

Personal

Name: MOHAMMED SHAHABUDDIN
Nationality: Indian
Date of birth: Aug. 15, 1964.
Current academic position: Associate Professor
Department: Dept. of Physics and Astronomy
College: Science
Permanent position: Reader, Department of Physics,
Jamia Millia Islamia, New Delhi,
110025. India

Academic Qualification:

Ph.D.:

Physics
University: Indian Institute of Technology, Kanpur, India.
Year: 1993.
GPA: 9.15 in scale of 10
Title of thesis: Electron Paramagnetic Resonance (EPR) and Low Field Dependent Microwave Absorption in High T_C Cuprate Superconductors.

M.Sc.:

Physics
University: Indian Institute of Technology, Kanpur, India.
Year: 1986.
GPA: 7.5 in scale of 10
Title of Project: Design and fabrication of Kowalski Wave meter for measuring the wavelength of He-Ne Laser.

B.Sc.:

Physics Honors
University: University of Bihar, Muzaffar pur , India.
Year: 1983.
GPA: 69% in absolute marking

National Educational Test of India:

Physics
Exam conducted: Council of Scientific Industrial Research, New
Delhi Year: 1985
Result: Qualified

Fellowship Awarded:

1. Commonwealth Fellowship of U.K. for the year 2000.
2. DAAD Fellowship of Germany for the year 1996.
3. Research fellowship of Council of Scientific Industrial Research, New Delhi for four years.

Employment Details:

Designation	Department and University	Duration	Responsibility
Associate Prof.	Dep of Phys. King Saud Univ. Riyadh	Sep 2004 to present	Teaching and Research
Reader	Dept of Physics, Jamia Millia Islamia, New Delhi	Jan 2000 to the present	Teaching and research (Presently on Leave)
Senior Lecturer	Dept of Physics, Jamia Millia Islamia, New Delhi	Jan 1995 to Jan 2000.	Teaching. and research
Lecturer	-do-	Jan 1990 to Jan 1995	Teaching and research
PDF	Department of Physics, University of Southampton, UK.	Sep 2000 to sep 2001	Research
PDF	Institute of Solid State Phys, University of Jena, Germany	Nov 96 to May 97	Research

Administrative job:

Worked as co-ordinator of B.Sc. Instrumentation course April 1994 – Sep 2000 at the Jamia Millia Islamia.

Teaching Experiences:

17 years

Courses taught:

Theory Courses in M.Sc.

Solid State Physics, Novel Materials, Atomic and Molecular Physics, Statistical Mechanics, Mathematical Physics, Advanced Solid State Physics

Theory Courses in B.Sc.

Structure of matter, Experimental technique in Physics, Instrumentation and Digital Electronics, Digital Electronics, Microprocessor, Basic Electronics, General Physics

Invited Talks

1. *"High Tc Superconductors"* at Workshop on Novel Materials held on 9th Jan 2008 at King Abdul Aziz City for Science and Technology, Riyadh , Saudi Arabia.
2. *"Prospects of Mg B₂ high Tc Superconductors in high magnetic field"* at Work shop on Novel Materials held on 9th Jan 2008 at King Abdul Aziz City for Science and Technology, Riyadh , Saudi Arabia
3. *"Low field Microwave Absorption in High Tc Superconductors"* at Institute of Festkorper-physik, Friedrich Schiller University, Jena, Germany, **on 11th April 1997.**
4. *"Effect of Temperature and Field cooling on Low Field Microwave Absorption in High Tc Superconductors"* at Institute Fur Festkorper-und Werkstofforschung, Dresden, Germany, **on 5th May 1997.**
5. *" Simulation of I-V characteristics of Intrinsic Stacked Josephson junctions Array as a function of Magnetic field and Microwave power"* **on April 4, 1997** at Institute of Festkorper-physik, Friedrich Schiller University, Jena, Germany, in April 1997.

Research

Supervised the projects of M.Sc. students: 12 students

Ph.D. Thesis supervised: six students

List of the Ph.D. Thesis supervised

<i>S.no</i>	<i>Name</i>	<i>Thesis title</i>	<i>Awarded</i>
1	A..S.M. Abddel-Maksoud	<i>Studies of Effect of Substitution and Columnar Defects on the Transport and Magnetic Properties of High Temperature Superconductors</i>	1998
2	Rajveer Singh	<i>Magnetic and transport properties of doped Cuprate superconductors</i>	2000
3	Jamal Akhter	<i>Studies on Microwave Response of High T_c superconductors Josephson Junctions and Arrays</i>	2002
4	K. Premjit Singh	<i>Synthesis and Physical Property Characterization of Pure and Nano-Magnetic Ions Doped Vacuum Annealed MgB_2 Superconductor</i>	2007
5	Intikhab A. Ansari	<i>Study of Fluctuation Induced Conductivity and Magnetic Properties of Nano-Metal Oxide Doped MgB_2 Superconductors</i>	2007
6	Krishan Pal Singh	<i>Study of Electronic and transport properties of nanostructures using computer simulation</i>	Continuing

Research Projected completed and going on

No.	Project Title	Starting Year	Amount (in Saudi Riyals)	Source of Funding	Finishing Year
1	Enhancement of critical current density and Mechanical strength of MgB_2 superconductors by doping hydrocarbon / carbon hydrate	June 2008	3,21,000	Center of Excellence Research in engineering materials (CEREM)	July 2009
2	Preparation and study of the magnetic and electrical properties of nano-particle Fe_3O_4 doped MgB_2 superconductors	Sep 2007	42,000	Research center, college of Sciencee King Saud University, Riyadh	Sep 2008
3	Nano-carbon substitution effect on electrical and magnetic properties of Magnesium Diboride superconductors	Sep 2007	45,000	Research center, college of Sciencee King Saud University, Riyadh	Sep 2008
4	Design and Fabrication of High sensitive AC Susceptometer	2005	45,000	Research center, college of Sciencee King Saud University, Riyadh	March 2007
5	Influence of Carbon Doping on the Magnetic Properties of MgB_2 Superconductors	2005	30,000	Research center, college of Sciencee King Saud University, Riyadh	2006
6	Design and fabrication of micro-Hall probe magnetometer for the measurement of magnetization and ac susceptibility of High T_c Superconductors	2005	30,000	Research center, college of Sciencee King Saud University, Riyadh	2006

LIST OF PUBLICATION
(M. Shahabuddin)

1. K.P.Singh, V.P.S. Awana, **M. Shahabuddin**, R.B. Saxena, Rashmi Nigam, M. A. Ansari, Anurag Gupta, Himanshu Narayan, S.K. Halder, and H. Kishan; *Nano Fe₃O₄ Induced Fluxoid Jumps and Low Field Enhanced Critical Current Density in MgB₂ Superconductor*
J. Superconductivity and Novel Magnetism **21**, 39-44 (2008).
2. K.P. Singh, V.P.S. Awana, **Md. Shahabuddin**, Intikhab A. Ansari, M. Husain, and H. Kishan; *Comparisons for the resistivity behaviors of different encapsulated MgB₂ samples*
Cryogenics **47**, 497–500 (2007)
3. Intikhab A Ansari¹, **M Shahabuddin**, Khalil A Ziq, A F Salem, V P S Awana, M Husain¹ and H Kishan; *The effect of nano-alumina on structural and magnetic properties of MgB₂ superconductors*
Supercond. Sci. Technol. **20**, 827–831 (2007)
4. Intikhab A. Ansari, V.P.S Awana, Rajeev Rawat, **M. Shahabuddin**, M. Hussain, H. Kishan, and A.V. Narlikar; *Fluctuation induced conductivity of polycrystalline MgB₂ superconductor*
J. Mater. Sci. **42**, 6306-6309 (2007)
5. **Mohammed. Shahabuddin** and Nasser Saleh Alzayed; *Design of ac susceptometer using closed cycle helium cryostat.*
Phys. Stat. Sol., **C 3**, 3002 (2006)
6. K.P.Singh, V.P.S. Awana, **M. Shahabuddin**, R.B. Saxena, Rashmi Nigam, M. A. Ansari, Anurag Gupta, Himanshu Narayan, S.K. Halder, and H. Kishan; *Phase formation and superconductivity of Fe-tube encapsulated and vacuum annealed MgB₂*
Mod. Phys. Lett., **20**, 1-7 (2006)
7. Jamal Akhtar Khan and **M. Shahabuddin**; Simulation of I-V characteristics of Josephson junctions array: Magnetic field effect
Indian J. Phys. **78**, 841-844 (2004)
8. G. Ahmed, A. Hashizume, S. Iwasaki, K. Yoshii, B. J. Reddy, **M. Shahabuddin**, S. Uthayakumar, R. Jayavel and T. Endo; *Microwave Absorption Spectrum and reentrant phase in Bi2212 Single Crystal: Microwave power dependence*
Physica C, **388-389**, 687 (2003).
9. R.D. Kale, A. Hashizume, T. Li, H. Kohmoto, S. Iwasaki, **M. Shahabuddin**, S. Uthayakumar, E. Srinivasan and T. Endo; *Microwave Absorption Spectrum and reentrant phase in Bi2212 Single Crystal: Temperature dependence*
Physica C, **378-381**, 470 (2002)

10. A. Hashizume, J. Yamada, H. Kohmoto, Y. Yamada, T. Endo and **M. Shahabuddin**; *Near-zero-field hysteretic anomaly in microwave absorption and indication of reentrant phase in Bi2212 single crystal*
Physica C, **357-360** , 481 (2001)
11. Anurag gupta, Ahmed Sedky, S.B. Smanta, **Md. Shahabuddin**, Ravi kumar and A.V. Narlikar; *Ac susceptibility and STM studies on BiSrCaCuO single crystals irradiated with heavy ion.*
Nucl. Instr. and Methods in Physics Research, **B 156**, 35-39 (1999)
12. Rajvir Singh, R.Lal, U.C. Upreti, D.K. Suri, A. V. Narlikar, V.P.S. Awana, J. Albino Aguiar, and **Md. Shahabuddin**; *Superconductivity in Zn Doped Tetragonal LaBaCaCu₃O_{7-x} Systems*
Phys Rev B. **55**, 1216 (1997)
13. **M. Shahabuddin**, H. D. Bist, Prem Chand and A.V. Narlikar; *Effect of temperature on low field dependent microwave absorption in pure YBa₂Cu₃ O_{7-x} near T_c.*
Physica C **235-240**, 2054-2055 (1994)
14. **Md. Shahabuddin**, A.G. Vedeshwar, H.D. Bist, Prem Chand, S.K. Agarwal and A.V. Narlikar; *Effect of modulation amplitude on low field microwave absorption in hafnium doped YBaCuO;*
Bull. Mater. Sci. 14, 789 (1991).
15. A.G. Vedeshwar, **Md. Shahabuddin**, H.D. Bist, Prem Chand, S.K. Agarwal and A.V. Narlikar; *Microwave absorption studies in field cooled hafnium doped YBaCuO*
Bull. Mater. Sci. 14, 777 (1991).
16. A.G. Vedeshwar, H.D. Bist, **Md. Shahabuddin**, S.K. Agarwal, V.N. Moorthy, C.V.N. Rao and A.V. Narlikar; *Temperature dependence of microwave loss signal in hafnium doped YBaCuO;*
Phys. Lett. A 139, 415 (1989).
17. A.G. Vedeshwar, **Md. Shahabuddin**, Prem Chand, H.D. Bist, S.K. Agarwal, V.N. Moorthy, C.V.N. Rao and A.V. Narlikar; *EPR and low magnetic field microwave absorption in hafnium doped YBaCuO ;*
Physica C 158, 385 (1989)
18. H.D. Bist, P.K. Khulbe, **Md. Shahabuddin**, Prem Chand, A.V. Narlikar, B. Jayaraman and S.K. Agarwal; *EPR and Raman spectroscopy of high t_c superconductor YBaCuO*
Solid State Commun. 65, 899 (1988).

Papers Published in refereed Proceedings

19. Kh. A. Ziq, **M. Shahabuddin**, Intikhab A. Ansari, A. F. Salem, H. Kishan; *Effects of Al O Nano-Particles on the Irreversible Properties of MgB₂ Superconductor.*
AIP conference Proceeding, **929**, 143-146 (2007).

20. Shakurada, Hong Zhu, Ajay K Sarkar, M Okada, Tamio Endo, H Yamasaki, K Endo and **M. Shahabuddin**; *Anisotropic Vortex Dynamics Related to Screening Currents and Microwave currents under magnetic Fields on High Tc Super Conductors*
Proceeding of Progress in Electromagnetics Research Symposium 2005, Hangzhaou China Aug 22-26
21. Jamal Akhtar Khan and **M. Shahabuddin**; *Effect of noise on Shapiro steps in high-Tc Josephson Junctions*
Proceeding of the DAE Solid State Physics Symposium Solid State Physics (India) 46, 629-630 (2003)
22. T. Li, A. Hashizume, KI. Itoh, H. Kohmoto, S. Iwasaki, M. Yamasaki, K. Yamaguchi, T. Endo and M. Shahabuddin; *Temperature rises by microwave absorption in superconducting materials and liquid nitrogen bubbling*
Proceeding of the Third Asia Pacific EPR/ESR Symposium, Kobe , Japan October 29-Nov. 1, 2001; edited by A. Kawamori, J. Yamauchi and H. Ohta , Elsevier Science B.V. (2002)

Papers Presented in conferences/symposium/workshop

23. **M. Shahabuddin** and Mushahid Hussain; *Effect of Zero Field Cooling and Field Cooling on Field Dependent Microwave Absorption in High Tc Superconductors and Determination of Inter&Intra granular Lower Critical Field.*
Presented in National Symposium in Condensed Matter Physics Aug29-31, 2002 organised by Department of Physics , T.M.Bhagalpur University, India.
24. R.D. Kale, A. Hashizume, T. Li, H. Kohmoto, S. Iwasaki, , **M. Shahabuddin**, S. Uthayakumar, E. Srinivasan and T. Endo; *Microwave Absorption Spectrum and reentrant phase in Bi2212 Single Crystal: Temperature dependence*
Presented in International Symposium on Superconductivity (ISS) Japan 2001
25. **Md. Shahabuddin** ; *Temperature dependence of low field dependent microwave absorption in YBa-Cu-O prepared by different routes: resistively shunted Josephson junction model*
Presented at 21st International Nathiagali Summer College on Physics and Contemporary Needs ; held at Islamabad Pakistan (27th Jun to 11th July 1996.)
26. **Md. Shahabuddin**; *EPR and Low Field Dependent Microwave Absorption in High Tc Cuprate Superconductors*
Proceeding of DAE Solid State Symposium 36 C, (1993).
27. **Md. Shahabuddin**, P.K. Khulbe, H.D. Bist and V.A. Singh; *Polarization of Raman bands in high Tc superconductor YBaCuO.*
Proceeding of DAE Solid State Symposium 30 C, E 149(1987).

