Biographical Sketch – JANGVIR SINGH SHAHI

JANGVIR SINGH SHAHI
Professor
Department of Physics
Panjab University, Chandigarh – 160 014, India

ACADEMIC BACKGROUND

Ph.D in Physics Panjab University, Chandigarh (2001)

Thesis Title: *X-Ray photon scattering cross section measurements and application in elemental analysis using EDXRF technique*

M.Phil. Panjab University, Chandigarh

M.Sc. (Honors) Physics Panjab University, Chandigarh
(with Electronics specialization)

B.Sc. (Honors) Physics Panjab University, Chandigarh

PROFESSIONAL BACKGROUND

● Professor	Panjab University, India	10/2018 – till date
● Associate Professor	Panjab University, India	10/2015 – 10/2018
● Assistant Professor	Panjab University, India	10/2003 – 10/2015
● Radio Chemist	Panjab University, India	06/1990 – 10/2003
● Lecturer	PEC Chandigarh, India	04/1988 – 06/1990
● Teaching Assistant	PEC Chandigarh, India	09/1986 – 04/1988
● Lecturer	S G T B Khalsa College Anandpur Sahib	01/1986 – 03/1995

SERVICES

- Establishment of dedicated lab for "Science Academy's Refresher Course in Experimental Physics" and earned a MOU between P U Chandigarh and Academy of Sciences Bangalore
- Successfully conducted six courses- including a prestigious 100th course in July 2018
- Acted as a resource person at "Science Academy's Refresher Course in Experimental Physics" at different universities of north India.
- Working as Coordinator Telecommunication Department, P U campus,
- In-charge B.Sc. 1st and 2nd year Lab, Dept. of Physics
- Member of various Departmental Committees

COLLABORATIONS

- India-based Neutrino Observatory (INO)

CURRENT POSITION

Working as Professor of Physics. Teaching Post-Graduate and Under-Graduate students (both theory and laboratory). Guiding research students for MSc project, and Ph.D. work. Member of the EDXRF and INO group in the department. Co-Investigator in various research projects.

PUBLICATIONS

Author / Co-author of more than 50 research papers in National / International Journals.

RESEARCH INTERESTS

- XRF and its Applications
- Neutrino Physics (Detector Developments)
- Medical Physics (Radiation Dosimetry)
- Instrumentation

LIST OF SOME RECENT PUBLICATIONS

1. Comprehensive review and future perspectives of efficient N-doped, Fe-doped and (N,Fe)-co-doped titania as visible light active photocatalysts
   Vacuum Volume 178, August 2020, 109429

2. A comparative study for surface dose evaluation in conventional treatment of carcinoma breast patients irradiated with Co-60 and 6 MV radiation beam
   Journal of Cancer Research and Therapeutics2019 15(5), pp. 1035-1041
3. Evaluation of positional accuracy of the Varian's exact-arm and retractable-arm support electronic portal imaging device using intensity-modulated radiotherapy graticule phantom
   Journal of Cancer Research and Therapeutics 2019: 15(1), pp. 204-210
4. Measurements of elastic scattering cross sections for 25.2, 28.5, 37.4, 36.8, and 42.2 keV X-ray photons in elements with $22 \leq Z \leq 83$
   X-Ray Spectrometry 2018: 47(6), pp. 459-474
5. Instrumental detection limit and sensitivity of K and L shell X-ray emission lines of Cl, Rb, and Sr elements using PC-WDXRF spectrometer
   X-Ray Spectrometry 2018: 47(5), pp. 352-358
6. Measurement of L XRF cross sections for elements with $33 \leq Z \leq 51$ and their interpretation in terms of $L_{i\ (i\ =\ 1–3)}$ subshell vacancy decay parameters
   Nuclear Instruments and Methods in Physics research, Section B: Beam Interactions with Materials and Atoms 2018: 429, pp. 19-26

7. Investigation of morphologies, photoluminescence and photocatalytic properties of ZnO nanostructures fabricated using different basic ionic liquids
Journal of Environmental Chemical Engineering 2018: 6(3), pp. 3718-3725

8. Green Synthesis of Nano-size Calcium Titanate CaTiO3 Using Solid State Mechano- Chemical Solvantless Method and Characterization
International Journal for Research in Engineering Application & Management (IJREAM) Volume 4, Issue 1, Apr 2018

9. Study of chemical shift in Kα, $K\beta_{1,3}$ and $K\beta_{//}$ X-ray emission lines of $_{37}$Rb compounds with WDXRF
AIP Conference Proceedings 1953, 140028

10. Elemental Analysis of Glass and Bakelite Electrodes Using PIXE Facility
Springer Proceedings in Physics 203, pp. 583-586

11. Study of chemical shift in L_l and L_η X-ray emission lines in different chemical forms of $_{48}$Cd and $_{50}$Sn compounds using WDXRF technique
X-Ray Spectrometry 47(2), pp. 116-126

12. Rayleigh scattering of $_{66}$Dy-K X-rays in elements with $22 \leq Z \leq 90$
Radiation Physics and Chemistry 141, pp. 257-263

13. India Based Neutrino Observatory (INO)
Bulletin of Indian association of Physics Teachers, Volume 9, Issue 9, September 2017 p 204-244

14. Influences of a new templating agent on the synthesis of coral-like TiO_2 nanoparticles and their photocatalytic activity
Journal of Science: Advanced Materials and Devices 2(3), pp. 347-353

15. Evaluation of positional accuracy of EPID using IMRT GRATICULE PHANTOM in extended source to imager distance setups: formalism of QA
International Journal of Current Advanced Research volume 6 issue 3 (Mar 2017) pp 2389 to 2393

16. Invited review: Physics potential of the ICAL detector at the India-based Neutrino Observatory (INO)
Pramana - Journal of Physics 88(5),79

17. Trace elemental profile of School Chalk from a few Companies in Punjab areas by WDXRF Technique
International journal of modern sciences and engineering technology Volume 3, Issue 6, 2016 pp 6-15

18. Development and characterization of single gap glass RPC
Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment 840, pp. 128-132

19. Investigations on Nuclear Counting System using Data Acceptance Tests
Elixir Nuclear & Radiation Phys. 98 (2016) 42482-42485

20. Elemental analysis of condiments, food additives and edible salts using X-ray fluorescence technique
International Journal of Pharmaceutical Sciences Review and Research
35(2), pp. 126-133