BIO-DATA

1.	**Name**	: **Dr Sukhpal Singh**
2.	**Designation**	: Assistant Professor (Physics)
3.	**Department**	: Department of Basic and Applied Sciences
4.	**Date of Birth**	: December 9, 1978.
5.	**Address for Correspondence**	: Department of Basic and Applied Sciences, Punjabi University, Patiala.
	Phones	
	Mobile	: 095015-99229
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	E-mail	: sukhpal_78@rediffmail.com
6	**Areas of Specialisation**	: Radiation Physics

7. Academic Qualifications:

Sr. no.	Degree Held	Year	Board/Univ./ Inst.	Div./ Rank	Subjects Taken
1.	B.Sc. (N.M)	1998	P.U.Chandigarh	First	Physics, Chemistry, Mathematics, Punjabi, English
2.	B.Ed.	1999	P.U.Chandigarh	First	Teaching of Science and Mathematics
3.	M.Sc. (H.S)	2001	P.U.Chandigarh	First	Physics
4.	NET		UGC-CSIR	Qualified	Physical Sciences
4.	Ph.D.	2008	Punjabi University, Patiala	---	Radiation Physics

8. Membership of Professional Bodies/Organisations:

(i) Indian Society for Radiation Physics

9. Details of Experience:

S. No.	Name of the Inst./Employer	Position Held	Duration	Major Job Responsibilities and Nature of Experience
1.	Principal, Guru Nanak College, Budhlada (Mansa)	Assistant Professor	July 14, 2009 to December 22, 2011	Teaching and Research
2.	Registrar, Punjabi University, Patiala	Assistant Professor	December 22, 2011 to till date	Teaching and Research

10. Published Work (Please specify numbers only):

a. Research Papers i) National

ii) International: **25**

b. General Article

c. Conference/Seminar Presentation : **17**

d. Books

a. Original : **1**

b. Edited :

(Please attach the list)

11. Reviewer/Referee for Research Journals

i) Annals of Nuclear energy

ii) Applied radiation and isotopes

iii) Radiation Physics and chemistry

12. Ph.D. Students guided/under guidance (Details):

S. No.	Name of the student	Title of Thesis	Remarks
1.	Mr. Kanwaldeep Singh	A study of gamma ray interactions in flyash shielding concretes	Degree awarded
2.	Mr. Sandeep Kumar	To be decided	Enrolled
3.	Ms. Ramanpreet Kaur	To be decided	Enrolled

13. List of Papers/Courses taught at P.G. and U.G. Level

S. No.	Paper	Class
1.	Nuclear Science	M.Sc.
2.	Quantum Mechanics	M.Sc.
3.	Applied Physics-I	B.Tech.
4.	Applied Physics-II	B.Tech.
5.	Vibrations and waves	B.Sc.
6.	Mechanics	B.Sc.
7.	Electricity and Magnetism	B.Sc.
8.	Quantum Mechanics(Modern Physics)	B.Sc.
9.	Condensed Matter Physics	B.Sc.
10.	Statistical Mechanics	B.Sc.
11.	Nuclear and Particle Physics	B.Sc.

14. Technical Proficiency

Can handle various nuclear physics equipments and radioactive sources Competent to design nuclear and radiation physics experiments for different studies such as measurements of attenuation coefficients, multiple scattering studies, gamma ray spectrometry etc. Preparation and characterization of different type of glasses, high volume flyash concretes.

15. List of Papers Published

In Journals:

1. Molar extinction coefficients of some commonly used solvents.
   Ashok Kumar, **Sukhpal Singh**, Gurmel S. Mudahar & Kulwant Singh Thind
   Radiat. Phys. Chem. 75 (2006) 737

2. Mass attenuation studies in some flyash materials
   Sukhpal Singh, Ashok Kumar, Kulwant Singh Thind & Gurmel S. Mudahar
   Asian J. Chem. 18 (2006) 3314

3. A study of buildup factor under different geometrical conditions for 1332 keV gamma rays
   Ashok Kumar, **Sukhpal Singh**, Kulwant Singh Thind & Gurmel S. Mudahar
   Asian J. Chem. 18 (2006) 3348

4. Studies on effective atomic numbers and electron densities in some commonly used solvents.
   Ashok Kumar, **Sukhpal Singh**, Gurmel S. Mudahar & Kulwant S. Thind
   Nucl. Sci. Engg. 155 (2007) 102.

5. Barium-borate-flyash glasses: as radiation shielding materials.
   Sukhpal Singh, Ashok Kumar, Devinder Singh, Kulwant S. Thind & Gurmel S. Mudahar
   Nucl. Instrum. Meths. B 266 (2008) 140.

6. Measurements of linear attenuation coefficients of irregular shaped samples by two media method **Sukhpal Singh**, Ashok Kumar, Kulwant S. Thind & Gurmel S. Mudahar
   Nucl. Instrum. Meths. B 266 (2008) 1116.

7. Two media method: an alternative methodology for the measurement of attenuation coefficients of irregular shaped samples
   Sukhpal Singh, Ashok Kumar, Kulwant S. Thind & Gurmel S. Mudahar
   Nucl. Sci Engg. 159 (2008) 338.

8. Effects of finite Sample dimensions and total scatter acceptance angle on the gamma ray buildup factor
   Sukhpal Singh, Ashok Kumar, Charanjit Singh, K.S. Thind, & Gurmel S. Mudahar,
   Annals of Nucl. Energy 35 (2008) 2414.

9. Study of CSDA and extrapolated ranges of electrons in some selected solvents in the energy range of 0.01-100 MeV.
   Ashok Kumar, B.S. Salaria, **Sukhpal Singh**, Balkrishan, CHaranjit Singh & G.S. Mudahar,
   Asian J. Chem., 21 (2009) S 130.

10. The study of reduced transition probabilities for E_2 transitions in the decays of ^{192}Os and ^{192}Pt nuclei
    S.S. Ghumman, Charanjeet Singh, **Sukhpal Singh**
    Annals of Nucl. Energy 36 (2009) 1484.

11. Gamma-Ray Summing in Germanium Detectors and Its Effects on Nuclear Decay Parameters,
    S.S.Ghumman, **Sukhpal Singh** & H. S. Sahota
    Asian J. Chem., 22 (2010) 8155.

12. γ-γ sum-coincidence effect on γ-ray intensities in the decay of ^{147}Nd-^{147}Pm.
    S.S. Ghumman, Charanjeet Singh, **Sukhpal Singh**
    Annals of Nucl. Energy 36 (2009) 1484.

13. Buildup of gamma ray photons in flyash concretes: A study
    Sukhpal Singh,S.S.Ghumman, Charanjeet Singh ,Kulwant Singh Thind**,** Gurmel S.Mudahar
    Annals of Nucl. Energy 37 (2010) 681.

14. Computations of Energy Absorption Buildup Factors of Flyash using Geometrical- Progression Fitting Formula.

Sukhpal Singh, Jasleen Kaur and Gurmel S.Mudahar
Int. J App. Phys. 1 (2011) 59-67.

15. Gamma ray energy absorption buildup factors (EABF) of hematite-flyash concrete.
Sukhpal Singh
Int. J. P. App. Phys. 9 (2013) 175-180.

16. Gamma ray exposure Buildup factor of Ilmenite-Flyash Concretes.
Sukhpal Singh
Int. J. P. App. Phys. 9 (2013) 169-173.

17. Gamma ray interaction cross sections for zinc doped lead borate glasses.
Sukhpal Singh
Int. J App. Phys. 3 (2013) 85-90.

18. Measurement of gamma ray attenuation coefficients of irregular shaped samples using improved two media method.
Sukhpal Singh
Int. J App. Phys. 3 (2013) 79-83.

19. Study of Effective Atomic Numbers (Zeff) of Zinc Doped Lead Borate Flyash Glasses.
Sukhpal Singh
Int. J P. App. Phys. 9 (2013) 181-184.

20. Effect of flyash addition on mechanical and gamma radiation shielding properties of concrete.
Kanwaldeep Singh, **Sukhpal Singh** , Gurmel Singh
Journal of energy vol.2014 (2014) 1-7
http://dx.doi.org/10.1155/2014/486093

21. Gamma radiation shielding analysis of lead-flyash concretes.
Kanwaldeep Singh, **Sukhpal Singh** , A.S. Dhaliwal, Gurmel Singh
Applied Radiation and Isotopes 95 (2015) 174-179

22. Gamma radiation shielding and health physics characteristics of diaspore-flyash Concretes.
Kanwaldeep Singh, **Sukhpal Singh**, S P Singh, Gurmel S Mudahar and A S Dhaliwal
Journal of Radiological Protection **35** (2015) 401–414

23. Study of some health physics parameters of bismuth-ground granulated blast furnace slag shielding concretes.
Sandeep Kumar and **Sukhpal Singh**
AIP Conference Proceedings **1728**, 020484 (2016)

24. Study of mass attenuation coefficients and effective atomic numbers of bismuth-ground granulated blast furnace slag concretes
Sandeep Kumar and **Sukhpal Singh**
AIP Conference Proceedings **1728**, 020484 (2016)

25. Gamma Radiation Shielding Properties of Steel and Iron Slags
Ravinder Singh, **Sukhpal Singh**, Gurmel Singh, Kulwant Singh Thind
New Journal of Glass and Ceramics, 7 (2017), 1-11

In Symposiums/Conferences:

1. Transmitted photon spectra of ^{137}Cs through single and double layer of soil and water
Charanjeet Singh, **Sukhpal Singh**, Ashok Kumar , Parjit S. Singh & Gurmel S. Mudahar
Natl. Symp. Radiat. Meas & App. (Patiala) (2004)
2. Mass attenuation coefficient studies of the mixture of flyash and soil.
Jarnail Singh, Tejbir Ingh,**Sukhpal Singh**, Parjit S. Singh & Gurmel S. Mudahar
Natl. Symp. Radiat. Meas & App. (Patiala) (2004)

3. Variation of exposure buildup factors of building materials with effective atomic number
Charanjeet Singh, Tejbir Singh, **Sukhpal Singh**, Parjit S. Singh & Gurmel S. Mudahar
16th Natl. Symp. Radiat. Phys. (Chennai) (2006) 251.
4. Study of absorption of 279 keV gamma rays in some commonly used solvents
Ashok Kumar, **Sukhpal Singh**, Gurmel S. Mudahar and K. S. Thind
16th Natl. Symp. Radiat. Phys. (Chennai) (2006) 254.
5. Elemental analysis of flyash with EDXRF technique
Jarnail Singh, **Sukhpal Singh**, Ashok Kumar, K. S. Thind & Gurmel S. Mudahar
Natl. Conf. Lasers, Smart Materials Radiat. Phys. (Longowal) (2006) 51.
6. Simultaneous variation of mass attenuation coefficient and buildup factor with gamma ray energy.
Charanjeet Singh, **Sukhpal Singh**, Parjit S. Singh & Gurmel S. Mudahar
10th Pb. Sci. Cong. (Jalandhar) (2007).
7. Variation of transmitted gamma photon intensity through single and double layers of high volume flyash concrete (hvfc) and water
Sukhpal Singh, Ashok Kumar, Kulwant S Thind & Gurmel S Mudahar
10th Pb. Sci. Cong. (Jalandhar) (2007).

8. Energy and chemical composition dependence of gamma ray absorption parameters in some ceramics materials
Ashok Kumar, **Sukhpal Singh**, Kulwant S Thind and Gurmel S. Mudahar
10th Pb. Sci. Cong. (Jallandhar) (2007).
9. An alternative methodology for the measurements of attenuation coefficients of irregular shaped samples
Sukhpal Singh, Ashok Kumar, Kulwant S Thind & Gurmel S Mudahar
Symp. Radiat. Sor. det. & App. (Patiala) (2007)
10. Attenuation coefficient measurements of aqueous solutions of some inorganic compounds
Ashok Kumar, **Sukhpal Singh**, Kulwant S Thind &Gurmel S Mudahar
Symp. Radiat. Sor. det. & App. (Patiala) (2007)

11. Measurement of gamma ray attenuation coefficients of irregular shaped samples of flyash materials by two media method.
Sukhpal Singh, Ashok Kumar, Kulwant S Thind & Gurmel S Mudahar
11th Pb. Sci. Cong. (Patiala) (2008).
12. CSDA and extrapolated ranges of electrons in some commonly used solvents
Ashok Kumar, **Sukhpal Singh** and Gurmel S. Mudahar
11th Pb. Sci. Cong. (Patiala) (2008).
13. Experimental measurements of attenuation coefficients of irregular shaped samples.
Sukhpal Singh, Gurmel S Mudahar, Kulwant S Thind
Natl. Symp. Radiat. Phys & Nano.Mat. (Patiala) (2011)

14. Gamma ray exposure buildup factors for flyash concretes.
Sukhpal Singh, Gurmel S Mudahar, Kulwant S Thind
Natl. Symp. Radiat. Phys & Nano.Mat. (Patiala) (2011)
15. Experimental verification of Two Media Method for the measurements of attenuation coefficients of irregular shaped samples.
Sukhpal Singh, Gurmel S Mudahar,
International conf. on emerging trends in physics for environmental monitoring and management (Patiala) 2012.
16. High Volume Flyash Concrete: A resourceful material for radiation shielding
Kanwaldeep singh, **Sukhpal Singh**, Gurmel S Mudahar,

International conf. on emerging trends in physics for environmental monitoring and management (Patiala) 2012.

17. Computation of exposure buildup factors for mortars using geometrical progression fitting formula. Kanwaldeep singh, Gurmel S Mudahar, **Sukhpal Singh**
International conference on emerging areas of mathematics for science and technology (Patiala) 2015.

Date: __/__/_____ **(Signature of the Teacher)**