



Dr. Amit Kumar Khaskalam

Department of Information Technology,

SoS Engineering & Technology,

Guru Ghasidas Vishwavidyalaya, (Central University), Bilaspur 495009

Mobile Number:09425280380; Email: amitkhaskalam@gmail.com

Qualification: PhD

Area of Interest / Specialization : Embedded systems & Material Science

Experience : 22 years teaching experience.

Publications

S.No.	Title of Paper	Co-author(s)	Name of journals	Vol.& Year	Pages
01	Role of acoustic phonon and plasmon in a coupled array of planes and chains in $YBa_2Cu_3O_{7-x}$ Superconductors.	Dinesh Varshney, R.K.Singh	Materials Science Forum	Vol. 223-224 (1996).	365-368
02	Effect of oxygen deficiency (d) on transition temperature of yttrium cuprate superconductors.	R.K.Singh, Dinesh Varshney	Bull. Mat. Sci.	Vol. 19 (1996)	737-747
03	On the Effect of oxygen deficiency variation with transition temperature in (Y,Sm,Er) $Ba_2Cu_3O_{7-x}$ superconductors.	R.K.Singh, Dinesh Varshney	Bull. Mat. Sci.	Vol. 20 (1997)	259-264
04	Analysis of specific heat in $YBa_2Cu_3O_{7-x}$ ceramic superconductors.	R.K.Singh, Dinesh Varshney	Physica status solidi (b)	206, (1998)	01-09
05	Effect of oxygen deficiency on the normal state resistivity of $Yba_2Cu_3O_{7-d}$ Superconductors.	R.K.Singh, Dinesh Varshney	Bull. Mat. Sci.	Vol. 21 (1998)	457-462
06	1. Anisotropic superconducting state parameters of TI 2212 superconductors				
07	Relaxed structural properties of Al nano-cluster : Theory	Bhoopendra DharDiwan	AIP	1536 (2013)	217-218
08	Size Effect on the Cohesive Energy of Palladium Nanoparticle	Bhoopendra DharDiwan	Proceeding of International conference on Research in Condensed Matter Physics.	(2013)	60-62
09	Thermo Mechanical Properties of $DyP_{1-x}As_x$ Solid Solution.		Proceeding of International	(2013)	77-80.

			conference on Research in Condensed Matter Physics		
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Papers Presented in International conferences/workshops

1. Relaxed structural property of Al nano-cluster : Theory.
Amit Khaskalam with B.D Diwan
Proceeding of International conference on Recent Trends in Applied Physics and Material Sc. AIP conference proceeding 1536 , 217-218(2013)
2. Thermoelectric Power of Zinc Nanowires composites : Phonon scattering Mechanism
Amit Khaskalam with K kChoudhary, Dinesh varshney and R K Singh
International conference on Advances in Nanotechnology Nov. 06-08,2008, MATS University, Raipur.
3. A model for efficient and secure outsourcing Database services.
Amit Khaskalam with Rajesh mahule& R K Singh
International conference: Tenth Conference of International Academy of Physical Sciences (CONIAPS-X) Jan 12-14, 2008, Guru Ghasidas University, Bilaspur.
4. Phonons and spin fluctuations Exchange paring of cuprates
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
International Conference on Phonons in condensed materials. Jan.2-23, 2003, Barkatullah University, Bhopal
5. Oxygen deficiency dependence of Normal state Resistivity of Y-Ba-Cu-O superconductors.
Amit Khaskalam with R K Singh & Dinesh Varshney
VII Asia Pacific Physics Conference Beijing China , 1997 .
6. Effect of impurity doping on transition temperature of $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$.
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
International workshop on high temperature superconductivity Dec. 16-21, 1996 held at University of Rajasthan, Jaipur.
7. Role of acoustic phonon and plasmons in a coupled array of planes and chains in $YBa_2Cu_3O_{7-\delta}$ superconductors.
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
International seminar on "Current Developments in Disordred Materials" E- 15, Jan. 20-24, 1996 held at Kurukshetra University, Kurukshetra.
8. Effect of temperature and oxygen ordering on normal state resistivity of $YBa_2Cu_3O_{7-\delta}$.
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
International conference on " Strong Correlated Electron Systems"(1995) P-24 Sept. 27-30,1995 held at Goa Organised by TIFR, Mumbai.
9. Thermal and themoelectric properties of Yttrium cuprate superconductors.
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
International Conference on The Physics of Disordered Materials (1997) D-16 Jan. 27- 29, 1997 Organised by University of Rajasthan, Jaipur.

Papers presented in National Conferences.

1. Size dependence Effective Band Gap in Silicon Nano film
Amit khaskalam with B.D.Diwan and Avinashkhaskalam
National Seminar on Nanomaterials : Synthesis and Application (NSNSA) 4-6, Marsh 2013 P-95, organized by Dept. of Physics, Govt. PG college, Chindwada M.P.
2. Effective Encryption on Limited Devices
Amit Khaskalam with Renu Trivedi, Vijay K and shiv Kumar
National conference on Information security : Practices & Challenges (ISPC-08) Feb. 9-10, 2008 organized by Department of Information Technology, GGV, Bilaspur
3. A Manufacturing Business Process Reengineering Method: Using Object Oriented Methodology called TAD

- Amit Khaskalam with Renu Trivedi, Vijay K and Shiv Kumar
National conference on Information security : Practices & Challenges (ISPC-08) Feb. 9-10, 2008 organized by Department of Information Technology, GGV, Bilaspur
4. A Pioneer Compression Technique for Databases
Amit Khaskalam with Sushil Kumar, Shiv Kumar
National conference on Information security : Practices & Challenges (ISPC-08) Feb. 9-10, 2008 organized by Department of Information Technology, GGV, Bilaspur
 5. Data Mining approach for Intrusion detection
Amit Khaskalam with Renu Trivedi, Shiv Kumar, Monika Bhatanagar
National conference on Information security : Practices & Challenges (ISPC-08) Feb. 9-10, 2008 organized by Department of Information Technology, GGV, Bilaspur.
 6. Secure Our Computer By "Data Bank"
Devendra Singh and Amit Khaskalam
National seminar on Technology for sustainable development – perspective & strategies" organized by Institute of technology, Guru ghasidas University, Bilaspur during January 6-7, 2007.
 7. Anisotropic superconducting state parameters of TI 2212 superconductors
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
Proc. 43rd DAE Solid state Physics symposium, jP29 Dec. 27-31,2000 Organised by Guru Ghasidas University, Bilaspur. (Chhattigarh)
 8. Study of the anisotropy superconducting state parameters of TI based superconductors.
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
National seminar "Condensed Matter Days – 2000, O-VII-91 (29-31 August, 2000), Organised by Guru Ghasidas University, Bilaspur.
 9. Effect of oxygen ordering on transition temperature of $ABa_2Cu_3O_{7-\delta}$ (A= Y, Yb, Sm) Superconductors.
Amit K. Khaskalam with R.K.Singh and Dinesh Varshney
Proc. Solid state Physics symposium **37C**, 369 Dec. 27-31 1994 Organised by University of Rajasthan, Jaipur.

□ **Administrative Experience** in Guru Ghasidas Vishwavidyalaya, (Central University), Bilaspur.

- **Co-coordinator of SAMARTH a project** is in implementation phase in Guru Ghasidas University. It is developed by Institute of Informatics and Communication, University of Delhi South Campus (IIC UDSC) as per the direction of MHRD.
- **Member of Incubation Centre**
- **Core Committee Member of Integrated University Management System(IUMS):**
Successfully implemented A ERP solution- **Integrated University Management System** in the university with **21 modules** like **Examination module, Finance module, HR module, Inventory module.**
- **Assistant Nodal Officer to Campus Connect :**
 - Designed, developed, implemented and maintaining the Wi-Fi facility in the university campus to make Wi-Fi campus under the project **Campus-Connect** of Ministry of Human Resources, Govt. of India.
 - Designed , developed, implemented and maintaining the **National Knowledge Network (NKN)** with **460 nodes** spread over in 50 departments in the university campus with the speed of **1 Gbps.**
- **Assistant Dean Students Welfare (ADWS):**
 - Successfully Coordinated the Students activities like Tech-Fest of Institute of Technology, Cultural fest of different departments, Insurance of students, Scholarships of students, Welfare schemes of students, Student's council meetings etc. of around 7000 students in the campus from 2014 to 2018
 - Assisting the Dean Student Welfare in different students supports activities and students related administrative activities.
- **Member of Institute- Industry Interaction cell of University:**

Developing the modules for Institute and Industry interaction for providing the opportunities to develop practical orientation of the subject and skill development of students. Organizing the Industry visit for students, Interaction with Industry personals.

- **Election Officer of Student's Council Election:**
Successfully conducted student's council elections from 2012 to 2019 as an Election officer .
- **Teacher Member of Alumni Cell of University -**
Successfully organized the different alumni activities like Alumni meet, Motivational Lectures by Alumni, Placement activity by alumni etc. in different departments of the university.
- **Nodal Officer for Laptops/ Tablets/Mobile Distribution.**
 - Successfully distributed the Laptops to Final Year students of Engineering & MCA students from 2014.to 2018
 - Successfully distributed the Tablets to Final Year students from 2015-16 and 2016-17.
 - Successfully distributed the Smart Mobile phones to All eligible students of session 2017-18 of University. Total 4845 mobiles distributed.
- **Member of anti-ragging committee** from 2004 to 2009 of Institute of Technology, GGV
- **Member of Disciplinary committee** of Institute of Technology, GGV.
Convener Disciplinary committee of SOS Engineering & Technology for Session 2019-2020
- **Examination Discipline Committee (EDC):**
Successfully maintained the Discipline of Examination among all the students of **09 schools** and **33 Departments** of the university from session 2012-13, 2013-14. and 2014-15 as member of EDC.
- **Superintendent of Examination:**
 - Successfully Conducted **End Semester Examinations** of School of Engineering & Technology for session 2002-03, 2005-06, 2006-07 and 2011-12 as Superintendent of Examination.
 - Successfully Conducted **Vishwavidyalaya Entrance Test (VET) (VET-2010, VET-2011, VET2012, VET 2013 & VET 2014, VET 2015, VET 2016, VET 2017)** as Superintendent of Examination.
- **Convener, Central Valuation:**
Successfully completed the valuation of **End semester examination answer books** of all the branches available in three Engineering colleges affiliated to the university for session 2007-08 and 2008-09 as Convener.
- **Assistant Superintendent of Examination:**
Successfully Conducted UGC - **National Eligibility Test (NET)** examination as Assistant Superintendent of Examination for session 2013-14 and 2014-15.
- Successfully conducted **End Semester Examinations** of School of Engineering & Technology for session 2000-01,, 2001-02 as Assistant Superintendent of Examination.
- **Chairman of Board of studies:**
Successfully completed **two tenure as Chairman of Board of studies** of Information Technology from 2009 to 2016. Design and implemented **Choice Based Credit System (CBCS)** for B. Tech. Information Technology students from session 2015-16..
- **Member of Board of studies**
Contributed as member of Board of Studies for Information Technology from 2000 to 2009 and implemented **AICTE model Scheme & Syllabus** for Information Technology Students from 2002-03.
- **Head, Department of Information Technology from 2000 to March 2017**
- First program coordinator of e-class room in 2003.
- Member of IT Cell

Additional Information

➤ **Organized Academic activities** in the University

Successfully Organized the following Academic Activities in the University.

- Organized National conference on **Advances in Electronic Materials and Devices** as **Organizing Secretary** on March 5-6,2006.
- Organized **A National seminar on “ Technology for sustainable development Perspectives & strategies”** as a**Organizing Secretary** on January 6-7, 2007.
- Organized **3rdNational conference on Advances in Electronic Materials & Devices (AEMD-07)** as a**Organizing Secretary** on March 25-26,2007.
- Participated in **International Conference on “Interdisciplinary Approaches in PhysicalSciences : Growing Trends and Recent advancement “** as a **Member of Organizing committee** on January 12-14, 2008.
- Organized **A National conference on Information security: Practices & Challenges(ISPC-08)** as a **Convener** on February 9-10, 2008.
- Organized**6thChhattisgarh Young Scientist congress** as a **Co- convener** on February 28-29, 2008.

Attended Short term courses by Amit K Khasklam

S.No.	Programme	Duration	Organised By
01	Workshop on distributed Laboratory Instrumentation systems	3 weeks (20 Oct -14 Nov. 2003)	ICTP, Italy
02	Attended the short term Course on “ Intelligent Control “	01 week (March 19-23, 2005),	IIT, Kanpur at NIIT, Raipur
03	Short term programme on “ Repair of UPS, Printers & CRO”	1 week (20-24 June 2005)	NITTTR, Chandigarh
04	Short term Programme on “ Embedded Systems “	1 week (6-10 feb 2006)	NITTTR, Chandigarh
05	Short term programme on “ Computer Network “	1 week (17-21 July 2006)	IIT, Kanpur & Govt. of CG
06	Short term programme on “ Digital Signal Processing “	1 week (17-21 July 2006)	IIT, Kanpur & Govt. of CG
07	Short term course on “Oracle 9i administration “	1 week (10 th -15 th Dec. 2006)	IIT, Kanpur & Govt. of CG
08	Workshop on “Development of self Learning Materials”	22 nd -24 th Dec. 2006	Pt. sundarlal Sharma (Open) University Bilaspur
09	Workshop on “Research Methodology in science : Managing Quality in Research & Identification of thrust Area “	29 th Sep. to 1 Oct. 2007	Department of Pure & Applied Physics, GGV
10	Entrepreneurship Educator Orientation Program	07-11 March, 2022	EDII, Ahmedabad

Actively participated in Conferences / workshops/ seminars attended (without Papers)

Attended A National Conference on "IPR issues an opportunities in research and Education" organized by Indian Institute of Technology, Roorkee on Feb. 16-17, 2002.

Building Human Capabilities: Towards A knowledge Society, Organized by Guru Ghasidas University on October 25-26, 2002.

Attended International Conference on Emerging trends in Soft Computing and ICT, Organized by department of Computer Science & Information technology, GGV, on March 16-17, 2011.

Attended A National Conference on Higher Education in The next Millennium organized by Guru Ghasidas University, Bilaspur on Nov. 22, 1999.

Attended A National conference on **Advances in Electronic Materials and Devices** organized by Department of Pure & Applied Physics, GGV, on March 5-6,2006.

Attended **A National seminar on "Technology for sustainable development – Perspectives & strategies"** organized by Department of Pure & Applied Physics, GGV, on January 6-7, 2007.

Attended **3rd National conference on Advances in Electronic Materials & Devices (AEMD-07)** organized by Department of Pure & Applied Physics, GGV, on March 25-26,2007.

Attended 6th Chhattisgarh Young Scientist congress Organized by Guru Ghasidas University, Bilaspur on February 28-29, 2008.

Technical Skill

□ Educational brief:

- **Doctor of Philosophy in Physics**, awarded in 1998 by Department of Physics (UTD) Barkatullah University, Bhopal, India,
- **Master of Science in Physics**, awarded in 1993 by Barkatullah University, Bhopal, Department of Physics (UTD) India,
- **Bachelor of Science**, with (PCM) subjects awarded in 1991 by **Govt. Motilal Vigyan Mahavidyalaya (MVM)**, Barkatullah University, Bhopal, India.
- **Post Graduate Diploma in Computer Applications**, awarded in 1997 by Guru Ghasidas University, Bilaspur, India.

□ Teaching & Research Experience:

➤ Research Publications :

- Papers Published in **International/ National Journals** **12**
- Papers presented in **International conferences/Workshops** **11**
- Papers presented in **National Conferences/workshops** **09**
- Edited a book "**Electronic Materials & Devices** " with ISBN-10 81 88342-18-1/@2007

➤ Teaching :

- **UG** – More than **22** years teaching experience for BE & B Tech students
- **PG**- More than **05** years teaching experience for M.Sc. (Physics), M.Sc. (IT), and MCA

Research Brief :

The Data mining techniques on superconducting materials and Ceramics have been applied to study the properties of materials and modeling of materials. In this method the database of the properties reported in literature of different samples are created and then Eigen Values, Eigen matrix, principal components, "scores" and variable "Loadings" calculated and studied the relation and dependency of the properties using MATLAB. The results are in good agreement with the experimental results and also reported new Information may be used in designing of new materials with improved properties.

A Free electron layered electron gas model (FELEG) of quasi two dimensional CuO_2 layers as well as one dimensional CuO chain in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ has been developed by incorporating the Coulomb, electron-electron, electron – phonon as well as electron – plasmon interactions. The proposed approach properly takes care of layered structure and facilitates the dielectric function and dispersion relation of various modes. Treating the system as two components plasma the

effect of 2D acoustic phonons as well as plasmons has been investigated to understand the nature of pairing mechanism as well as the essence of Superconducting state in these cuprates. The FELEG model developed has been applied to study the transport properties as resistivity and specific heat of copper oxide. Effect of temperature and oxygen deficiency (δ) in Y123 based cuprates on these properties with usual electron-phonon interactions shows a consistent explanation of normal state resistivity when compared with the experimental data. The electron phonon lifetime as well as the a-b plane velocity of sound is also estimated from the analysis.

Certified **DB2 certified from IBM**
Language **JAVA, C, FORTRAN,**
O/S Platforms **WIN-NT, Windows-98, 95, UNIX and DOS**
Assembly Language Programming in **8085, 8086** Microprocessor and programming for **Microcontrollers.**

Amit Kumar Khaskalam