

**LIST OF PUBLICATIONS:****INTERNATIONAL REFERRED JOURNALS (Published):**

1.	Chandra Shakher, H. L. Yadav and <b>Anil Kumar Nirala</b> , “Design and analysis of low f-number imaging system using holo-lenses”, J. Optics (Paris) (IOP Science), Vol. <b>20</b> , No. 6, 259 - 262 (1989). IF= <b>2.75</b> . <a href="https://doi.org/10.1088/0150-536X/20/6/002">https://doi.org/10.1088/0150-536X/20/6/002</a>
2.	Chandra Shakher, <b>Anil Kumar Nirala</b> , J. Pramila & S.K. Verma, “Use of speckle technique for temperature measurement in gaseous flame”, J. Optics (Paris) (IOP Science), Vol. <b>23</b> , No. 2, 35 - 39 (1992). IF= <b>2.75</b> . <a href="https://doi.org/10.1088/0150-536X/23/2/001">https://doi.org/10.1088/0150-536X/23/2/001</a>
3.	Chandra Shakher and <b>Anil Kumar Nirala</b> , “Measurement of temperature using speckle shearing interferometry”, Appl. Opt. (USA), Vol. <b>33</b> , No. 11, 2125 - 2127 (1994). IF= <b>1.973</b> . <a href="https://doi.org/10.1364/AO.33.002125">https://doi.org/10.1364/AO.33.002125</a> <b>(It's result is published on the front page of April 1994 issue of the Journal)</b>
4.	Chandra Shakher, A.J. Pramila Daniel and <b>Anil Kumar Nirala</b> , “Temperature profile measurement of axisymmetric gaseous flame using speckle photography, speckle shearing interferometry and Talbot interferometry”, Opt. Eng. (USA), Vol. <b>33</b> , No.6, 1983-1988 (1994).IF= <b>1.21</b> . <a href="https://doi.org/10.1117/12.168849">https://doi.org/10.1117/12.168849</a>
5.	Chandra Shakher and <b>Anil Kumar Nirala</b> , “A comparative study of speckle shearing interferometry and speckle photography for measurement of temperature of an axisymmetric flame”, Optik (Germany), Vol. <b>97</b> , No.2, 43-46 (1994). IF= <b>2.44</b> .
6.	<b>Anil Kumar Nirala</b> and C. Shakher, "Measurement of temperature profile of a two-dimensional slot burner (pre-mixed laminar) flame using laser speckle photography and laser speckle shearing interferometry", J. Optics, Vol.26(5), 215-223 (1995). IF= <b>2.75</b> . <a href="https://doi.org/10.1088/0150-536X/26/5/004">https://doi.org/10.1088/0150-536X/26/5/004</a>
7.	Chandra Shakher and <b>Anil Kumar Nirala</b> , “A Review on refractive Index and temperature profile measurements using laser based interferometric techniques”, Optics and Laser in Engg., Vol. <b>31</b> , 455-491 (1999). IF= <b>5.66</b> , <a href="https://doi.org/10.1016/S0143-8166(99)00037-8">https://doi.org/10.1016/S0143-8166(99)00037-8</a>
8.	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Study of light propagation in human, rabbit and rat liver tissue by Monte Carlo Simulation”, Optik (Elsevier), Vol. <b>122</b> , 807–810 (2011). IF= <b>3.1</b> , <a href="https://doi.org/10.1016/j.ijleo.2010.06.006">https://doi.org/10.1016/j.ijleo.2010.06.006</a>
9.	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Real time OCT for study of cornea of living Indian Frogs and Toads” Biology and Medicine ( <b>Scopus</b> ), Vol. <b>3 (1)</b> , 23-29 (2011).
10.	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “In vivo fiber based high speed Optical Coherence Tomography images of human finger”, International Journal of Engineering Science and Technology, Vol. <b>3</b> No. 8F , 6739-6743, (2011).
11.	<b>Md Zaheer Ansari</b> and <b>Anil Kumar Nirala</b> , “Activity assessment of fruits using the methods of inertia moment and absolute value of the differences”, International Journal of Advanced Laser and Optics Research, Vol. <b>1</b> , 7-16 (2012).
12.	<b>Md Zaheer Ansari</b> and <b>Anil Kumar Nirala</b> , “Assessment of bio-activity using the methods of inertia moment and absolute value of the differences”, Optik (Elsevier), Vol. <b>124</b> , 512– 516 (2013). IF= <b>3.1</b> , <a href="https://doi.org/10.1016/j.ijleo.2011.12.013">https://doi.org/10.1016/j.ijleo.2011.12.013</a>

13.	<i>Md Zaheer Ansari and Anil Kumar Nirala</i> , “Biospeckle activity measurement of Indian fruits using the methods of cross-correlation and inertia moment”, <i>Optik (Elsevier)</i> , Vol. <b>124</b> , 2180–2186 (2013). IF= <b>3.1</b> , <a href="http://dx.doi.org/10.1016/j.ijleo.2012.06.081">http://dx.doi.org/10.1016/j.ijleo.2012.06.081</a>
14.	Preeti D. Minz and <i>A.K. Nirala</i> , “ Bio-activity assessment of fruits using Generalized Difference and Parameterized Fujii method”, <i>Optik (Elsevier)</i> , Vol. <b>125</b> , 314-317 (2014). IF= <b>3.1</b> , <a href="https://doi.org/10.1016/j.ijleo.2013.06.061">https://doi.org/10.1016/j.ijleo.2013.06.061</a>
15.	Abhijit Ghosh <sup>1</sup> , R. Ranjan, <i>A.K. Nirala</i> & H.L. Yadav, “ Design and analysis of processing parameters of hololenses for wavelength selective light filters”, <i>Optik (Elsevier)</i> , Vol. <b>125</b> , 2191–2194 (2014). IF= <b>3.1</b> , <a href="http://dx.doi.org/10.1016/j.ijleo.2013.10.039">http://dx.doi.org/10.1016/j.ijleo.2013.10.039</a>
16.	Preeti D. Minz and <i>A.K. Nirala</i> , “Intensity based algorithms for biospeckle analysis”, <i>Optik (Elsevier)</i> , Vol. <b>125</b> , 3633-3636 (2014). IF= <b>3.1</b> , <a href="http://dx.doi.org/10.1016/j.ijleo.2014.01.083">http://dx.doi.org/10.1016/j.ijleo.2014.01.083</a>
17.	Abhijit Ghosh and A.K. Nirala, “One to one imagery using single hololens configuration”, <i>Optical Review</i> , Vol. <b>21</b> , No.6, 765-768 (2014). IF= <b>0.87</b> . <a href="https://doi.org/10.1007/s10043-014-0125-7">https://doi.org/10.1007/s10043-014-0125-7</a>
18.	Md Zaheer Ansari and <i>A. K. Nirala</i> , “Assessment of fruits during shelf-life storage using biospeckle laser”, <i>Agric Eng Int: CIGR Journal (Scopus)</i> , Vol. <b>16</b> , No.3, 223-229 (2014). <a href="http://dx.doi.org/10.1016/j.ijleo.2013.10.039">http://dx.doi.org/10.1016/j.ijleo.2013.10.039</a>
19.	Abhijit Ghosh and <i>A. K. Nirala</i> , “Improvement of fringe quality at LDA measuring volume using compact two hololens imaging system”, <i>Optics and Spectroscopy (Springer)</i> , Vol. <b>118</b> , No.3, 482-289 (2015), IF= <b>0.82</b> . <a href="https://doi.org/10.1134/S0030400X15030030">https://doi.org/10.1134/S0030400X15030030</a>
20.	Abhijit Ghosh, <i>A.K. Nirala</i> and H.L. Yadav, “Dependence of wavelength selectivity of holographic PV concentrator on processing parameters”, <i>Optik (Elsevier)</i> , Vol. <b>126</b> , 622–625 (2015). IF= <b>3.1</b> , <a href="http://dx.doi.org/10.1016/j.ijleo.2015.01.014">http://dx.doi.org/10.1016/j.ijleo.2015.01.014</a>
21.	P D Minz, M Z Ansari and <i>A K Nirala</i> , “Effect of antibrowning agents on fresh cut potato tubers using frequency filtering of biospeckle image”, <i>Laser Physics (IOP Publishing)</i> , Vol. <b>25</b> , 055601 (8pp) (2015). IF= <b>1.38</b> , doi:10.1088/1054-660X/25/5/055601
22.	M Z Ansari and <i>A K Nirala</i> , “Assessment of Fevicol (adhesive) drying process through dynamic speckle techniques”, <i>AIMS Bioengineering (Scopus)</i> , Vol. <b>2(2)</b> , 49-59 (2015). DOI: 10.3934/bioeng.2015.2.49
23.	M Z Ansari and <i>A K Nirala</i> , “Biospeckle assessment of torn plant leaf tissue and automated computation of leaf vein density (LVD)”, <i>Eur. Phys. J. Appl. Phys.</i> Vol. <b>70</b> , 21201-p1 to 21201-p8 (2015). IF= <b>0.99</b> , DOI: 10.1051/epjap/2015150013
24.	R. Ranjan, Abhijit Ghosh, <i>A.K. Nirala</i> and H.L. Yadav, “Tuning of suitable solar spectrum onto photocatalytic materials of matched band gap using optical engineering”, <i>Optica Applicata</i> , Vol. <b>XLV</b> , No. <b>2</b> , 237-247 (2015). IF= <b>1.10</b> , DOI: 10.5277/oa150210

25.	Abhijit Ghosh, <b>A.K. Nirala</b> and H.L. Yadav, “Wavelength selective holographic concentrator: application to concentrated photovoltaics”, Optik (Elsevier), Vol. <b>126</b> , 4313-4318, (2015). IF= <b>3.1</b> , <a href="http://dx.doi.org/10.1016/j.ijleo.2015.07.201">http://dx.doi.org/10.1016/j.ijleo.2015.07.201</a>
26.	Abhijit Ghosh and <b>A.K. Nirala</b> , “LDA Optical setup using holographic imaging configuration,” Laser Physics ( <b>IOP Publishing</b> ), Vol. <b>25</b> , (11), 116201 (8pp) (2015). IF= <b>1.38</b> , doi:10.1088/1054-660X/25/11/116201
27.	Md Zaheer Ansari and <b>A. K. Nirala</b> , “Following the drying process of Fevicol (adhesive) by dynamic speckle measurement” Journal of Optics ( <b>Springer</b> ), vol <b>45(4)</b> , 357–363 (2015) , IF= <b>2.75</b> DOI 10.1007/s12596-015-0298-x
28.	Md Zaheer Ansari and <b>A. K. Nirala</b> , “Monitoring capillary blood flow using laser speckle contrast analysis with spatial and temporal statistics”, Optik (Elsevier), Vol. <b>126</b> , No.24, 5224-5229 (2015). IF= <b>3.1</b> , <a href="http://dx.doi.org/10.1016/j.ijleo.2015.09.200">http://dx.doi.org/10.1016/j.ijleo.2015.09.200</a>
29.	Preeti D Minz and <b>A. K. Nirala</b> , “Laser speckle technique to study the effect of chemical pre-treatment on the quality of minimally processed apples” Laser Physics ( <b>IOP Publishing</b> ), Vol. <b>26</b> , 045602 (8pp) (2016). IF= <b>1.38</b> , doi:10.1088/1054-660X/26/4/045602
30.	Abhijit Ghosh and <b>A. K. Nirala</b> , “Micro analysis of fringe field formed inside LDA measuring volume”, Laser Physics ( <b>IOP Publishing</b> ), Vol. <b>26</b> , 056001 (5pp), (2016). IF= <b>1.38</b> , doi:10.1088/1054-660X/26/5/056001
31.	Abhijit Ghosh and <b>A. K. Nirala</b> , “Formation of uniform fringe pattern free from diffraction noise at LDA measurement volume using holographic imaging configuration”, Meas. Sci. Technol. ( <b>IOP Publishing</b> ), Vol. <b>27</b> , 055202 (11pp), (2016). IF= <b>2.29</b> , doi:10.1088/0957-0233/27/5/055202
32.	Md Zaheer Ansari and <b>A. K. Nirala</b> , “Biospeckle numerical assessment followed by speckle quality tests” Optik (Elsevier), Vol. <b>127</b> , No.24, 5825-5833 (2016). IF= <b>3.1</b> , <a href="http://dx.doi.org/10.1016/j.ijleo.2016.04.010">http://dx.doi.org/10.1016/j.ijleo.2016.04.010</a>
33.	Md Zaheer Ansari and <b>A. K. Nirala</b> , “Assessment of bio-speckle activity of lemon fruit”, Agric Eng Int: CIGR Journal ( <b>Scopus</b> ), Vol. <b>18</b> , No.2, 190-200 (2016).
34.	Subhashri Kumari and <b>A. K. Nirala</b> , “Biospeckle technique for non-destructive differentiation of bruised and fresh region of Indian Apple using intensity based algorithms”, Laser Physics ( <b>IOP Publishing</b> ), Vol. <b>26</b> , 115601 (11pp), (2016). IF= <b>1.38</b> , doi:10.1088/1054-660X/26/11/115601
35.	Md Zaheer Ansari, Anne Humeau-Heurtier , Nikolas Offenhauser , Jens P. Dreier and <b>A. K. Nirala</b> , “Visualization of perfusion changes with laser speckle contrast imaging using the method of motion history image”, Microvascular Research (Elsevier), Vol. <b>107</b> , 106–109 (2016), IF= <b>3.51</b> , <a href="http://dx.doi.org/10.1016/j.mvr.2016.06.003">http://dx.doi.org/10.1016/j.mvr.2016.06.003</a>
36.	Abhijit Ghosh and <b>A. K. Nirala</b> , “Design and fabrication of different types of holographic lenses, with analysis of their imagery and aberration”, Meas. Sci. Technol. (IOP Publishing), Vol. <b>28</b> , 125402 (25pp), (2017), IF= <b>2.29</b> , <a href="https://doi.org/10.1088/1361-6501/aa92aa">https://doi.org/10.1088/1361-6501/aa92aa</a>

37.	A. Ghosh and <b>A.K. Nirala</b> , “Formation of high quality interference fringes from both sides of a suitably designed hololens in the laser Doppler anemometer measurement volume”, Quantum Electronics (IOP Science), Vol. <b>47</b> (10), 960- 966 (2017), IF= <b>1.14</b> , <a href="https://doi.org/10.1070/QEL16386">https://doi.org/10.1070/QEL16386</a>
38.	Abhijit Ghosh, <b>A. K. Nirala</b> and H.L. Yadav, "Analysis of Fringe Field Formed Inside LDA Measurement Volume Using Compact Two Hololens Imaging Systems” Optics and Spectroscopy (Springer), Vol. <b>124(3)</b> , 437- 449 (2018), IF= <b>0.82</b> . DOI: 10.1134/S0030400X18030025
39.	S Kumari and <b>A. K. Nirala</b> , “Differentiation of the drying time of adhesives on plywoods through the dynamic speckle technique”, Laser Phys. (IOP Publishing), Vol <b>28</b> , 025605 (11pp) (2018), IF= <b>1.38</b> , <a href="https://doi.org/10.1088/1555-6611/aa962a">https://doi.org/10.1088/1555-6611/aa962a</a>
40.	M Z Ansari, A Mujeeb, and <b>A.K. Nirala</b> , “Assessment of biological leaf tissue using biospeckle laser imaging technique” Laser Phys.(IOP Publishing), Vol <b>28</b> (6), 065608(8pp) (2018), IF= <b>1.38</b> , <a href="https://doi.org/10.1088/1555-6611/aab65c">https://doi.org/10.1088/1555-6611/aab65c</a>
41.	Abhijit Ghosh, <b>A. K. Nirala</b> and H L Yadav, “Optical design and characterization of holographic solar concentrators for photovoltaic applications”, Optik (Elsevier), Vol. <b>168</b> , 625–649(2018). IF= <b>3.1</b> , <a href="https://doi.org/10.1016/j.ijleo.2018.04.060">https://doi.org/10.1016/j.ijleo.2018.04.060</a>
42.	S. Kumari & <b>A.K. Nirala</b> , “Monitoring of functional blood flow on human hand due to effect of different treatments by laser biospeckle imaging”, Lasers Med Sci (springer) Vol. <b>34(6)</b> , 1167-1176, (2019), IF= <b>3.16</b> , <a href="https://doi.org/10.1007/s10103-018-02706-z">https://doi.org/10.1007/s10103-018-02706-z</a>
43.	S Kumari and <b>A.K. Nirala</b> , “Biospeckle image processing algorithms for non-destructive differentiation between maturity and ripe stages of Indian climacteric fruits and evaluation of their ripening period ”, Laser Phys (IOP) Vol. <b>29(7)</b> , 075601 (13pp), (2019), IF= <b>1.38</b> , <a href="https://doi.org/10.1088/1555-6611/ab0c93">https://doi.org/10.1088/1555-6611/ab0c93</a>
44.	C. Koley and <b>A.K. Nirala</b> , “Detection, differentiation and mapping of different States of blue mold disease of Indian gooseberry (Emblica officinalis G.) using a biospeckle technique”, Eur J Plant Patho, Vol. <b>158</b> , 925–937 (2020), IF= <b>1.73</b> , <a href="https://doi.org/10.1007/s10658-020-02127-1">https://doi.org/10.1007/s10658-020-02127-1</a>
45.	C. Koley and <b>A.K. Nirala</b> , "Image processing algorithms for biospeckle analysis of almond seed" International Journal of Innovative Research in Physics, Vol. <b>2(4)</b> , 82-86(5), (2021), <a href="https://doi.org/10.15864/ijiip.2410">https://doi.org/10.15864/ijiip.2410</a>
46.	S. Kumari and <b>A.K. Nirala</b> , "Non-destructive assessment of basic parts of the plant grown in hydroponic medium using image processing algorithms", International Journal of Innovative Research in Physics, Vol. <b>3(1)</b> , 31-33(3), (2021). , <a href="https://doi.org/10.15864/ijiip.3104">https://doi.org/10.15864/ijiip.3104</a>
47.	Nusrat Jabeen and <b>A.K. Nirala</b> , “Digital Holographic Interferometry for Temperature Measurement of Flame without Phase Unwrapping”, IETE Journal of Research, Vol. <b>69</b> , No.6, 3668-3677, (2023), I.F.= <b>2.20</b> , <a href="https://doi.org/10.1080/03772063.2021.1933624">https://doi.org/10.1080/03772063.2021.1933624</a>
48.	Nusrat Jabeen and <b>A.K. Nirala</b> , "Digital holographic interferometry for temperature measurement of oil lamp flames with different wick thicknesses", Sustainable Energy Technologies and

	Assessments (Elsevier), Vol. <b>52</b> , 101964 (2022).I.F.= <b>7.63</b> , <a href="https://doi.org/10.1016/j.seta.2022.101964">https://doi.org/10.1016/j.seta.2022.101964</a>
49.	C Koley and <b>A.K. Nirala</b> , "Assessment of milk fermentation process at three temperatures using laser speckle technique", Laser Physics (IOP Publishing) Vol. <b>32 (4)</b> , 045602 (10pp) (2022). IF= <b>1.38</b> , <a href="https://doi.org/10.1088/1555-6611/ac56d6">https://doi.org/10.1088/1555-6611/ac56d6</a>
50.	C Koley and <b>A.K. Nirala</b> , "Visual biospeckle analysis of just torn plant leaf using frequency filtering", Laser Phys. (IOP Publishing), Vol. <b>32</b> , 075603 (10pp) (2022), IF= <b>1.38</b> , <a href="https://doi.org/10.1088/1555-6611/ac70d9">https://doi.org/10.1088/1555-6611/ac70d9</a>
51.	Navanit Kumar and <b>A.K. Nirala</b> , "A novel computational method for dynamic laser speckle and its application to analyze water activity during photosynthesis in papaya leaf", Optik (Elsevier), Vol. <b>274</b> , 170518 (13pp) (2023). IF= <b>3.1</b> <a href="https://doi.org/10.1016/j.ijleo.2023.170518">https://doi.org/10.1016/j.ijleo.2023.170518</a>
52.	Chhanda Koley, Rittik Das and <b>A.K. Nirala</b> , "Assessment of black rot development on apple surface using laser biospeckle technique", Phys. Scr., Vol, <b>98</b> , 035501(14pp) (2023), IF= <b>3.10</b> , <a href="https://doi.org/10.1088/1402-4896/acb5d0">https://doi.org/10.1088/1402-4896/acb5d0</a>
53.	Atul Kumar and <b>A. K. Nirala</b> , "Surface topographic characterization of optical storage devices by Digital Holographic Microscopy" Micron, Vol. <b>170</b> 103459 (9pp), (2023), IF= <b>2.40</b> , <a href="https://doi.org/10.1016/j.micron.2023.103459">https://doi.org/10.1016/j.micron.2023.103459</a>
54.	<b>Rahul Mandal</b> , Abhijit Ghosh and <b>A. K. Nirala</b> , "Speckle photography and double aperture speckle interferometry using both sides of a suitably designed hololens imaging configuration", Laser Phys. Vol. <b>33</b> ,086202 (6pp) (2023), IF= <b>1.38</b> , <a href="https://doi.org/10.1088/1555-6611/acd7de">https://doi.org/10.1088/1555-6611/acd7de</a>
55.	Atul Kumar and <b>A. K. Nirala</b> , Digital holographic nanoscopy for erythrocyte, nanoparticle and quantum dot characterization", Optics and Lasers in Engineering, Vol. <b>169</b> , 107720(9pp), (2023). IF= <b>5.66</b> , <a href="https://doi.org/10.1016/j.optlaseng.2023.107720">https://doi.org/10.1016/j.optlaseng.2023.107720</a>
56	Hemraj Bhai Patel and <b>A. K. Nirala</b> , "Assessment of Adulteration in Honey by Artificial Sweeteners using Dynamic Laser Speckle Technique" Optik (Elsevier),Vol. <b>289</b> , 171264 (2023). IF= <b>3.10</b> <a href="https://doi.org/10.1016/j.ijleo.2023.171264">https://doi.org/10.1016/j.ijleo.2023.171264</a>
57	Navanit Kumar and A.K. Nirala, Hemraj Bhai Patel, "Quality evaluation of eggs during shelf-life ambient storage by laser speckle technique", Optik, Vol. <b>307</b> , 171820 (13pp), (2024). <a href="https://doi.org/10.1016/j.ijleo.2024.171820">https://doi.org/10.1016/j.ijleo.2024.171820</a> .
58	S.K.Thatikonda, A. Kandasami, S. Rabha ,D. Pamu, A.K. Nirala, "Enhancement of crystallinity and the optical properties in gamma irradiated and thermally annealed cobalt doped MgTiO <sub>3</sub> thin films", Thin solid films, Vol. <b>804</b> , 140483 (8pp),(2024). IF= <b>2.00</b> <a href="https://doi.org/10.1016/j.tsf.2024.140483">https://doi.org/10.1016/j.tsf.2024.140483</a> .

<b>NATIONAL REFERRED JOURNAL (Published):</b>	
I.	<b>Anil Kumar Nirala</b> , Chandra Shakher Kumar, Chandra Shakher, Santosh Kumar, Koji Tenjimbayashi and Kiyofumi Matsuda “Production and use of perfectly symmetric scatter plate in scatter plate interferometry for testing of spherical surface”, Journal of Optics,Vol. <b>30</b> , No.2, 45-49 (2001). IF= <b>2.00</b> through IOP Science, <a href="http://www.springer.com/physics/journal/12596">http://www.springer.com/physics/journal/12596</a>



II.	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Study of light propagation in human and animal tissues by Monte Carlo simulation”, Indian J. Physics, <b>86(2)</b> 97-100 (2012). IF= <b>1.95</b> , <a href="http://link.springer.com/article/10.1007%2Fs12648-012-0024-3">http://link.springer.com/article/10.1007%2Fs12648-012-0024-3</a>
-----	--

<b>INTERNATIONAL SYMPOSIA /CONFERENCES (Published):</b>	
1)	B.N. Gupta, Chandra Shakher and <b>Anil Kumar Nirala</b> , “A study of a posteriori holographic moire technique for estimation of defective area in the defective curve of diaphragms / plates”, published in the proceedings of ICO, on "Atmospheric Volume and Surface Scattering And Propagation" held at Florence, Italy, August 27-29, Number P-64, pages 525-528 (1991).
2)	Chandra Shakher and <b>Anil Kumar Nirala</b> , “Measurement of temperature using speckle shearing interferometry”, published in the proceedings of 3 <sup>rd</sup> international conference on "Holographic Systems, Components and Applications" organised by the Institute of Electrical Engineers (IEE) at Heriot-Watt University, Edinburgh, U.K., September 16-18 (1991).
3)	A. Phatak (Mrs), Roop Lal (C.B.R.I. Roorkee), Chandra Shakher & Anil Kumar Nirala (IIT Delhi), “Non-destructive testing of building materials by holographic interferometry”, published as poster paper in the proceedings of C.I.B., Montreal, Canada, 18-22 May 1992.
4)	Chandra Shakher and <b>Anil Kumar Nirala</b> , “Laser speckle shearing interferometry for measurement of temperature of a two-dimensional atomic absorption spectrophotometer burner (premixed laminar flow slot burner)”, published in abstract book of international conference on "Applied Optics and Opto-Electronics", 5-8 September at University of York (UK), organised by the applied optics Division of the Institute of Physics. Paper No. 1NP7, pages 310-311 (1994).
5)	Santosh Kumar and <b>Anil Kumar Nirala</b> , "Development of Optical Testing Technique Least Affected by External Perturbations and optical Distortions", International Conference on Laser Applications and Optical Metrology (ICLAOM-03), held at IIT Delhi between 01- 04 December, 2003.
6)	<b>Anil Kumar Nirala</b> , Sulekha Kumari, D.A. Jackson, Adrian Podoleanu, “Study of Optical aberrations of an artificial eye using Low coherence Interferometry and Laser Ray Tracing”, published on page- PL-6 of the proceedings of International conference on Laser and Nanomaterials (ICLAN) held on Nov 30-Dec 2, 2006 at Saha Institute of Nuclear Physics, organised by Department of Physics, University of Calcutta.
7)	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Study of fish eye by Optical coherence Tomography” presented as oral paper and published on pages 41-42 in the proceedings of International seminar held on May 27-29, 2009, on “The 4 <sup>th</sup> Asian and Pacific Rim Symposium on Biophotonics” at Shilla Hotel, Jeju Island, South Korea.
8)	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Study of light propagation in rat liver tissue at different wavelengths by Monte Carlo simulation” presented as oral paper and published on pages 804-810 in the proceedings of International seminar held on Dec 15-17, 2008, on PFAMXVII- Processing And Fabrication of Advanced Materials at IIT Delhi.
9)	Sulekha Kumari, Nitu Sahu and <b>Anil Kumar Nirala</b> , “Study of light propagation in human brain tissues at different wavelength by monte carlo simulation", published on page-227 in the

	proceedings of PHOTONICS - 2008: International Conference on Fiber Optics and Photonics, held between December 13-17, 2008 at IIT Delhi.
10)	<i>Md Zaheer Ansari, Biswajit Pathak and Anil Kumar Nirala</i> , “Activity assessment of fruits through Biospeckle techniques”, published on pages 421-425 in the proceedings of International Conference on Trends in Optics and Photonics (IConTOP 2011) held during 7–9 Dec, 2011, Dept. of Applied Optics and Photonics, University of Calcutta.
11)	<i>Md Zaheer Ansari, P.D. Minz and Anil Kumar Nirala</i> , “Fruit quality evaluation using biospeckle techniques” published on pages 473-476 in the proceedings of International Conference on recent advances in information technology (RAIT-2012) held during 15-17 March 2012 at Dept. of Computer Science and Engineering, ISM Dhanbad. (Available online at IEEE Xplore Digital Library:978-1-4577-06974/12/\$26.00 ©2012 IEEE).
12)	Md Zaheer Ansari and <b>Anil Kumar Nirala</b> , “ <i>Biospeckle techniques in quality evaluation of Indian fruits</i> ” published in the proceedings of International conference on Optics and Photonics (ICOP-2012), World Academy of Science, Engineering and Technology ,71, 520-524 (2012), held at Venice, Italy from 14th Nov 2012 to 16th Nov, 2012. <a href="http://www.waset.org/journals/waset/v71/v71-90.pdf">http://www.waset.org/journals/waset/v71/v71-90.pdf</a> , <a href="http://www.waset.org/journals/waset/v71.php">http://www.waset.org/journals/waset/v71.php</a>
13)	Abhijit Ghosh, R. Ranjan, <b>A.K. Nirala</b> & H.L. Yadav, “Design and analysis of wavelength selective wide acceptance angle holographic concentrator for PV application” published in the proceedings on pages17-20 of 7 <sup>th</sup> International Conference on Renewable Energy Sources (RES '13) & 1st International Conference on Environmental Informatics (ENINF '13) International Conference (Conference Focus on Latest Trends in Renewable Energy and Environmental Informatics) organized by World Scientific and Engineering Academy of Science (WSEAS), in the proceedings, at Kuala Lumpur, Malaysia, April 2-4, 2013. <a href="http://www.wseas.us/e-library/conferences/2013/Malaysia/RESEN/RESEN-01.pdf">http://www.wseas.us/e-library/conferences/2013/Malaysia/RESEN/RESEN-01.pdf</a>
14)	R. Ranjan, Abhijit Ghosh, <b>A.K. Nirala</b> & H.L. Yadav, “Optimization of processing parameters of holographic concentrator for maximum efficiency operation in PV system”, published in the proceedings on pages 50-53 of 7 <sup>th</sup> International Conference on Renewable Energy Sources (RES '13) & 1st International Conference on Environmental Informatics (ENINF '13) (Conference Focus was on Latest Trends in Renewable Energy and Environmental Informatics) organized by World Scientific and Engineering Academy of Science (WSEAS at Kuala Lumpur, Malaysia, April 2-4, 2013. <a href="http://www.wseas.us/e-library/conferences/2013/Malaysia/RESEN/RESEN-07.pdf">http://www.wseas.us/e-library/conferences/2013/Malaysia/RESEN/RESEN-07.pdf</a>
15)	Preeti D Minz and <b>A.K. Nirala</b> , “Assessment of bio-activity of the fruits using intensity based methods”, published in the proceedings on page-151 (PAPER No-PS05) of International conference on Microwave and photonics (ICMAP) 2013, organized by Dept. of Electronics Engineering, during 13th -15th December 2013 at ISM Dhanbad, India.
16)	Abhijit Ghosh , <b>A.K. Nirala</b> & H.L. Yadav, “Use of hololenses for generation of speckle correlation fringes in LDA measurement volume”, published in the proceedings on page-125 (PAPER No-PS-03) of International conference on Microwave and photonics (ICMAP) 2013,

	<p>organized by Dept. of Electronics Engineering, during 13th -15th December 2013 at ISM Dhanbad, India.</p> <p><a href="http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=06733557">http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=06733557</a></p>
17)	<p>Abhijit Ghosh and <b>A.K. Nirala</b>, “Design, Analysis and Fabrication of Microlens Array using Holographic Technique”, published in the proceedings on pages-226-227 (PAPER No-POS-254) of International Conference on Structural and Physical Properties of Solids (SPPS) 2013, organized by Dept. of Applied Physics, during 18th -20th November 2013 at ISM Dhanbad, India.</p>
18)	<p>Abhijit Ghosh, <b>A.K. Nirala</b> and H.L. Yadav, “Improvement of Fringe Quality in LDA Measuring Volume Using Hololens,” Published in proceedings of International Conference on optics &amp; optoelectronics (ICOL-2014) held at IRDE Dehradun during 05-08, March 2014, pp.-126.</p>
19)	<p>R. Ranjan, Abhijit Ghosh, <b>A.K. Nirala</b> &amp; H.L. Yadav, “Designing of Holocons for Semiconductor Electrodes of PEC Device,” Published in proceedings of International Conference on optics &amp; optoelectronics (ICOL-2014) held at IRDE Dehradun during 05-08, March 2014, pp.-125.</p>
20)	<p>Abhijit Ghosh, <b>A.K. Nirala</b> and H.L. Yadav, “Dependence of wavelength selectivity of holographic PV concentrator on processing parameters,” Published in proceedings of International Conference on Energy Efficient LED Lighting and Solar Photo Voltaic Systems held at IIT Kanpur during 27-29 March, 2014, pp. 24-26.</p>
21)	<p>R. Ranjan, Abhijit Ghosh, <b>A.K. Nirala</b> &amp; H.L. Yadav, “Design and analysis of holographic optical elements for daylighting interior of a building with solar radiation free from UV and IR,” Accepted for Proc. of SPIE Optics + Photonics-2014, Solar Energy + Technology, San Diego, California, United States, held from 17 - 21 August 2014.</p>
22)	<p>Preeti D. Minz, S. Kumari and <b>A. K. Nirala</b>, “Measurement of speckle size of biological samples using non-destructive biospeckle technique” Proceedings of International Conference on Opto-Electronics and Photonic Materials (ICOPMA-2015), organised by Centre for Nonlinear science and Engg (CeNSE), School of Electrical and Electronics Engineering, held from 27-28 February 2015, page-34, at SASTRA University, Thanjavur, Tamil Nadu, Paper Area (Laser Application Optics-LAO), No: LAO 01.</p>
23)	<p>Abhijit Ghosh, <b>A.K. Nirala</b> and H.L. Yadav, “Fringe field quantification of an LDA probe volume,” Proceedings of XXIX Conference of Optical Society of India (Golden Jubilee Conference), International Conference on Optics and Photonics (ICOP-2015), organized by Department of Applied optics and Photonics, University of Calcutta during 20-22 February, 2015, pp. 55, Paper No. IOP15-P400-128. (ISBN 978-93-80813-31-8).</p>
24)	<p>Abhijit Ghosh and A.K. Nirala, “One to one coherent imaging through double and single hololens configurations: A comparative study,” Proceedings of XXIX Conference of Optical Society of India (Golden Jubilee Conference), International Conference on Optics and Photonics (ICOP-2015), organized by Department of Applied optics and Photonics, University of Calcutta during 20-22 February, 2015, pp. 44, Paper No. - IOP15-P400-80, (ISBN 978-93-80813-31-8). Also</p>



	Published in Proc. of SPIE Vol. 9654, 965409-1 to 965409-7 (2015). <a href="http://dx.doi.org/10.1117/12.2181609">http://dx.doi.org/10.1117/12.2181609</a>
25)	Abhijit Ghosh, <b>A. K. Nirala</b> and H. L. Yadav, “Real Time Monitoring of Fringe Formation inside LDA Measuring Volume”, presented as oral paper (no./code- P1C5, under Photonics Paper of Contributory Paper) in 2 <sup>nd</sup> International conference on Microwave and Photonics, (ICMAP-2015), organized by Department of Electronics Engineering, ISM Dhanbad from during 11-13 December 2015.
26)	Abhijit Ghosh and <b>A. K. Nirala</b> , “LDA measurement volume using Gaussian Beam and Plane Wave Approaches: A Comparative Study” Proceedings of International Tropical Conference on Charged Particle Collision and Electronic processes in Atoms, Molecules and Materials (q-PACE 2016) organized by Department of Applied Physics, ISM Dhanbad from during 9-11 January 2016, pp. 103-104, Session7.2 (Parallel).
27)	Santosh Kumar T., A .K. Nirala, Srinivas Rao N, Pathak A P and Pamu D, “Effect of Energetic Ion Beam Irradiation on structural and Optical properties of MgTiO <sub>3</sub> Thin Films”, Proceedings of International Tropical Conference on Charged Particle Collision and Electronic processes in Atoms, Molecules and Materials (q-PACE 2016) organized by Department of Applied Physics, ISM Dhanbad from during 9-11 January 2016 pp.242-243, PP-96.
28)	Preeti D. Minz and <b>A. K. Nirala</b> , “Biochemical analysis of minimally processed apples using Biospeckle Technique”, Proceedings of International conference on recent trends in Engineering and material science (ICEMS), Organized by Jaipur National University, Rajasthan, India, from 17-19 <sup>th</sup> March 2016.
29)	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Non-destructive Evaluation of Degradation of Papaya Fruit using Intensity Based Algorithms”, Published in proceedings of International conference on Recent Trends in Chemical Sciences (ICRCS-2017), Poster ID-172_Kumari_ICRCS2017, Page no -116, organized by Department of the Chemical sciences at Bikaner, Rajasthan during 12-13 January, (2016) pp.116 and 2nd International Conference on Condensed Matter and Applied Physics (ICC 2017)). AIP Conference Proceeding no 1953, 140010(2018). <a href="https://doi.org/10.1063/1.5033185">https://doi.org/10.1063/1.5033185</a>
30)	Shubhashri Kumari, Chhanda Koley and <b>Anil Kumar Nirala</b> , “Laser bio-speckle technique to study bruising caused by height of impacts on Indian Apple using Intensity based algorithms, Published in proceedings of 3 <sup>rd</sup> International conference on Microwave and Photonics (ICMAP-2018), Paper no- 2PIB-037, page no -47, organized by Department of Electronics Engineering, IIT(ISM) Dhanbad from 09-11 February, 2018. <a href="https://ieeexplore.ieee.org/document/8354493/">https://ieeexplore.ieee.org/document/8354493/</a>
31)	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Reliability of Histogram sliding and Co-occurrence matrix for maturity and ripe stage decision of fruits by laser biospeckle technique”, Published in proceedings of 3 <sup>rd</sup> International conference on Microwave and Photonics (ICMAP-2018), Paper no- PP-014, page no -69, organized by Department of Electronics Engineering, IIT(ISM) Dhanbad from 09-11 February, 2018

32)	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Comparative study of drying of adhesives on a plywood through dynamic speckle technique using image processing algorithms” Published in proceedings of 4 <sup>th</sup> IEEE International Conference on Recent Advances in Information Technology (RAIT-2018), s.no.-40 of volume-I under subheading “Advances in Image and Video Processing”, page nos -229 to 232, organized by Department of Computer Science and Engineering, Indian Institute of Technology (ISM) Dhanbad from 15 <sup>th</sup> -17 <sup>th</sup> March 2018. <a href="https://ieeexplore.ieee.org/document/8389030/">https://ieeexplore.ieee.org/document/8389030/</a>
33)	Abhijit Ghosh and <b>A. K. Nirala</b> , “Holographic spatial filter: An optical design consideration”, in XLII Annual Meeting of The Optical Society of India OSI - International Symposium on Optics (OSI-ISO 2018) 19 –22 September 2018, at IIT Kanpur. pp. 340-341.
34)	Abhijit Ghosh, Rohit Kumar, Nishant Kumar and <b>A.K. Nirala</b> , “In-plane displacement component measurement using Fourier Transform filtering technique”, Published in proceedings of International Conference on Optics and Electro-Optics (ICOL-2019) (XLIII Symposium of Optical Society of India), Paper no.-OIM-PP-21 under subheading “Optical Interferometry & Metrology”, page no. - 334, organized by Instruments Research & Development Establishment Dehradun, Uttarakhand from 19 <sup>th</sup> – 22 <sup>nd</sup> October 2019. (Ghosh A., Kumar R., Kumar N., Nirala A.K. (2021) In-Plane Displacement Component Measurement Using Fourier Transform Filtering Technique. In: Singh K., Gupta A.K., Khare S., Dixit N., Pant K. (eds) ICOL-2019. Springer Proceedings in Physics, vol 258. Springer, Singapore. <a href="https://doi.org/10.1007/978-981-15-9259-1_132">https://doi.org/10.1007/978-981-15-9259-1_132</a> )
35)	Chhanda Koley and <b>A.K. Nirala</b> , “Dynamic Laser Speckle Technique to assess the Drying Time of Asian Paints on Plywoods”, Published in proceedings of International Conference on Optics and Electro-Optics (ICOL-2019) (XLIII Symposium of Optical Society of India), Paper no.-OIP-OP-01 under subheading “Optical Image Processing & Holography”, page no. - 341, organized by Instruments Research & Development Establishment Dehradun, Uttarakhand from 19 <sup>th</sup> – 22 <sup>nd</sup> October 2019., Published in Springer Proceedings in Physics, 258, 597–600, 2021. <a href="https://doi.org/10.1007/978-981-15-9259-1_137">https://doi.org/10.1007/978-981-15-9259-1_137</a>
36)	Shubhashri Kumari and <b>A.K. Nirala</b> , “Biospeckle activity analysis of root tissues grown in hydroponic medium using image processing algorithms ”, Published in proceedings of International Conference on Optics and Electro-Optics (ICOL-2019) (XLIII Symposium of Optical Society of India), Paper no.-OIP-OP-07 under subheading “Optical Image Processing & Holography”, page no. - 344, organized by Instruments Research & Development Establishment Dehradun, Uttarakhand from 19 <sup>th</sup> – 22 <sup>nd</sup> October 2019.
37)	Chhanda Koley, Atul Kumar, Debapriya Das and <b>A.K. Nirala</b> , “Activity Assessment of Bruished regions on Sapodilla Caused by Different Impact Energies using Biospeckle Technique”, Published in proceedings of International Conference on Optics and Electro-Optics (ICOL-2019) (XLIII Symposium of Optical Society of India), Paper no.-OIP-OP-08 under subheading “Optical Image Processing & Holography”, page no. - 349, organized by Instruments Research & Development Establishment Dehradun, Uttarakhand from 19 <sup>th</sup> – 22 <sup>nd</sup> October 2019. Published in

	<i>Springer Proceedings in Physics</i> , <b>258</b> , 629–632, 2021. <a href="https://doi.org/10.1007/978-981-15-9259-1_145">https://doi.org/10.1007/978-981-15-9259-1_145</a>
38)	Nusrat Jabeen and <b>A.K. Nirala</b> , “Temperature profile measurement in Kerosene Lamp Flame using Digital Holographic Interferometry”, Published in proceedings of International Conference on Optics and Electro-Optics (ICOL-2019) (XLIII Symposium of Optical Society of India), Paper no.-OIP-OP-11 under subheading “Optical Image Processing & Holography”, Vol no 258, page no. 633-636, organized by Instruments Research & Development Establishment Dehradun, Uttarakhand from 19 <sup>th</sup> – 21 <sup>nd</sup> October 2019. <a href="https://doi.org/10.1007/978-981-15-9259-1_146">https://doi.org/10.1007/978-981-15-9259-1_146</a>
39)	Preeti Deepika Minz and <b>A.K. Nirala</b> , “Graphic and numerical analysis of biospeckle image”, Published in proceedings of International Conference on Optics and Electro-Optics (ICOL-2019) (XLIII Symposium of Optical Society of India), Paper no.-OIP-OP-13 under subheading “Optical Image Processing & Holography”, page no. - 352, organized by Instruments Research & Development Establishment Dehradun, Uttarakhand from 19 <sup>th</sup> – 22 <sup>nd</sup> October 2019.
40)	Nusrat Jabeen and <b>A.K. Nirala</b> , “Temperature profile measurement of Lighter flame using Digital Holographic Interferometry”, Published in proceedings of 3 <sup>rd</sup> International Conference on Condense Matter & Applied Physics (ICC-2019), Paper ID.-L-0084 under Category L: “Computational methods, Simulation & Applied Physics”, page no. - 302, organized by Department of Physics, Govt. Engineering College, Bikaner from 14 <sup>th</sup> -15 <sup>th</sup> October 2019. AIP Conference Proceedings 2220, page no.130062 (2020); <a href="https://doi.org/10.1063/5.0001186">https://doi.org/10.1063/5.0001186</a>
41)	Chhanda Koley, Rittik Das and <b>Anil Kumar Nirala</b> , “Image processing algorithms for biospeckle analysis of almond seed “, International Conference in Advanced Physics (IEMPHYS-21), April 1-3, 2021., Published in <i>International Journal of Innovative Research in Physics</i> , <b>2</b> , (Issue 4) 82-86, 2021. <a href="https://doi.org/10.15864/ijiip.2410">https://doi.org/10.15864/ijiip.2410</a>
42)	Atul Kumar and <b>A. K. Nirala</b> , “Submicron crack detection on thin film using digital holographic microscopy”, presented in International Conference on Optics, Photonics and Quantum Optics, (COPaQ-2022), Abstract on page nos-571-572, held from 9-13 Nov 2022, organised by XLV symposium of OSI and Department of Physics, Indian Institute of Technology, Roorkee, Uttarakhand, India.
43)	Nusrat Jabeen and <b>A. K. Nirala</b> , "Filtering Techniques for Flame Temperature Measurement using Digital Holographic Interferometry", presented in International Conference on Optics, Photonics and Quantum Optics, (COPaQ-2022), Abstract on page nos-683-684, held from 9-13 Nov 2022, organised by XLV symposium of OSI and Department of Physics, Indian Institute of Technology, Roorkee, Uttarakhand, India.
44)	Rahul Mandal, Mayukh Mandal, Abhijit Ghosh and <b>A. K. Nirala</b> , "Double Aperture Speckle Interferometer using Single Hololens Imaging Configuration", presented in International Conference on Optics, Photonics and Quantum Optics, (COPaQ-2022), Abstract on page nos-407-408, held from 9-13 Nov 2022, organised by XLV symposium of OSI and Department of Physics, Indian Institute of Technology, Roorkee, Uttarakhand, India.
45)	Navanit Kumar and <b>A K Nirala</b> , "Biospeckle activity assessment of shelf-life storage of chicken egg” , presented at International Biennial Photonics Conference on PHOTONICS-2023, held at J N Tata Auditorium IISc Bangalore from 5-8 July 2023, paper no-P17.

46)	Hemraj Bhai Patel, Navanit Kumar, Reema Rose Indwar and <b>A K Nirala</b> , "Assessment of dry yeast interaction with sugar solution using dynamic laser speckle", presented in International conference on "Advances in Spectroscopic Techniques and Materials (ASTM-2024)" 18 - 20 January, 2024, Dept. of Physics, IIT(ISM) Dhanbad, paper no-pp13.
-----	--

<b>NATIONAL SYMPOSIA /CONFERENCES (Published):</b>	
1.	Chandra Shakher, H. L. Yadav and <b>Anil Kumar Nirala</b> , "Design and analysis of high f-number and low f-number imaging system using holo-lenses", presented at 17 <sup>th</sup> Optical Society of India (OSI) symposium on "Optics and Opto-Electronics", 26-28 April at Central Scientific Instrument Organisation (CSIO) Chandigarh, pp.16 (1989).
2.	<b>Anil Kumar Nirala</b> , H. L. Yadav & A. Narula, "A study of a posteriori holographic moire technique for estimation of defective area in the defective curve of diaphragms/plates", presented as paper at 18 <sup>th</sup> OSI Symposium organised by Indian Institute of Astrophysics, Bangalore on "Optical Science and Engineering", 21-23 March, Session-p-II, pp-12 (1990).
3.	Chandra Shakher, <b>Anil Kumar Nirala</b> , John Pramila and S.K. Verma, "Use of speckle technique for temperature measurement in gaseous flame", presented at 19 <sup>th</sup> OSI Symposium on "Optics and National Development" at Lucknow, 8-10 March (1991).
4.	Chandra Shakher, <b>Anil Kumar Nirala</b> , Pramila Daniel and S.K. Angra, "Measurement of temperature of a two-dimensional slot burner (pre-mixed laminar) flame using speckle photography, speckle shearing interferometry and Talbot interferometry", presented at 22 <sup>nd</sup> OSI Symposium on "Optics and Opto- Electronics Instrumentation", held on 29-31 March at CSIO, Chandigarh, pp.V-139 (1995).
5.	Chandra Shakher and <b>Anil Kumar Nirala</b> , "Design analysis of compact two holo-lenses imaging system", presented at 22 <sup>nd</sup> OSI Symposium on "Optics and Opto-Electronics Instrumentation", held on 29-31 March at CSIO, Chandigarh, pp.IIIA-8(1995).
6.	<b>Anil Kumar Nirala</b> and Santosh Kumar, "Development of optical testing technique using N.O.P.C.I. which is least affected by external non-uniform perturbations and optical distortions", Published on pages 39-44 in the proceedings on "Optics and Photonics in Engineering (COPE-03)" in 28 <sup>th</sup> Conference of OSI, held at NSIT, New Delhi, 6-8 January, 2003.
7.	<b>Anil Kumar Nirala</b> , D.A. Jackson, Adrian Podoleanu, "Study of aberrations of an artificial eye using Laser Ray Tracing", 92 <sup>nd</sup> Ind. Sc. Cong., Ahmadabad, 3-7 January 2005.
8.	Ranjit Kumar Upadhyay, Sulekha Kumari and <b>Anil Kumar Nirala</b> , "A 3-dimensional mathematical model of heat transfer in Human Eyes", published on pages 91-92 in the proceedings of National Seminar on Recent Advances in Materials' Sciences (RAMS08), held on 15-17 February, 2008 at ISMU Dhanbad. F
9.	Sulekha Kumari, Kanu Mundu and <b>Anil Kumar Nirala</b> , "Monte Carlo modelling of light propagation in a single layer and multiplayer human tissue", published on pages 87-89 in the proceedings of National Seminar on Recent Advances in Materials' Sciences (RAMS-08), held on 15-17 February, 2008 at ISMU Dhanbad.

10.	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Study on Real time OCT images of Finger in vivo”, published on pages 84-85 in the proceedings of National Seminar on Recent Advances in Materials’ Sciences (RAMS-08), held on 15-17 February, 2008 at ISM Dhanbad.
11.	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Study of light propagation in Human Blood tissue at different wavelengths by Monte Carlo Simulation”, presented to National seminar on Recent Advances in Wireless & Mobile Telecommunications (RAWMTEL08), held between 18-19 October 2008 at BIT Mesra, Ranchi.
12.	Sulekha Kumari, Nitu Sahu and <b>Anil Kumar Nirala</b> , “Study of light propagation in sheep brain tissue by Monte Carlo Simulation”, presented as oral paper and published on pages 66-67 in the proceedings of National seminar on Frontiers in Electronics, Communication, Instrumentation and Information Technology (FECIIT-2008) held during October 13-15, 2008, by Dept. of Electronics and Instrumentation Engineering, ISMU Dhanbad.
13.	Sulekha Kumari and <b>Anil Kumar Nirala</b> , “Monte Carlo Simulation for light propagation in Pig and Rabbit Muscle”, presented as oral paper and published on pages 478-481 in the proceedings of Recent Advances on Information Technology (RAIT2009), held on February 6-7, 2009, at Indian School of Mines University, Dhanbad.
14.	Md Zaheer Ansari and <b>Anil Kumar Nirala</b> , “Quality evaluation of tomato and apple during their self lives using non-destructive biospeckle correlation technique”, published in the proceedings of National Seminar on Nanomaterials and their applications (NANOMAT -2011) on page-158-164, NANOMAT-2011 was held on 10-11 Feb, 2011 at ISM Dhanbad.
15.	Md Zaheer Ansari, P.D. Minz, Biswajit Pathak and <b>Anil Kumar Nirala</b> , “Spatialtemporal speckle correlation technique for fruit quality evaluation during shelf life”, published in the proceedings of National Conference on "Frontiers in Electronics Communication and Instrumentation Technology" (FECIT 2011) on pages 28-29, held at ISM Dhanbad during Nov 3-4, 2011.
16.	R. Ranjan, Abhijit Ghosh, <b>Anil Kumar Nirala</b> and H.L. Yadav “Design and Analysis of Holographic Wavelength Filter” ” Publication in proceedings on pages 72-74 in National Conference on Advances in Laser and Spectroscopy (ALS-2012), organized by Dept. of Applied Physics from 1-3 Nov 2012 at ISM Dhanbad.
17.	Abhijit Ghosh, <b>Anil Kumar Nirala</b> and H.L. Yadav “Compact LDA Optical Setup using HOEs ” Publication in proceedings on pages 75-78 in National Conference on Advances in Laser and Spectroscopy (ALS-2012), organized by Dept. of Applied Physics from 1-3 Nov 2012 at ISM Dhanbad.
18.	Abhijit Ghosh, <b>A.K. Nirala</b> and H L Yadav, “Dependence of Angular Selectivity of Holographic Solar Concentrator on Spatial frequency”, Published in the proceedings on pages 335-337 in National Seminar on Energy and Environment for Sustainability organized by Mechanical & Electrical Engg. Department & Geology, B.I.T. Sindri, 16-17 March, 2013.
19.	Nusrat Jabeen and <b>A.K. Nirala</b> , “Determination of aberration of artificial eye using Hartmann Shack Sensor”, Published in proceedings on Session 7 (Parallel), pp.52 of National Conference on Recent Advances in Science and Engineering (RASE 2016), which was organized by Faculty Development Centre Under Pandit Madan Mohan Malviya National Missions on Teachers and Teaching (PMMMNTT) between 28-29 <sup>th</sup> March 2016 at ISM Dhanbad.

20.	S.N.S. Yadav, Nusrat Jabeen, Abhijit Ghosh, S.A. Linda, M.K. Mohanta and <b>A.K. Nirala</b> , “Monitoring of diffusion process in transparent liquid mixtures using digital holographic interferometry”, Published in proceedings on Session 9 (Parallel) pp.77 of National Conference on Recent Advances in Science and Engineering (RASE 2016), which was organized by Faculty Development Centre Under Pandit Madan Mohan Malviya National Missions on Teachers and Teaching (PMMMNMST) between 28-29 <sup>th</sup> March 2016 at ISM Dhanbad.
21.	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Comparative analysis of bruise and fresh regions of fruits using non- destructive technique”, Published in proceedings on Session 9 (Parallel), pp.80, of National Conference on Recent Advances in Science and Engineering (RASE 2016), which was organized by Faculty Development Centre Under Pandit Madan Mohan Malviya National Missions on Teachers and Teaching (PMMMNMST) between 28-29 <sup>th</sup> March 2016 at ISM Dhanbad.
22.	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Application of Bio - speckle activity to differentiate the bruise and fresh region of the apple”, Published in proceedings on 11(Parallel), pp.93, of National Conference on Recent Advances in Science and Engineering (RASE 2016), which was organized by Faculty Development Centre Under Pandit Madan Mohan Malviya National Missions on Teachers and Teaching (PMMMNMST) between 28-29 <sup>th</sup> March 2016 at ISM Dhanbad.
23.	Abhijit Ghosh and <b>A.K. Nirala</b> , “LDA optical setup using suitably designed hololens imaging configuration”, Published in proceedings on Session 6 (Parallel), pp.30, of National Conference on Recent Advances in Science and Engineering (RASE2016) which was organized by Faculty Development Centre Under Pandit Madan Mohan Malviya National Missions on Teachers and Teaching (PMMMNMST) between 28-29 <sup>th</sup> March 2016 at ISM Dhanbad.
24.	Abhijit Ghosh and <b>A.K. Nirala</b> , “LDA Measurement Volume using Gaussian Beam and Plane Wave Approaches: A Comparative study”, Published in proceedings of Topical Conference on Charged Particle Collisions and Electronic Processes in Atoms, Molecules and Materials (q-PaCE-2016), Pages 103-104, organized by Dept. of Applied Physics in association with Indian Society of Atomic and Molecular Physics, during 9 <sup>th</sup> -11 <sup>th</sup> January 2016 at ISM Dhanbad, India.
25.	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Non-destructive evaluation of ripening stage of Chiku (Manikara Zapota) using some numerical based Algorithms”, Published in proceedings of National Conference on Liquid Crystals (NCLC-2016), P77, Page no-142, organized by Department of Applied Physics in association with Indian Liquid Crystal Society form 07-09 December 2016 at IIT(ISM) Dhanbad.
26.	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Study of activities of water at different conditions using Autocovariance and grey level co-occurrence matrix method”, Published in proceedings of National Conference on Liquid Crystals (NCLC-2016), P78, Page no-143, organized by Department of Applied Physics in association with Indian Liquid Crystal Society form 07-09 December 2016 at IIT(ISM) Dhanbad.
27.	Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Non-destructive differentiation among maturity, ripe and over maturity stages of Indian Tomato using intensity based algorithms”, Published in proceedings of National Conference on Advances in spectroscopic techniques and Materials



	(ASTM-2018), paper no-OL6, page no-8, organized by Department of Applied Physics, IIT(ISM) Dhanbad form 14-16 March 2018.
28.	Nusrat Jabeen and <b>Anil Kumar Nirala</b> , “A Real Time Monitoring of Temperature Induced deformation in rectangular stainless steel bar using Digital Holographic Interferometry”, Published in proceedings of National Conference on Advances in spectroscopic techniques and Materials (ASTM-2018), on page no-P24, page no-26, organized by Department of Applied Physics, IIT(ISM) Dhanbad form 14-16 March 2018.
29.	Chhanda Koley, Shubhashri Kumari and <b>Anil Kumar Nirala</b> , “Assessment of Bioactivity of Milk fermentation Process using Intensity based algorithms”, Published in proceedings of National Conference on Advances in spectroscopic techniques and Materials (ASTM-2018), on paper no-P27, page no-30, organized by Department of Applied Physics, IIT(ISM) Dhanbad form 14-16 March 2018.
30.	N. Jabeen and <b>A.K. Nirala</b> , “Determination of ocular aberration of Labeo rohita (rohu) fish.- Oral Presentation”, Presented in Contemporary Trends in Optics, OSA students chapter, organized by IISER Kolkata, from May 20-23, 2019.
31.	Chhanda Koley and <b>Anil Kumar Nirala</b> , “Activity Assessment of Anthracnose Disease Infected Region of Aonla”, Published in 5 <sup>th</sup> National e-Conference on Advanced Materials and Radiation Physics (AMRP-2020), Paper ID: GS-14, held at Department of Physics, SLIET Longowal, Sangrur, Punjab, India, from November 9-11, 2020. AIP Conf. Proc. 2352, 030013-1–030013-4; <a href="https://doi.org/10.1063/5.0052513">https://doi.org/10.1063/5.0052513</a>
32.	Chhanda Koley and <b>A.K. Nirala</b> , “Activity Assessment of Anthracnose Disease Infected Region of Aonla”, 5th National Conference on Advanced Materials and Radiation Physics (AMRP-2020), November 09-11, 2020. And it was published as Chhanda Koley and A.K. Nirala, "Activity assessment of anthracnose disease infected region of aonla", AIP Conference Proceedings 2352, 030013 (2021); <a href="https://doi.org/10.1063/5.0052513">https://doi.org/10.1063/5.0052513</a>
33.	Navanit Kumar, Hemraj Bhai Patel, and <b>A.K. Nirala</b> , “Biospeckle activity assessment of ipomoea batatas vine under different photosynthetic active radiation intensities”, 24 <sup>th</sup> National Conference on Atomic and Molecular Physics (NACMP), organised jointly by Department of Physics, IIT(ISM) Dhanbad and Indian Society of Atomic and Molecular Physics (ISAMP) from 08-11, January 2025 at IIT(ISM) Dhanbad, Poster session 1, P1-Th2-No-T2P_008 on 8/1/2025.