#)  
 Cited by 571 records 500+
5. [Measurements of single top quark production cross sections and  \$V\_{cb}\$  in  \$p\bar{p}\$  collisions at  \$\sqrt{s}=1.96\$  TeV](#)  
 D0 Collaboration ( [Victor Mukhamedovich Abazov](#) ( [Dubna, JINR](#) ) *et al.* ). Aug 2011. 11 pp. Published in **Phys.Rev. D84 (2011) 112001**  
 e-Print: [arXiv:1108.3091](#) [hep-ex] | [PDF](#)  
 Cited by 51 records 50+

6. [Search for the Higgs boson in  \$H \rightarrow W W \rightarrow 2l 2\nu\$  mode with the CMS detector](#)  
[CMS](#) Collaboration ( [N. Nishu et al.](#) ).  
2012. 4 pp. Published in **Pramana** **79**  
(2012) 1263-1266
7. [W/Z + jet\(s\) production in p p collisions at  \$s^{\*1/2} = 7\$ -TeV](#)  
[CMS](#) Collaboration ( [S.B. Beri et al.](#) ).  
2012. 4 pp. Published in **Pramana** **79**  
(2012) 1285-1288
8. [Measurement of Z/gamma\\*+jet+X angular distributions in p anti-p collisions at  \$s^{\*1/2} = 1.96\$  TeV](#) [D0](#) Collaboration ( [Victor Mukhamedovich Abazov \( Dubna, JINR\) et al.](#) ). Jul 2009.  
15 pp. Published in **Phys.Lett.** **B682** (2010) 370- 380  
e-Print: [arXiv:0907.4286](#) [hep-ex] | [PDF](#)  
[Cited by 35 records](#)
11. [Observation of Single Top Quark Production](#)  
[D0](#) Collaboration ( [V.M. Abazov \( Dubna, JINR\) et al.](#) ). Mar  
2009. 7 pp. Published in **Phys.Rev.Lett.** **103** (2009) 092001  
e-Print: [arXiv:0903.0850](#) [hep-ex] | [PDF](#)  
[Cited by 289 records](#) 250+
12. [The CMS experiment at the CERN LHC](#)  
[CMS](#) Collaboration ( [S. Chatrchyan \( Yerevan Phys. Inst.\) et al.](#) ). Aug 2008.  
361 pp. Published in **JINST** **3** (2008) S08004  
[Cited by 1665 records](#) 1000+
13. [The CMS outer hadron calorimeter](#)  
[Bannanje Sripath Acharya, T. Aziz, S. Banerjee, S. Banerjee, H.S. Bawa, S.B. Beri, V. Bhandari, V. Bhatnagar, S.R. Chendvankar, P.V. Deshpande \( Tata Inst. & Panjab U. \) et al.](#). Jun 2006. 20 pp. CERN-CMS-NOTE-2006-127
14. [The Upgraded D0 detector](#)  
[D0](#) Collaboration ( [V.M. Abazov \( Dubna, JINR\) et al.](#) ). Jul 2005.  
142 pp. Published in **Nucl.Instrum.Meth.** **A565** (2006) 463-537  
e-Print: [physics/0507191](#) | [PDF](#)  
[Cited by 816 records](#) 500+
15. [A precision measurement of the mass of the top quark](#)  
[D0](#) Collaboration ( [V.M. Abazov et al.](#) ). Jun  
2004. (8 pp. Published in **Nature** **429** (2004) 638-  
**642**  
e-Print: [hep-ex/0406031](#) | [PDF](#)  
[Cited by 292 records](#) 250+
16. [Observation of the top quark](#)  
[D0](#) Collaboration ( [S. Abachi et al.](#) ). Mar 1995.  
12 pp. Published in **Phys.Rev.Lett.** **74** (1995)  
**2632-2637** e-Print: [hep-ex/9503003](#) | [PDF](#)  
[Cited by 2183 records](#) 1000+

17. [Direct measurement of the top quark mass at D0](#)

[D0](#) Collaboration ( [B. Abbott \( New York U.\) et al.](#) ). Jan 1998. 43 pp. Published in **Phys.Rev. D58 (1998) 052001**  
e-Print: [hep-ex/9801025](#) | [PDF](#)

[Cited by 270 records](#)

18. [General Features Of K+ D Interactions At 70-gev/c](#)

[S. Banerjee](#), [S. Beri](#), [S.N. Ganguli](#), [A. Gurtu](#), [P.K. Malhotra](#), [R. Raghavan](#), [A. Subramanian](#), [T.K. Chatterjee](#), [S.Dorje](#), [J.M. Kohli](#) ( [Tata Inst. & Panjab U.](#) ) *et al.*. 1988.  
Published in **Z.Phys. C41 (1988) 17-24**

19. [A Search for Anomalous Fragments in 1.8-gev 40Ar Reactions in Nuclear Emulsions](#)

[Banaras-Chandigarh-Jaipur-Jammu-Lund](#) Collaboration ( [S.B. Beri et al.](#) ). Sep 1984. 13 pp. Published in **Phys.Rev.Lett. 54 (1985) 771**

[Cited by 15 records](#)

20. [Charm Production in 400-GeV/c Proton Emulsion Interactions](#)

[Bombay-Chandigarh-Delhi-Jammu](#) Collaboration ( [T. Aziz et al.](#) ). Jan 1982. 29 pp. Published in **Nucl.Phys. B199 (1982) 424**