

### **Professional Qualification:**

Ph.D-Microwave Ferrites (I K Gujral Punjab Technical University Jalandhar)

M.Tech-Electronics Product Design and Technology (Punjab Engineering College, Chandigarh)

B.Tech-Electronics and Communication Engineering (BBSBEC Fatehgarh Sahib)

### **Research Interest:**

Synthesis and Characterization of Microwave Ferrites and Composites as Absorbers from 1-40 GHz

### **Employment History:**

#### **Teaching and Administrative Experience: 19 Years**

#### **Teaching Experience**

- Currently working as **Associate Professor at YDOE, Punjabi University Guru Kashi Campus**, Talwandi Sabo since 29<sup>th</sup> December 2006.
- Worked as a lecturer at **Guru Nanak Dev University Amritsar** from 28<sup>th</sup> July 2006 to 28<sup>th</sup> December 2006.
- Worked as a lecturer at **Guru Nanak Dev University Regional Campus Jalandhar** 3<sup>rd</sup> July 2006 to 27<sup>th</sup> July 2006
- Worked as a lecturer at **Guru Nanak Dev University Regional Campus Gurdaspur** 18<sup>th</sup> July 2005 to 28<sup>th</sup> April 2006.
- Worked as a lecturer at **Guru Nanak Dev University Regional Campus Gurdaspur** from 21<sup>st</sup> Oct 2004 to 30 April 2005.
- Worked as a lecturer at **GGs College of Modern Technology, Kharar** from 23<sup>rd</sup> July 2003 to 20<sup>th</sup> Oct 2004.
  - **Teaching (UG and PG):** Digital Electronics, Microprocessor, Electronics and Microwave Absorbers.

#### **Administrative Experience**

- Acted as Section In charge ECE for a tenure of 2 years
- Co-ordinator of electronics circuit fabrication and testing certificate course
- Nodal officer for NAAC/IQAC/AISHE for Yadavindra department of engg, Talwandi Sabo

#### **Institutional Services, Co-curricular and Extension Activities**

- Board Member of Faculty of Engineering and Technology
- Board of Studies member for Electronics and Communication Engineering
- Co-ordinator of Short term course on engineering today at YCoE
- M.Tech Incharge,
- Training and Placement Incharge,
- Transport Bus Pass Incharge
- Physical Verification of candidates applied through golden heart scheme
- Member of College Website Upgradation Committee, Admission Committee, Screening Committee, Purchase Committee, Social and print media committee, Annual Athletic meet committee etc.

**Life Membership of Professional Bodies:** Indian Society for Technical Education (ISTE)

#### **Research Oriented Activities**

**Thesis Guided:** M.Tech (Electronics and Communication Engineering) – 13

**Lab setup :** Established R & D lab in 2015 on microwave absorbers with the help of PhD Supervisor at Rayat Bahra College of Engg. Hoshiarpur which resulted in 12+ research publications in Springer and Elsevier Journals

**Visits:** 2018: Visited **Centre University of Hyderabad** and **Osmania University Telangana** for Experimentation work

#### **Seminar/STC/ Workshops/Conferences Attended**

- 2<sup>nd</sup> IEEE International conference on intelligent circuits and systems held on April 20-21, 2018 at LPU Punjab.
- UGC HRDC Sponsored STC on Research Methodology held on 11.09.19 to 17.09.19 at GNDU Amritsar
- One week STC on Engineering Today from 7-11 May 2018 at YCoE Talwandi Sabo.
- One week STC on Engineering Today from 7-11 January 2019 at YCoE Talwandi Sabo.
- 3<sup>rd</sup> National workshop on innovation in science on 6-7 Nov. 2017 at YCoE Talwandi Sabo.
- 4<sup>th</sup> National workshop on innovation in science on 16-17 October 2018 at YCoE Talwandi Sabo.
- National Workshop on 3D Printing of smart materials on 7<sup>th</sup> Feb 2019 at YCoE Talwandi Sabo.
- One day Workshop on Robotics held at YCoE Talwandi Sabo on dated 7<sup>th</sup> Feb 2018.

## Publications:

Total papers published: 21 (list of publications attached as Annexure II)

➤ Referred Journals SCI Indexed: 18

UGC and Conference Proceedings:5

Research collaboration: Collaborated with various Research Experts at international and national level (List attached as Annexure II)

Citation Indices (As on October 2023):

Google Citations	h-index (Google)	i10-index (Google)	Total Impact Factor
443	9	8	80.095

## List of Publications (Annexure II)

Sr. No.	Title	Journal Name	Year	Volume and Page	ISBN No	Impact Factor
1.	Structural, electrical, and impedance properties of Co and Sn doped Ba <sub>0.5</sub> Sr <sub>0.5</sub> Fe <sub>12-2x</sub> O <sub>19</sub> hexaferrite ceramics ( $0 \leq x \leq 1$ ) and their evaluation for antenna application.	<b>journal of Applied Physics A: Materials Science &amp; Processing / Springer Berlin Heidelberg</b>	2023	129,550	0947-8396	2.983
2.	Exploitation of Dielectric Properties of Ferrite Composites for Microwave Absorber Applications: Complex Permittivity, Real-Imaginary Impedance, Geometrical Thickness, and Reflection Loss Parameters	<b>journal of Applied Physics A: Materials Science &amp; Processing / Springer Berlin Heidelberg</b>	2022	128, 820	0947-8396	2.983
3.	Elucidation of Structural, Morphological, Electrical Parameters and Anti-bacterial Activity of Polyaniline-Nanocomposite: New Paradigm of Controlling Bacterial Activity	<b>IEEE Transactions on NanoBioscience</b> DOI: 10.1109/TNB.2022.3220573	2022	1-1	5361241, 15582639	3.206
4.	Fabrication of highly sensitive 4-Nitrophenol sensor and photocatalytic performance of multifunctional Ba <sub>0.5</sub> Sr <sub>0.5</sub> CoxHfxFe <sub>12-2x</sub> O <sub>19</sub> Ferrite	<b>Journal of Materials Chemistry and Physics / (Elsevier)</b>	2022	288, 126396	0254-0584	4.094
5.	Role of phase, grain morphology and impedance properties in tailoring of Barium Strontium hexaferrites for microwave absorber/attenuator applications	<b>Journal of Materials Science &amp; Engineering B / (Elsevier)</b>	2022	281, 115679	0921-5107	3.407
6.	Controllable Morphology, Dielectric, Magnetic and Reflection loss Characteristics of Ferrite/Wax Composites for Low-loss Applications	<b>Journal of Alloys and Compounds/ (Elsevier)</b>	2021	888, 161611	0925-8388	6.371
7.	Optimization of Performance Parameters of Doped Ferrite-Based Microwave Absorbers: Their Structural, Tunable Reflection Loss, Bandwidth, and Input Impedance Characteristics	<b>IEEE Transactions on Magnetics / IEEE</b>	2021	57, 2800619	1941-0069	1.7
8.	Development of Co <sub>0.7</sub> Ca <sub>0.3</sub> Fe <sub>20</sub> O <sub>4</sub> -EPDM nanocomposite for microwave application: Their rheometric behavior, surface topography and electromagnetic parameters	<b>Journal of Ceramic International / Elsevier</b>	2021	47, 7285–7290	0272-8842	5.532
9.	Development of doped BaSr hexagonal ferrites for microwave absorber applications: Structural characterization, tunable thickness, absorption peaks and electromagnetic parameters	<b>Journal of Alloys and Compounds/ (Elsevier)</b>	2021	855, 157242	0925-8388	6.371
10.	Design and development of Ga-substituted Z-type hexaferrites for microwave absorber applications: Mossbauer, static and dynamic properties	<b>Journal of Ceramic International / Elsevier</b>	2021	47, 1145-1162	0272-8842	5.532
11.	Complex permittivity and complex permeability characteristics of Co–Ti doped barium strontium hexaferrite/paraffin wax composites for application in microwave devices	<b>journal of Applied Physics A: Materials Science &amp; Processing / Springer Berlin Heidelberg</b>	2020	126, 1-8	0947-8396	2.983

12.	A Review: BER Performance Analysis of OFDM system using Reed-Solomon Codes	<b>International Journal of Scientific Research in Network Security and Communication</b>	<b>2018</b>	6, 47-50	2321-3256	
13.	Study of Microwave Absorption Properties in Co-Sn doped M- type Ba –Sr hexagonal ferrite	<b>International Journal of Electronics Engineering / IJEE,UGC</b>	<b>2018</b>	10, 326-330	0973-7383	
14.	Investigation on Microwave Absorption Property of Co <sup>2+</sup> and Cr <sup>3+</sup> substituted M-Type Ba – Sr hexagonal ferrite synthesized by a ceramic method.	<b>International Journal of Electronics Engineering / IJEE,UGC</b>	<b>2018</b>	10, 321-325	0973-7383	
15.	Microwave absorption characteristics of Co <sup>2+</sup> and W <sup>4+</sup> Substituted M-type Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>x</sub> W <sub>x</sub> Fe <sub>12-2x</sub> O <sub>19</sub> hexagonal ferrites	<b>Journal of Materials Science: Materials in Electronics / Springer US</b>	<b>2017</b>	28, 228-235	0957-4522	<b>2.478</b>
16.	A study of microwave absorbing properties in Co–Gd doped M-type Ba–Sr hexaferrites prepared using ceramic method	<b>Journal of Materials Science: Materials in Electronics / Springer US</b>	<b>2017</b>	28, 11969-11978	0957-4522	<b>2.478</b>
17.	Structural and magnetic properties of Co <sup>2+</sup> - W <sup>4+</sup> ions doped M-type Ba-Sr hexaferrites synthesized by a ceramic method	<b>Journal of Alloys and Compounds/ (Elsevier)</b>	<b>2017</b>	695. 909-914	0925-8388	<b>6.371</b>
18.	Investigation on structural and microwave absorption property of Co <sup>2+</sup> - Y <sup>3+</sup> substituted M-type Ba-Sr hexagonal ferrites prepared by a ceramic method	<b>Journal of Alloys and Compounds/ (Elsevier)</b>	<b>2017</b>	695, 792-798	0925-8388	<b>6.371</b>
19.	Microwave absorbing characteristics in Co <sup>2+</sup> and Al <sup>3+</sup> substituted Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>x</sub> Al <sub>x</sub> Fe <sub>12-2x</sub> O <sub>19</sub> hexagonal ferrite	<b>Journal of Materials Science: Materials in Electronics / Springer US</b>	<b>2017</b>	28, 2377-2384	0957-4522	<b>2.478</b>
20.	Elucidation of phase evolution, Microstructural, Moosbauer and magnetic properties of Co <sup>2+</sup> - Al <sup>3+</sup> doped M-type Ba - Sr hexaferrites synthesized by a ceramic method	<b>Journal of Alloys and Compounds/ (Elsevier)</b>	<b>2017</b>	695,1112-1121	0925-8388	<b>6.371</b>
21.	Tunable Microwave Absorption in Co-Al substituted M-type Ba-Sr Hexagonal Ferrite	<b>Journal of Materials and Design / Elsevier</b>	<b>2016</b>	110, 749-761	0264-1275	<b>9.417</b>
22.	Performance analysis of fuzzy logic based PD,PI and PID Controllers	<b>International Journal of Engineering Research and Applications / IJERA</b>	<b>2012</b>	2, 1290-1297	2248-9622	
23.	Performance evaluation of digital modulation technique in WCDMA-Based radio over fiber communication system	<b>International journal of advanced research in computer science and electronics engineering / ijarcese</b>	<b>2012</b>	1, 10-14	2278-9043	

Dr Jasbir Singh

### Research collaboration: (Annexure I)

#### ➤ International

Sr. No.	Name	Address
1.	Dr. Sanjay Mishra	Department of Physics, University of Memphis, Memphis, TN, USA
2.	Dr. Madhav Ghimire	Department of Physics, University of Memphis, Memphis, TN, USA
3.	Dr. Yang Bai	School of Materials Science and Engineering, University of Science and Technology Beijing, Beijing 100083, China.
4.	Dr. Sergei Trukhanov	National University of Science and Technology, Moscow, Russia.
5.	Dr. Alex Trukhanov	National University of Science and Technology, Moscow, Russia.
6.	Dr. Larrisa Panina	Institute of Novel Materials and Nanotechnology, National University of Science and Technology (MISiS), Moscow 119991, Russia
7.	Dr.A.S.B. Sombra	Physics Department - Telecommunication, Science and Engineering of Materials Laboratory (LOCEM), Federal University of Ceara (UFC), P.O. Box 6030, Fortaleza, Ceara, 60455-760, Brazil.
8.	Dr. J.E.V. de Morais	Telecommunication Engineering Department, Federal University of Ceara (UFC), P.O. Box 6007, Fortaleza, Ceará 60755-640, Brazil

9.	Dr. Di Zhou	School of Electronic Science and Engineering, Xi'an Jiaotong University, Xi'an 710049, China
10.	Dr. Hasan B Albargi	Physics Department, College of Science, Najran University, Najran, P.O. Box 1988, Najran, 11001, Saudi Arabia
11.	Dr. Juan C. Apesteguy	LaQuiMMAI-IQAI, Facultad de Ingeniería, UBA. Av. Paseo Colón 850, C1063EHA, Buenos Aires, Argentina
12.	Dr. Silvia Jacobo	LaQuiMMAI-IQAI, Facultad de Ingeniería, UBA. Av. Paseo Colón 850, C1063EHA, Buenos Aires, Argentina
13.	Dr. I.A. Abdel-Latif	Physics Department, College of Science, Najran University, Najran, P.O. Box 1988, Najran, 11001, Saudi Arabia
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15.	Dr. R.G.M. Oliveira	Physics Department - Telecommunication, Science and Engineering of Materials Laboratory (LOCEM), Federal University of Ceara (UFC), P.O. Box 6030, Fortaleza, Ceara, 60455-760, Brazil
16.	Dr. F. F. do Carmo	Physics Department - Telecommunication, Science and Engineering of Materials Laboratory (LOCEM), Federal University of Ceara (UFC), P.O. Box 6030, Fortaleza, Ceara, 60455-760, Brazil
17.	Dr. M. A. S. Silva	Physics Department - Telecommunication, Science and Engineering of Materials Laboratory (LOCEM), Federal University of Ceara (UFC), P.O. Box 6030, Fortaleza, Ceara, 60455-760, Brazil
18.	Dr. Sandeep Sharma	Department of Medical Laboratory Sciences, Lovely Professional University, Phagwara, Punjab
19.	Dr Sundeep Jaglan	Department of Microbiology, CSIR-Indian Institute of Integrative Medicine, Canal Road Jammu-180001
20.	Dr Sarika Sharma	Department of Life Sciences, Arni University. Kathgarh, Indora, Kangra.H.P.(India)-176401.
21.	Dr. Ravinder Kaur	Department of Mechanical Engineering, Indian Institute of Technology, Ropar Punjab
22.	Sukhleen Bindra Narang	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India
23.	Dr. Rajshree B. Jotania	Department of Physics, University School of Sciences, Gujarat University, Ahmedabad 380 009, India
24.	Dr K C James Raju	Centre for Advanced Studies in Electronics Science and Technology (CASEST), School of Physics, Electronics Block, University of Hyderabad, India
25.	Dr. Preksha N Dhruv	Department of Physics, University School of Sciences, Gujarat University, Ahmedabad 380 009, India
26.	Dr. Andrew joseph	Centre for Advanced Studies in Electronics Science and Technology (CASEST), School of Physics, Electronics Block, University of Hyderabad, India
27.	Dr. Maria Vesna	Institute for Multidisciplinary Research, University of Belgrade, 546, Serbia

**Dr Jasbir Singh**