Resume

Full Name **Rohit Dhir**

Fathers Name **Sh.Vinod Kumar Dhir**

Date of Birth **01 May 1979**

Place of Birth **Ludhiana, Punjab (India).**

Mobile +919872955859

E-Mail ***dhir.rohit@gmail.com, dhir_phy@yahoo.com***

Nationality **Indian** Category **General** Marital Status **Married**

Spouse (wife) **Dr Neelesh Sharma Dhir, PhD (Physics)**

Native Address **Plot no. 8, Bobby Colony, Altos Nagar, Hambran Road, Ludhiana-141003.**

Present Address **BK-21 Post Doctoral Fellow, Department of Physics, Yonsei University, 50 Yonsei-ro, Seodaemun-gu, Seoul, 120-749 Korea**

Visit my webpage http://sites.google.com/site/rohitdhirphysics/

OBJECTIVE

Seeking an opportunity as a Physicist in the challenging environment of Research and Education Development.

ACADEMIC INFORMATION

Qualification:

Exam Passed	Year	Board/Univ.	%age/Grad.
Ph.D.	April, 2010	Pbi. Univ. Patiala.	--
M.Phil. (Regular)	Feb.2004	Pbi. Univ. Patiala.	80/A
M.Sc. (Physics)	April, 2002	Pbi. Univ. Patiala.	61.5
B.Ed.	May, 2000	P.U. Chandigarh.	66.37
B.Sc. (N.M.)	April, 1999	P.U. Chandigarh.	60.10

PRESENT STATUS**:** ***Working as Brain Korea (BK)-21 Post Doctoral Fellow in HEP at Department of Physics, Yonsei University, Seoul, South Korea.***

Main area of research **HIGH ENERGY PHYSICS -PHENOMENOLOG/ THEORETICAL COMPUTAIONAL PHYSICS**

PhD Thesis Advisor ***Prof. R.C. Verma, Punjabi University, Patiala***

Scholarships

1. *Research fellowships for meritorious students in sciences*, UGC Delhi.
2. *D.S. Kothari Post Doc Fellowship (UGC, Delhi) in HEP at GGSIP University*, Delhi from 21st march, 2011 to 15th March 2012.
3. *BK-21 Post Doc Fellowship from Govt. of Korea at Department of Physics, Yonsei University, Seoul, South Korea.*

Course Work (M.Sc. & M.Phil.) *Mathematical Physics I & II, Classical Mechanics, Electrodynamics, Statistical Physics, Quantum Mechanics, Quantum Field Theory, Computational Physics, Particle Physics, Solid State Physics, Electronics I& II, Nuclear Physics, Experimental Techniques and Radiation Physics.*

RESEARCH

Research Experience:

- **M.Phil. (2 yrs)** Dissertation in ***HIGH ENERGY NUCLEAR PHYSICS***, Title "Pion Nucleon Differential Scattering Cross Sections at GeV Energies" under the supervision Dr. B.S. Bains, Department of Physics, Punjabi University, Patiala.
- **Ph.D. (5 yrs)** in ***HIGH ENERGY PHYSICS (Particle Physics)***, Title "Properties and Decays of Heavy Flavor S-wave Hadrons" under guidance of Prof. R.C. Verma Department of Physics, Punjabi University, Patiala.
- **Post Doctoral Fellow (2 Years to be completed on 28th Feb.2013)**

PUBLICATIONS AND CONFERENCES

I. Publications in refereed International Journals of repute: 12

II. Conferences and workshops attended: 12

III. Abstracts published in conferences: 9

IV. Citations in International Journals: 54

Full information regarding my Research Articles and Citations is available at **HEP-SPIRES** ***web site*****:**

http://www.slac.stanford.edu/spires/find/hep/www?rawcmd=find+a+rohit+dhir&FORMAT=WWW&SEQUENCE=

Research Papers Published:

S/N **Title, Author(s) and Journal**

12 Branching ratios of *Bc* Meson Decaying to Vector and Axial-Vector Mesons.
Rohit Dhir and C.S. Kim (IPAP, Yonsei U. , Seoul) Jan 2013, 26 pp.
e-Print: arXiv:1210.7890 [hep-ph] (Accepted in Phys. Rev. D.)

11 Effects of Flavor Dependence on Weak Decays of J/psi and Upsilon.
Rohit Dhir. R.C. Verma and A.C. Sharma (Yonsei U., Punjabi U. & GGSIP U.), Dec 2012, 24 pp. (In Press: Advances in High Energy Physics)
(http://www.hindawi.com/journals/ahep/aip/706543/)
e-Print: **arXiv:0903.1201 [hep-ph] Cited 2 times**

10 *Preliminary Estimate of Branching ratios of Weak Hadronic Decays of Bottom Baryons Emitting Charmless Scalar Mesons.*
Arvind Sharma, **Rohit Dhir** and R.C. Verma
Published in ***Eur. Phys. J. C****, 1538* (2011).
e-Print available at arXiv: 0906.2445[hep-ph]

9 *Decays of Bottom Mesons emitting Tensor Mesons in the Final State using the ISGW II Model.*
Neelesh Sharma, **Rohit Dhir** and R.C. Verma
Published in ***Phys. Rev. D****, 014007* (2011). **Cited 8 time**

8 *Exclusive Semileptonic Decays of B_c Meson.*
Rohit Dhir, R.C. Verma
Published in ***Physica Scripta 82****,* 065101 (2010).
e-Print available online: arXiv:0903.2234 [hep-ph]

7 *Branching ratios of B_c Meson Decaying to Pseudoscalar and Axial-Vector Mesons.*
Neelesh Sharma, **Rohit Dhir** and R.C. Verma,
***J. Phys.G* 37**, 075013 (2010). **Cited 3 time**

6 *Magnetic moments of ($J^P = 3/2^+$) heavy baryons using effective mass and screened charge scheme.*
Rohit Dhir, R.C. Verma *(Punjabi Univ.) Oct 2008. 8pp.*
Published in ***Eur. Phys. J. A* 42**, 243 (2009). **Cited 7 times**

5 *B_c Meson Form-factors and $B_c \rightarrow$ PV Decays Involving Flavor Dependence of Transverse Quark Momentum.*
Rohit Dhir, R.C. Verma *(Punjabi Univ.) Oct 2008. 18pp.*
Published in ***Phys. Rev. D* 79**, 034004 (2009). **Cited 12 times**

4 *Flavor dependence of B/c+ meson form factors and $B_c \rightarrow P\,P$ decays.*
Rohit Dhir, Neelesh Sharma, R.C. Verma
Published in ***J.Phys.*G 35**, 085002 (2008). **Cited 15 times**

3 *Nonfactorizable contributions to hadronic decays of D mesons.*
Rohit Dhir, R.C. Verma *(Punjabi Univ.) . 2007. 16pp.*
Published in ***J.Phys.G* 34**, 637-652 (2007). **Cited 4 times**

2 *Magnetic moments of charm baryons using effective mass and screened charge of quarks.*
S. Kumar, **Rohit Dhir**, R.C. Verma *(Punjabi Univ.) 2005. 7pp.*
Published in ***J.Phys.G*** **31**, 141-147 (2005). **Cited 3 times**

1 *Large angle pion-nucleon scattering at GeV energies.*
Rohit Dhir and B.S. Bains,
Physica Scripta **74**, 481 (2006).

Research Papers Submitted:

1 *Analysis of $B \rightarrow PP$ Weak Decays Using Quark Diagram Scheme,* **Rohit Dhir**, R.C. Verma, Avinash Sharma*, Feb 2009. 12pp.* ***e-Print: arXiv:0902.2538 (newer version to be uploaded soon) [hep-ph]***

2 Magnetic moments of bottom baryons using effective mass and effective charge scheme, **Rohit Dhir,** R.C.Verma (Under Preparation and expect to submit soon)

Problems Undertaken at present:

1. *P-wave emitting decays of heavy flavor hadrons*
2. *SU(3) breaking effects and Non-factorizable contributions to B decays.*
3. *Weak radiative decays of Vector mesons.*
4. *Isospin analysis of non-factorizable contribution to p wave emitting charm mesons.*

Attendance to Workshops/Research Schools:

1. *National Workshop on Status of Basic Sciences*, Punjabi University, Patiala, Jan., 2004.
2. *SERC School on Theoretical High Energy Physics*, Jaipur, Feb., 2004.
3. *Workshop on Computer Laboratory Training in Fortran*, Punjabi University, Patiala, June, 2004.
4. *National Symposium on Radiation Measurements and Application*, Punjabi University, Patiala, Nov., 2004.

5. *National Conference on Advances in Condensed Matter Physics (ACMP-2005)*, School of Physics and Materials Science, Thaper Institute of Engineering and Technology (Deemed University), Patiala, Feb., 2005.
6. *Workshop on Computer Laboratory Training in Physics*, Punjabi University, Patiala, December, 2006.
7. *Workshop on Emerging Technologies in Nano-Science*, Punjabi University, Patiala, February, 2008.
8. *UGC sponsored national Workshop on Computer Laboratory Training in Physics*, Punjabi University, Patiala, December, 2008.
9. *XIX DAE-BRNS High Energy Physics Symposium,* LNMIIT, Jaipur, December, 2010.
10. NRF Workshop on Flavor Physics and Collider Physics, Yonsei U., Seoul, June, 2012.
11. LHC Physics Workshop, Konkuk University, Seoul, August 2012
12. Particle Physics and Cosmology (PPC)-2012, KIAS, Seoul, Nov. 2012.

Presentations (Abstracts Published):

1. *Large angle pion-nucleon scattering at GeV energies*, **Rohit Dhir** and B.S. Bains, National Symposium on Radiation Measurements and Application, Punjabi University, Patiala, Nov., 2004.
2. *Magnetic moments of charm baryons using effective mass and screened charge of quarks*, **Rohit Dhir** and R.C. Verma National Symposium on Radiation Measurements and Application, Punjabi University, Patiala, Nov., 2004.
3. *Reanalysis of non-factorizable contributions to hadronic decays of charmed mesons at isospin level*, **Rohit Dhir** and R.C. Verma, 8th Punjab science congress, Punjabi University, Patiala, Feb., 2005.
4. *Weak decays of charmed mesons involving axial-vector mesons,* Neelesh Sharma, **Rohit Dhir** and R.C. Verma, National Conference on Advances in Condensed Matter Physics (ACMP-2005), SPMS, Thaper Institute of Engineering and Technology (Deemed University), Patiala, Feb., 2005.
5. *B_c Meson Form-factors and $B_c \rightarrow$ PV Decays Involving Flavor Dependence of Transverse Quark Momentum,* **Rohit Dhir** *and RC Verma , DAE HEP SYMPOSIUM, BHU, VARANASI, 2008.*
6. B_c meson decays involving pseudoscalar and *p*-wave meson in the final state using the non-relativistic model, Neelesh Sharma, **Rohit Dhir** *and RC Verma , DAE HEP SYMPOSIUM, LNMIIT, Jaipur, 2010.*

7. *Weak hadronic decays of heavy flavor baryons emitting p-wave mesons,* **Rohit Dhir** *and RC Verma , DAE HEP SYMPOSIUM, LNMIIT, Jaipur, 2010.*

8. *Effects of Flavor Dependence on Weak Decays of J/psi and \Upsilon.* **Rohit Dhir**, R.C. Verma*, DAE HEP SYMPOSIUM, LNMIIT, Jaipur, 2010.*

9. *Axial Vector meson emitting decays of* B_c, LHC Physics Workshop, Konkuk University, Seoul, August 2012