

**Arun Upmanyu, Ph.D.**  
Associate Professor of Physics  
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**Professional Summary:**

- Over 19 years of teaching experience in the Physics at post-secondary level.
- Over 15 years of research experience in the field of Acoustics and radiation Physics.
- Over 6 years of administrative Experience at post-secondary level.
- 19 research publications in various National and International research journals.
- Participated/Contributed in 10 International and National Conferences.
- Delivered several 'Invited Lectures' within India.

**Educational Qualifications:**

- **Ph.D. (Physics), 2018**, IKG Punjab Technical University, Punjab, India  
**Topic:** *Study of photon atom interactions in X-ray region and their applications in elemental analysis.*
- **M. Phil (Physics), 2008**, Periyar University, Tamil Nadu, India  
**Topic:** *Opto-acoustic Investigations of molecular interactions in Polymer Solutions.*
- **Certified Trainer**, Perdue University, Indiana (USA), to design/teach course on *"Engineering projects in community service (EPICS)"*.
- **M.Sc. (Physics), 2002**, Punjabi University, Punjab, India.

**Professional Qualifications:**

- **Associate Professor in Physics** 2014-till date  
(Currently at Chitkara University, CHD, also worked at SG Group of Institutions, PTL, Pb. RB Institute of Engg. & Nano Tech., HSP, Pb.)
- **Coordinator, EPICS, Chitkara University, Chandigarh.** 2017-till date
- **Assistant Professor in Physics** 2008-2015  
(worked at RB Institute of Engg. & Nano Tech., Hoshiarpur, Patiala Institute of Engg. & Technology, Patiala, Pb.)
- **Lecturer/Post Graduate Teacher** 2002-08  
( worked at Army Public School, Patiala, GGS Public School, Sangrur, Shivalik Public School, Nangal, Pb.)

**Professional Leadership:**

- **Dean Academics**, Sh. Ganesh Group Of Institutions, Patiala, Pb. 2015-16
- **Coordinator (Exam.)**, RB Inst. of Engg. & Nano Tech., Hoshiarpur, Pb., 2010-15
- **Member, Board of Studies**, DCM School, Ludhiana, Pb. 2018
- **Coordinator** of five days national workshop on innovative techniques of characterization, optimization & data analysis (ITCOD) 2019

- **Coordinator** of five days national workshop  
On art of writing: *a permeable for thesis*  
*And research paper (A WTRP-19)* 2019
- **Coordinator** of Expert talk on “noise: sources, monitoring, control, standards and guidelines for the safe noise limits ”
- **Coordinator** of Sir C. V. Raman Memorial Lecture  
on "Recent Trends in Space Sciences and Technology  
on National Science Day 2020
- **Conference coordinator** of AIP conference proceedings: National Conference  
on Advances in Applied Sciences and Mathematics (NCASM-20) 2020

#### Membership of Research Organizations:

- **Life Member**, Punjab Academy of Sciences, Patiala.
- **Member**, Ultrasonic Society of India, New Delhi.
- **Life Member**, Indian Society of Technical education (ISTE)

**Detail of Research Profile from 2017 to till date is attached here with for your kind reference.**

S.N.	Title	Name of Journal	Impact Factor/H-Index	SCI/Scopus
1.	Chemical state analysis of $\text{Cl K}\alpha$ and $\text{K}\beta_{1,3}$ X-ray emission lines using polychromatic WDXRF spectrometer” 416, pp. 62-67.	Nuclear Instruments and Methods in Physics Research Section B:	1.229 / H-index = 112	SCI/Scopus
2.	Measurement of large angle Rayleigh scattering cross sections for 39.5, 40.1 and 45.4 keV photons in elements with $26 \leq Z \leq 83$ ”. 128 pp, 125-131.	J. Applied Radiation and Isotope	1.27 / H index = 75	SCI/Scopus
3.	Cross section measurements of radiative $\text{KL}_{2,3}$ RRS in $^{24}\text{Cr}$ and $\text{L}_{3}\text{M}_{4,5}$ RRS in $^{59}\text{Pr}$ for Mn $\text{K}\alpha_{1,2}$ X-rays 137 pp, 55-62.	J. Radiation Physics and Chemistry	2.226 / H-index = 76	SCI/Scopus
4.	Rayleigh scattering of $^{66}\text{Dy K}$ X-rays in elements with $22 \leq Z \leq 90$ ,” 141, pp. 257-263	J. Radiation Physics and Chemistry	2.226 / H-index = 76	SCI/Scopus

5.	Alignment of $L_3$ subshell vacancy states created without Coster–Kronig decay through the selective photoionization in $^{82}\text{Pb}$ , $^{90}\text{Th}$ and $^{92}\text{U}$ and effect of external magnetic field”. 71 pp. 248-260	Eur. Phys. J. D	1.393/ H-index =81	SCI/Scopus
6.	Measurements of differential Rayleigh scattering cross section for 25.2, 28.5, 37.4, 36.8 and 42.2 keV photons in elements with $22 \leq Z \leq 83$ ”	X ray spectrometry	1.445/ H-index =44	SCI/Scopus
7.	Contribution of flyash from coal-fired thermal power plants to uranium contamination of ground water”. Journal of Radio analytical and Nuclear Chemistry 318,( 2). (2018) pp 857–863.	Journal of Radioanalytical & Nuclear Chemistry	1.059/ H-index =65	SCI/Scopus
8.	Ultrasonic Studies of Molecular Interactions in Polymer Solution of the Polyisobutylene (PIB) and Benzene, pp. 434-439	Acta Acustica united with Acustica	1.081 / H-index =54	SCI/Scopus
9.	Thickness measurement of the thin films using in house build energy dispersive X-rays fluorescence (EDXRF) technique. <b>(accepted)</b>	Vacuum	2.925/ H-index= 81	SCI/Scopus
10.	Ultrasonic Study of Molecular Interactions in Polymeric Solution of Polypropylene Glycol-400 and Ethanol at 303 K, 743-752.	Acta Acustica united with Acustica	1.081 / H-index =54	SCI/Scopus
11.	Assessment of Phytoremediation Potential of Chara vulgaris to Treat Toxic Pollutants of Textile Effluent	Journal of Toxicology	H-index = 26	Scopus
12.	Study of excess acoustical and thermodynamical parameters of binary solutions of polypropylene glycol-400 and n-alkanols at 303 K. In AIP Conference Proceedings (Vol. 2220, No. 1, p. 080001). AIP Publishing LLC.	AIP Conference Proceedings	H-index = 64	Scopus
13.	Thermo-acoustic investigations of molecular interactions in CuO nano particles contained aqueous solutions of some glycols." In AIP Conference Proceedings, vol. 2220, no. 1, p. 020087. AIP Publishing LLC, 2020.	AIP Conference Proceedings	H-index = 64	Scopus
14.	Rayleigh Differential Scattering Cross-sections for Mn $K\alpha$ and Mn $K\beta$ Photons in Some Rare Earth Elements. <b>(communicated)</b>	AIP- Proceedings	H-index = 64	Scopus

15.	Molecular interactions study in polymer blends of chitosan(Ch)/polyvinyl pyrrolidone(PVP) in a buffer solution, within 303.15 K -323.15 K. <b>(communicated)</b>	AIP- Proceedings	H-index = 64	Scopus
16.	Estimation of viscosity and ultrasonic velocity of polymer solutions of HTPB + chlorobenzene in the temperature range 303.15 K – 318.15 K. <b>(communicated)</b>	AIP- Proceedings	H-index = 64	Scopus
17.	Thermo-acoustical studies of zinc oxide nanoparticles dispersed nematic liquid crystals mixtures in the temperatures range 283.15 K- 318.15K <b>(in progress)</b>	Journal of molecular liquids	4.766 / H- index=98	SCI/Scopus
18.	Thermo-viscous Investigations of Molecular Interactions in the Binary Mixtures of Polyethylene glycol-400 + Dimethyl Sulfoxide and Polyethylene glycol-600 + Water at Various Temperatures <b>(in progress)</b>	Journal of molecular liquids	4.766 / H- index=98	SCI/Scopus
19.	<p style="text-align: center;"><b>Title of Patent ( Published)</b>  WATER FILTRATION APPARATUS ( Patent no: 201711045864)</p>			

## II. Guiding three Research Scholar as a Supervisor

1. Name of Research Scholar: Monika Dhiman  
Date of Registration: July 2019  
Till Date: Research Proposal Defended.
2. Name of Research Scholar: Archana  
Date of Registration: Jan 2021
3. Name of Research Scholar: Mahesh Bhutt  
Date of Registration: Jan 2021

**With Regards**

**Dr. Arun Upmanyu**  
**Associate Professor**  
**Department of Applied Sciences**  
**Chitkara University, Punjab**