

DR. KULWINDER SINGH MANN

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For Research & Consultancy: <https://pymilbuf.pythonanywhere.com/>

13/11/2023

Research (13 Years' Experience)

Nuclear Radiations' Shielding Behaviours of Homogeneous and Heterogeneous Slabs

Research Topic: Nuclear Radiation Shielding Behaviors of Some Low-Z Engineering Materials

Keywords: Optimum Thickness value for the measurement of mass attenuation coefficients, Scattered to Transmission Ratio of Photons, Buildup Factors, Effective atomic number, Acceptance Angle, Air Slab Correction (ASC), G.P. fitting method, American Nuclear Standards-ANSI/ANS-6.4.3: 1991, Fast Neutron Shielding, Monte Carlo Simulation (EGS4), GEANT4, WinNC-Toolkit, BUF-Toolkit, GRIC-Toolkit, Zeff-Toolkit, Py-MLBUF: Online platform for calculations of 36 parameters for Multi-Layered Shields.

Research Significance: The suggested corrections factor the ASC is useful more accurate estimation of attenuation coefficients of low-Z materials and improving the clarity of the image produced by CT-Scan. The data published related to EBF, EABF, OOT, DLEBF, etc. will be useful in updating the Radiation Safety Standards for residential buildings and to update the ANS/ANSI 6.4.2, 1991.

Registered as Supervisor/Co-Supervisor with Guru Kashi University, Talwandi Sabo, Bathinda

Ph.D. Students: (1) Mr Amit Joshi (Assistant Professor in Physics, Govt. Barjindra College Faridkot),

Thesis Submitted in August 2023

(2) Simran Diwan (Course Work Under Process)

(3) Vacant

(4) Vacant

Education

Ph. D.	Nuclear Physics	Punjab Technical University Jalandhar	2013-2017
UGC/NET	Physical Sciences	Council of Scientific & Industrial Research	Jan. 1998
M.Sc.	Applied Physics	Punjabi University Patiala, Punjab	1995-1997
B.Sc.	Non Medical	Punjabi University Patiala, Punjab	1992-1995

Employment and Positions (Teaching Experience: 25 Years 6 Months)

<u>Organization</u>	<u>Place</u>	<u>Position(s)</u>	<u>Duration</u>
D.A.V. College Bathinda	Punjab, India	Assistant Professor (Promotion Due for Associate Prof. Since 26/07/2018)	Jul'18 – present
D.A.V. College Bathinda	Punjab, India	Assistant Professor	Jan'06 – Jul'18
D.A.V. College Bathinda	Punjab, India	Lecturer in Physics	Jul'04 – Jan'06
Guru Nanak College Budhlada	Punjab, India	Lecturer in Physics	Aug'98– Jul'04
Govt. Rajindra College Bathinda	Punjab, India	Lecturer in Physics	Sep'97– Mar'98

Awards, Honors Received and Consultancies Provided

- Sanctioned a grant of Rs.44/- Lakhs for Hands-on Training for UG Science students of DAV College Bathinda ([April 2020 to March 2023](#)). One-year extension w.e.f. 05.03.2023 to 04.03.2024 [granted on 27.02.2023](#), within the sanction budget.
- Appreciation-Certificate received from IAPT and Vigyan Parasar on Dec. 13, 2020 for contributing in the Online Prelims of National Anveshika Experimental Skill Test 2020 (NAEST-2020).

¹ Associate Professor promotion is due since 26.07.2018

- Appreciation-Certificate received from Chief-Coordinator (Examination), Indian Association of Physics Teachers for performing observer duty for the *cause of science and science Olympiad* on 24th Nov.2019.
- Best Paper Award earned in International Conference in March 2017, based on my research work and designed computational toolkits.
- Appreciation Letter for Providing Research Consultancy to Department of Nuclear Science and Engineering, MIST, Dhaka, Bangladesh on 25/04/2018
- **Provided Research Consultancies using Py-MLBUF-online portal to more than [300 researchers](#).**

Skills

- Microsoft Excel/Spreadsheets/ Google Sheets
- Google classroom/ Google Slides/ Google forms/ Google sites
- Electric VLAB simulations
- Tracker Video analysis software
- SimPHY software for Physics related simulations
- Simulations with PhyPhox, PHET, Sensor Box, etc.
- Video editing: OBS Studio, Kinemaster, Filmora9
- Electronics: DSO/CRO/Soldering
- Nuclear Physics: GM Counter/ Scintillation Counter/ Rad Lab/
- Graphs: OriginLab
- Training Received from Energy Swaraj Foundation: [ENERGY LITREACY TRAINING on 10/09/2023](#)
- ARDUINO for Physics Experiments and Measurements

Mentoring Highlights

- Physics Teaching experience in UG classes: 25.5 Years.
- Research experience on Gamma-Rays shielding: 13 Years
- PhD students: 2 Pursuing.
- Guided minor projects of UG-B.Sc. students under the Star College Scheme.
- Internship Provided to M.Sc. (Physics) students under YSL-programme
- Delivered Invited talks in National Seminars / Webinars: 4
- Trained UG students for physics computation with FORTRAN-77
- Conducted PhD viva voce at [IGCR Kalpakam](#) on 27/09/2022

Memberships / Associations / Consultancy

- Life member of Indian Association of Physics Teachers (Reg. No. 10611L6816)(20/02/2015)
- Life member of Indian Society for Radiation Physics (ISRP) (Reg No. 876) (09/09/2008)
- Elected as a member of RC-02 (Punjab + J&K) of IAPT for two years Jan. 2022-Dec.2024.
- Reviewer, ELSEVIER SPRINGER, IEEE, IOP Journals and several conferences
- Member of Board of Studies in Physics for Undergraduate Classes, Punjabi University Patiala from 25.02.2011 to 31.12.2012, 24.01.2017 to 31.12.2018, and 21.05.2021 to 31.12.2022-11.01.2023.
- Member of Editorial Board of Sinop University Science Journal, ISSN 2536-4383, e-ISSN 2564-7873.
- Research Consultancy Provided at international level with the help of self-designed toolkits such as Py-MLBUF: Online platform for calculation of Gamma-ray shielding parameters, WinNC-Toolkit, GRIC-Toolkit, GRIC2-Toolkit, BUF-Toolkit, Zeff-Toolkit, etc. For more detail please open the following link: https://bit.ly/RC_Provided

Professional Activities

- Judge for THE Poster Presentation Competition during the “National Conference on Recent advancement in Physics” organized on [17th September, 2022](#).

- Completed UGC-Approved Short-Term Professional Development Programme: Professional Development Programme on 'Implementation of NEP-2020 for University and College Teachers' held from [09-17 September, 2022](#) ([Link](#))
- Presented a paper titled "Organic Farming: Issues and Challenges" in ICSSR sponsored National Seminar on Rural Transformation in Punjab: Issues & Challenges, held on [24 September, 2022](#) at DAV College, Bathinda.
- One Day National Webinar on "Intellectual Property Rights (IPR)" on [05th October 2021](#), organized by Maharana Pratapsinh Shikshan Sanstha's Anandibai Raorane Arts, commerce and Science College, Vaibhavwadi, Dist. Sindhudurg – 416810
- Attended One Week ([17/7/2021-23/7/2021](#)) FDP program on Novel Materials under ATAL scheme and organized by MRSPTU, Bathinda.
- Attended, three day Workshop on '#ZeroWaste', Organized by DAV College, Bathinda, Central University of Punjab, Bathinda and Indian National Young Academy of Sciences (INIAS), New-Delhi, from 16-18 June 2020.
- Participated in seven-day Faculty Development Program on 'Recent Trends in Materials Science and Engineering, Organized by Department of Physics, School of Basic Sciences & Research, Sharda University, Greater Noida, Uttar-Pradesh, during 25-31 May, 2020.
- Participated in International Webinar on 'Modern Trends in Experimental Research: Optics and Imaging in Healthcare', Organized by The Maharaja Sayajirao University of Baroda Vadodara, Gujarat, India from 21-24 May 2020.
- Participated in TEQIP-III sponsored webinar on 'Post COVID-9: Mitigation Strategies for Challenges of online Education in India', Organized by Dr. B. R. Ambedkar National Institute of Technology Jalandhar, Punjab, India, on 18th May 2020.
- Participated in, a Webinar Series on 'Conceptual and Applied Physics', Organized by Department of physics, School of science, RK University and Department of Nanoscience & Advanced materials, Saurashtra University, Rajkot during 05-08 May, 2020.
- Attended National Workshop on LaTeX and MATLAB Tools 31st Jul'17 to 05th Aug'17
- Completed REFRESHER COURSE at ASC of GNDU, Amritsar form 28th Nov'12 to 18th Dec'18
- Completed ORIENTATION PROGRAMME at ASC of PU, Chandigarh form 2nd Dec'08 to 29th Dec'08
- Completed REFRESHER COURSE at ASC of PU, Chandigarh form 5th Dec'06 to 25th Dec'06

Publications:

• Research papers in Indexed and SCI Journals	: 29
• Citations (Google Scholar)	: 969 (h-index: 18, i10-index: 20)
• Books	: 06
• Chapter in Books/Proceedings	: 12
• Conference and Workshop Proceedings	: 15
• Activity Reports in Bulletin of IAPT	: 13
• News Paper Articles	: 11
• Abstract in Conference Proceedings	: 16

Peer-Reviewed Publications

Journals

1. **K. S. Mann**, Garima , Sarthak (2023). "Capacitance Measurement by Digital Oscilloscope: An Extension of The Conventional Method Practiced In UG Physics Laboratories". Bulletin of the IAPT a Monthly Journal of Education in Physics & Related Areas (IAPT Publication) [15 \(11\), pp. 360-364. \(ISSN: 22778950\)](#)
2. Joshi, A., Walia, G., **Mann, K. S.** (2023). Characterization of Silicon Rubber Doped with Bismuth (III) OXIDE (Bi₂O₃) and Boron Nitride (hBN) For Neutron and Gamma Radiation Shielding Competences Via

- GEANT4-TOOLKIT and PYMLBUF, Semiconductor Optoelectronics, 42 (1), 1234-1255, (China), ISSN:1001-5868.
<https://bdtgd.cn/article/view/2023/1234.pdf>
3. Joshi, A., **Mann, K. S.**, Walia, G. (2022). A Closer Look at Neutron and Gamma Shielding Behaviours of Some Multi-Constituent Composite Materials, Journal of Aeronautical Materials, 43 (1), 56-82, (China), ISSN: 1005-5053 (IMPACT FACTOR: **0.94**)
<https://www.hkclxb.cn/article/view/2023/56.pdf>
 4. Kumar, S., **Mann, K. S.**, Singh, T., Singh, S. (2021). Investigations on the gamma-ray shielding performance of green concrete using theoretical, experimental and simulation techniques, Progress in Nuclear Energy, (ELSEVIER Publications), 134, 103654 (ISSN: 0149-1970), (IMPACT FACTOR: **2.256**)
<https://doi.org/10.1016/j.pnucene.2021.103654>
 5. **Mann, K.S.** and Mann, S. S. (2021). Py-MLBUF: Development of an online-platform for gamma-ray shielding calculations and investigations, Annals of Nuclear Energy, United States (ELSEVIER Publications), 150, 107845 (ISSN: 0306-4549), (IMPACT FACTOR: **1.776**)
<https://doi.org/10.1016/j.anucene.2020.107845>
 6. **Kulwinder Singh Mann**, Asha Rani, Manmohan Singh Heer, V. P. Singh, Turgay Korkut, Shielding Effectiveness of Some Hydrogenous Materials for Neutral Nuclear Radiations, J. Rad. Nucl. Appl. 5, No. 1, 69-79 (2020): (ISSN: 2536-9539) <http://www.naturalspublishing.com/download.asp?ArtclID=20582>
 7. Al-Buriah, M. S. and **Mann, K. S.** (2019). Radiation shielding investigations for selected tellurite-based glasses belonging to the TNW system, Mater. Res. Express 6, (IOP Publishing), 105206 (IMPACT FACTOR: **1.620**)
<https://doi.org/10.1088/2053-1591/ab3f85>
 8. S.F. Olukotun, **Kulwinder Singh Mann**, S.T. Gbenu, F.I. Ibitoye, O.F. Oladejo, Amit Joshi, H.O. Tekin, M.I. Sayyed, M.K. Fasasi, F.A. Balogun, Turgay Korkut (2019). Neutron-shielding behaviour investigations of some clay-materials." Nuclear Engineering and Technology, South Korea, (ISSN: 1738-5733) (UGC J. No.: 26991) (IMPACT FACTOR: **2.341**)
<https://doi.org/10.1016/j.net.2019.03.019>
 9. **Kulwinder Singh Mann** (2019). "Investigation of gamma-ray shielding by double layered enclosures." Radiation Physics and Chemistry, England (ELSEVIER Publications), 159, pp. 207-221, (ISSN: 0969-806X) (UGC J. No.: 9909) (IMPACT FACTOR: **2.858**)
<https://doi.org/10.1016/j.radphyschem.2019.03.007>
 10. **Kulwinder Singh Mann**, Sukhmanjit Singh Mann (2018). "Investigation of Gamma-Ray's Transmission Geometries for the Measurement of Attenuation Coefficients." Zeitschrift für Naturforschung - Section A Journal of Physical Sciences, Germany, 73 (12), pp. 1083-1090, 2018, (ISSN: 0932-0784) (UGC J. No.: 25383) (IMPACT FACTOR: **1.355**)
<https://doi.org/10.1515/zna-2018-0282>
 11. **Kulwinder Singh Mann** (2018). "Semi-empirical method for analysis of cultivated soils," Journal of Physics Communications (IOP), United Kingdom, 2,055013, pp. 1-10. (ISSN: 2399-6528) (UGC J. No.: 25383) <https://doi.org/10.1088/2399-6528/aac0e1>
 12. **Kulwinder Singh Mann** (2018). "Measurement of exposure buildup factors: The influence of scattered photons on gamma-ray attenuation coefficients", Nuclear Instruments and Methods in Physics Research, Section A: Acc., Spect., Det. Netherlands (Elsevier Publications), 877, pp.1–8. (ISSN: 0168-9002), (UGC J. No.: 27002) (IMPACT FACTOR: **1.265**)
<https://doi.org/10.1016/j.nima.2017.08.047>
 13. **Kulwinder Singh Mann** (2017). "AIR Slab-Correction for Gamma-Ray Attenuation Measurements", Nuclear Instruments and Methods in Physics Research, Section A: Acc., Spect., Det., Netherlands (Elsevier Publications), 875, pp. 146-155. (ISSN: 0168-9002), (UGC J. No.: 27002) (IMPACT FACTOR: **1.265**)
<https://doi.org/10.1016/j.nima.2017.09.001>

14. **Kulwinder Singh Mann** (2017). "Gamma-Ray Shielding Behaviors of Some Nuclear Engineering Materials". Nuclear Engineering and Technology, South Korea (Elsevier Publications), 49 (4), pp. 792-800, (ISSN: 1738-5733) (UGC J. No.: 26991)
(IMPACT FACTOR: **2.341**)
<https://doi.org/10.1016/j.net.2016.12.016>
15. **Kulwinder Singh Mann**, Manmohan Singh Heer, Asha Rani (2017). "Influence of Sample's Thickness on Gamma-Ray Shielding Parameters". International Journal of Advanced Technology in Engineering and Science (ijates), Vol.05 (03), pp. 521-533 (ISSN: 2348-7550).
http://www.ijates.com › images › short_pdf
16. **Kulwinder Singh Mann**, Manmohan Singh Heer, Asha Rani (2017). "The Study of the Compaction Effect on Gamma-Ray Shielding". International Journal of Pure and Applied Physics, 13(1), pp. 96-99. (ISSN 0973-1776).
[Pdf-Link](#)
17. Harjinder Singh Mann, Gurdarshan Singh Brar, **Kulwinder Singh Mann**, Gurmel Singh Mudahar (2016). "Experimental Investigation of Clay Fly-Ash Bricks for Gamma-Ray Shielding". Nuclear Engineering and Technology, South Korea (Elsevier Publications), 48 (5), pp. 1230-1236, (ISSN: 1738-5733), (UGC J. No.: 26991)
(IMPACT FACTOR: **2.341**)
<http://dx.doi.org/10.1016/j.net.2016.04.001>
18. **Kulwinder Singh Mann**, Manmohan Singh Heer, Asha Rani (2016). "A comparative study of gamma-ray interaction and absorption in some building materials using Zeff- Toolkit". Radiation Effects and Defects in Solids, England (Taylor & Francis), 171, 7-8, 615-629, (ISSN: 1029-4953), (UGC J. No.: 32535)
(IMPACT FACTOR: **1.414**)
<http://dx.doi.org/10.1080/10420150.2016.1227824>
19. **Kulwinder Singh Mann**, Manmohan Singh Heer, Asha Rani (2016). "Gamma-Ray Double-Layered Transmission Exposure Buildup Factors of Some Engineering Materials, A Comparative Study". Radiation Physics and Chemistry, England (ELSEVIER Publications), 125, pp. 27-40, (ISSN: 0969-806X), (UGC J. No.: 9909)
(IMPACT FACTOR: **2.858**)
<https://doi.org/10.1016/j.radphyschem.2016.03.001>
20. **Kulwinder Singh Mann**, Manmohan Singh Heer, Asha Rani (2016). "Investigation of clay bricks for storage facilities of radioactive-wastage". Applied Clay Science, Netherlands Applied Clay Science, Netherlands (ELSEVIER Publications), 119, pp. 249-256, (ISSN: 0169-1317), (UGC J. No.: 15932)
(IMPACT FACTOR: **5.467**)
<http://dx.doi.org/10.1016/j.clay.2015.10.022>
21. Kulwinder Singh Mann, Manmohan Singh Heer, Asha Rani (2015). "Fast Neutron Removal Cross-Section Calculations: Computer Program". International Journal of Application or Innovation in Engineering & Management. (ISSN: 2319-4847). Abstract only
Kulwinder Singh Mann, Manmohan Singh Heer, Asha Rani (2015). "Effect of low-Z absorber's thickness on gamma-ray shielding parameters". Nuclear Instruments and Methods in Physics Research, Section A: Acc., Spect., Det., Netherlands (ELSEVIER Publications), 797, pp.19-28. (ISSN: 0168-9002), (UGC J. No.: 27002)
(IMPACT FACTOR: **1.265**)
<http://dx.doi.org/10.1016/j.nima.2015.06.013>
22. Kulwinder Singh Mann, Asha Rani, Manmohan Singh Heer (2015). "Shielding behaviours of some polymer and plastic materials for gamma-rays". Radiation Physics and Chemistry, England (ELSEVIER Publications), 106, pp. 247-254, (ISSN: 0969-806X) (UGC J. No.: 9909)
(IMPACT FACTOR: **2.858**)
<http://dx.doi.org/10.1016/j.radphyschem.2014.08.005>
23. H. Birtan Kavanoz, Ozlem Ya_gci, Zeynel Yalcin, Orhan Icelli, Ahmet Altindal, Mustafa Okutan, Kulwinder Singh Mann (2014). "Photon parameters for Gamma-rays sensing properties of some thick oxide films". Vacuum, England (ELSEVIER Publications), 101, pp.238-245. (ISSN: 0042-207X), 806X) (UGC J. No.: 35506)
(IMPACT FACTOR: **3.637**)
<http://dx.doi.org/10.1016/j.vacuum.2013.09.001>

24. Orhan Icelli, Kulwinder Singh Mann, Zeynel Yalcin, Salim Orak, Vatan Karakaya (2013). "Investigation of shielding properties of some boron compounds". *Annals of Nuclear Energy, United States (ELSEVIER Publications)*, 55, pp. 341-350. (ISSN: 0306-4549), (UGC J. No.: 15591) (IMPACT FACTOR: **1.776**)
<http://dx.doi.org/10.1016/j.anucene.2012.12.024>
25. M. Kurudirek, D. Sardari, N. Khaledi, C. Cakir, K.S. Mann (2013). "Investigation of X- and gamma ray photons buildup in some neutron shielding materials using GP fitting approximation". *Annals of Nuclear Energy (ELSEVIER Publications)*, 53, pp. 485-491. (ISSN: 0306-4549), (UGC J. No.: 15591) (IMPACT FACTOR: **1.776**)
<http://dx.doi.org/10.1016/j.anucene.2012.08.002>
26. Kulwinder Singh Mann, Turgay Korkut (2013). "Gamma-Ray Buildup Factors Study for Deep Penetration in Some Silicates". *Annals of Nuclear Energy (ELSEVIER Publications)*, 51, pp. 81-93, (ISSN: 0306-4549) , (UGC J. No.: 15591) (IMPACT FACTOR: **1.776**)
<http://dx.doi.org/10.1016/j.anucene.2012.08.024>
27. Kulwinder Singh Mann, Baljit Kaur, Gurdeep Singh Sidhu, Ajay Kumar (2013). "Investigations of some building materials for Gamma-rays shielding effectiveness" *Radiation Physics and Chemistry, England (ELSEVIER Publications)*, 87, pp.16-25. (ISSN: 0969-806X), (UGC J. No.: 9909) (IMPACT FACTOR: **2.858**)
<http://dx.doi.org/10.1016/j.radphyschem.2013.02.012>
28. Vipin Kumar, Kulwinder Singh Mann, S. R. Manohara, Gurdeep Singh Sidhu (2012). "Investigations on some low-Z alkali minerals as Gamma-ray shields" *International Journal of Latest Research in Science and Technology (MNK Publications)*, 4(1), pp. 324-333, (ISSN (Online):2278-5299).
29. Kulwinder Singh Mann, Jyoti Singla, Vipin Kumar, G. S. Sidhu (2012). "Verification of some building materials as gamma-ray shields". *Radiation Protection Dosimetry, England (Oxford Journals)*, 151(1), pp. 183-195. doi:10.1093/rpd/ncr455. (ISSN: Online-1742-3406, Print-0144-8420), (UGC J. No.: 9910) (IMPACT FACTOR: **0.972**)
30. Kulwinder Singh Mann, Murat Kurudirek, G.S.Sidhu (2012). "Verification of dosimetric materials to be used as tissue-substitutes in radiological diagnosis" *Applied Radiation and Isotopes, United States (ELSEVIER Publications)*, 70, pp. 681-691. (ISSN: 0969-8043), (UGC J. No.: 8074) (IMPACT FACTOR: 1.513) doi:10.1016/j.apradiso.2011.12.008
31. Kulwinder Singh Mann, Jyoti Singla, Vipin Kumar, Gurdeep Singh Sidhu (2012). "Investigations of mass attenuation coefficients and exposure buildup factors of some low-Z building materials". *Annals of Nuclear Energy, United States (ELSEVIER Publications)*, 43, pp.157-166. (ISSN: 0306-4549), (UGC J. No.: 15591) (IMPACT FACTOR: 1.776), doi:10.1016/j.anucene.2012.01.004
32. Kulwinder Singh Mann, Gurdeep S. Sidhu (2012). "Verification of some low-Z silicates as gamma-ray shielding material". *Annals of Nuclear Energy, United States (ELSEVIER Publications)*, 40, pp. 241-252. doi:10.1016/j.anucene.2011.09.015. (ISSN: 0306-4549), (UGC J. No.: 15591), (IMPACT FACTOR: 1.776)
33. Vivek Wagh , Subhash Chandra Samanta , Rekha Ghorpade , Kulwinder Singh Mann (2022). "Survey Report: Investigation of Lab Based Physics Education in India". *Bulletin of the IAPT a Monthly Journal of Education in Physics & Related Areas (IAPT Publication)* 14 (12), pp. 413-426. (ISSN: 22778950)

Communicated

1. Kulwinder Singh Mann, Garima, Sarthak (2022). Manuscript ID PE22-11-865: Capacitance Measurement by Digital Oscilloscope: An Extension of the Conventional Method Practiced in UG Physics Laboratories, *Journal of Physics Education (ISSN 0970-5953)*.

Books

1. A Closer Look at Neutrons in Nuclear and Radiological Engineering (**May 2021**), Nova Science Publishers, USA, (Kulwinder Singh Mann, V. P. Singh and H.R Vegas-Carillo)
[ISBN: 978-1-53619-405-0](#)
2. Computational Methods in Nuclear Radiation Shielding and Dosimetry (**August 2020**), Nova Science Publishers, USA, (Kulwinder Singh Mann and V. P. Singh)
[ISBN: 978-1-53618-527-0](#).

3. A Closer Look at Gamma Rays (**Nov. 2019**), Nova Science Publishers, USA
[ISBN: 978-1-53616-993-5](#) (**V. P. Singh and Kulwinder Singh Mann**)
4. Shielding Behaviour Analysis of Double Layered Slabs, (**Sept., 2018**), GRIN Publication,
[ISBN: 9783668780125](#)
5. Toolkits for Gamma-Ray Shielding Analysis of Engineering Materials, (**Aug., 2018**), Lambert Academic Publishing, Moldova, Europe,
[ISBN: 978-613-9-89572-4](#)
6. Text book Physics Practicals, S. Dinesh Publications, Jalandhar, (**Aug., 2016**),
Physics Practicals, S. Dinesh Publications, Jalandhar,
[ISBN: 978-93-5211-125-7](#)

CHAPTERS IN BOOKS/PROCEEDINGS:

1. Amit Joshi, Simran Dhawan, **Kulwinder Singh Mann**, Genius Walia, Abstract on “SHIELDING BEHAVIOR INVESTIGATIONS OF SOME GLASS-CERAMICS FOR GAMMA-RAYS AND FAST NEUTRONS” in the proceedings of international conference on “Anthropogenic Effects On Environment & Biodiversity: Socio-Ecological Concerns & Solutions” 22-23, April, 2023, Govt. Rajendra College, Bathinda, Punjab (India).
[Keeladcon 22](#), [Google Book: Abstract Book And Souvenir](#).
2. **Kulwinder Singh Mann**, Amit Joshi, “Fast Neutron Shielding Behaviour of Some Materials”, National Conference on Advances in Wireless Communication and Mathematics at Punjabi University Guru Kashi College Damdama Sahib, Talwandi Sabo, Dec. 2nd, 2018, Proceeding Book Title: Advances in Wireless Communication and Mathematics, pp. 124-130, Twenty first Century Publications,
[ISBN 978-93-85446-98-6](#)
3. **Kulwinder Singh Mann**, “Political Influence on Use of Nuclear Energy”, National Seminar on Institutions of Democracy: Challenges and Prospects in Present Scenario sponsored by Indian Council of Social Science Research, New Delhi at D.A.V. College, Bathinda, October 30th, 2018
[ISBN 978-93-87276-98-7](#)
4. **Kulwinder Singh Mann**, “Influence of Collimator’s Aperture-size on Scattered Gamma-rays”, pp 110-113, Emerging Scenario in Basic and Applied Sciences for Sustainable Development (ESBAS-2018) at D.A.V. College, Bathinda, April 5th, 2018, Gracious Books, Patiala (India), pp.110-113,
[ISBN:978-93-8727-93-2](#)
5. Amit Joshi, **Kulwinder Singh Mann**, Book: Emerging Scenario in Basic and Applied Sciences for Sustainable Development, Editors: Aman Malhotra, G. Singh, K. Gupta, Amar Santosh S., Chapter: “Investigation of Neutron Shielding Behavior of Some Engineering Materials”, Urban Estate, Patiala (Pb.), pp. 104-109 (2018),
[ISBN:978-93-8727-93-2](#)
6. Shailza, Gurpreet Singh, **Kulwinder Singh Mann**. Emerging Scenario in Basic and Applied Sciences for Sustainable Development, Editors: Aman Malhotra, G. Singh, K. Gupta, Amar Santosh S., Chapter: “Emerging Applications of Thermal Plasma Warm Spraying”, Urban Estate, Patiala (Pb.), pp. 120-127 (2018),
[ISBN:978-93-8727-93-2](#)
7. Deeksha, Gurpreet Singh, **Kulwinder Singh Mann**. Emerging Scenario in Basic and Applied Sciences for Sustainable Development, Editors: Aman Malhotra, G. Singh, K. Gupta, Amar Santosh S., Chapter: “Structural, Optical and Enhanced LPG Gas Sensing Properties of Chromium-doped Tin Oxide Nanostructures”, Urban Estate, Patiala (Pb.), pp. 136-143 (2018),
[ISBN:978-93-8727-93-2](#)
8. **Kulwinder Singh Mann**, Manmohan Singh Heer, Asha Rani. “Influence of Sample’s Thickness on Γ -Ray Shielding Parameters”. International Conference on Recent Innovation in Engineering, Science, Humanities and Management, ICRISHM-17, International Conference at Dev Samaj College for Women, Ferozpur, India, March 19th 2017, www.Conferenceworld.in, pp. 380-392, ISBN: 978-93-86171-33-7.
(BEST PAPER AWARD)
9. **Kulwinder Singh Mann**, Baljit Kaur, Harmandeep Kaur, Manmohan Singh Heer, Asha Rani. “Application of Gamma-Rays in Soil Analysis”, National Seminar on Agricultural Crisis and Farmer’s Distress in Punjab, at D.A.V. College, Bathinda, India, March 10th, 2017, Twentyfirst Century Publications, pp. 216-220.

ISBN: 978-93-5181-205-0

10. **Kulwinder Singh Mann**, "Air-Displacement Correction in Γ -Ray Transmission Measurements", National Seminar on "Responsible Research and Innovations in Science & Technology". (Abstract Only) (RRIST-2017) at Guru Nanak College, Budhlada, Mansa, March 18th, 2017. Bhagtan da chhapakhana, Budhlada, **ISBN: 978-93-85670-84-8**
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- ii. Stefan's Law and Fermi Dirac Distribution (<https://youtu.be/yuCXI0-sNqo>)
- iii. Portable Regulator (https://youtu.be/-TWUjUHP_zE)
- iv. Equation of the Orbit under the influence of inverse Square forces (<https://youtu.be/DXFI4qPWpg8>)
- v. TURNING POINTS (<https://youtu.be/f3P6ws9oin8>)
- vi. Relationship between eccentricity and total energy of a system. (https://youtu.be/w_MAE3nikcg)
- vii. Shape of Trajectories (<https://youtu.be/6qigr147eP0>)
- viii. Kepler's Laws of Planetary Motion (https://youtu.be/L6J_08YDiRo)
- ix. Invited talk on Myth & Reality about Radiations (https://youtu.be/t-FkndC_MYU)
- x. https://youtu.be/w4_437mfk0U (https://youtu.be/w4_437mfk0U)
- xi. One Day National Conference (<https://youtu.be/n-Ur5f4gOWA>)
- xii. Tutorial for Assignment Submission Portal (<https://youtu.be/XfpUHmUON-E>)
- xiii. Introduction to Pushpa Gujral Science City (<https://youtu.be/deEp8tiQSPU>)
- xiv. Tutorial of Assignment Submission (<https://youtu.be/7HEeJChoDKw>)
- xv. Gurudwara Qila-Mubarak Sahib, Bathinda (<https://youtu.be/cyFa3jhQ-q0>)
- xvi. IAPT-DSMA Presentation of Dr. Kulwinder Singh Mann (<https://youtu.be/DCr61TJyP9k>)
- xvii. Michelson Morley Experiment's contribution to the Theory of Relativity (<https://youtu.be/m6qmJuogXDM>)
- xviii. Michelson Morley Experiment Part 2 by Dr K S Mann (<https://youtu.be/wnd11W2H2O8>)

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Website dedicated to provide free Research and Consultancy	https://pym1buf.pythonanywhere.com/
YouTube Channels dedicated to Physics related activities.	<ol style="list-style-type: none"> 1. https://bit.ly/Ch_I 2. https://bit.ly/Channel_II 3. https://bit.ly/Channel_III 4. https://bit.ly/Chanel_IV

Activities Organized During the Lockdown Period (2020-21)	https://bit.ly/3dXkZAj
Google Scholar Citations	https://bit.ly/2TezBEk
Scopus ID	https://bit.ly/3k271AS
Research Gate ID	https://bit.ly/3hqQk0g
Complete Resume	https://bit.ly/3hkWr6u