

Name	Dr. K. LALITHAMBIGAI			
Department	PHYSICS			
Qualification	M.Sc., M.Phil., Ph.D.,			
Area of Specialization	PHYSICS			
Date of Joining (KSR IET)	17.04.2023			
Experience (as on 01.05.2023)	Teaching: 1 YEAR	Industry: NIL	Others: - NIL	
Number of Papers Published	National Journals : - International Journals : 19			
Number of Papers Presented	National Conferences : International Conferences : 13			
Books Published	National Publisher : - International publisher : -			
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Publications (International Journals)

1. **K. Lalithambigai**, P. Suresh, V. Ravi, K. Prabakaran, Z. Jaroszewicz, K. B. Rajesh, P. M. Anbarasan and T. V. S. Pillai, "Generation of Sub-wavelength Super-long Dark Channel using High NA Lens Axicon", *Optics Letters* 37 (2012) 999 -1001 (**Impact Factor - 3.399**) [**Optica Publishing**].
2. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, "Formation of Multiple Focal Spots by High NA Lens with Complex Spiral Phase Mask", *Physica Scripta* 89 (2014) 075501 (7 pp) (**Impact Factor – 3.081**) [**IOP**].

3. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Generation of Needle of Transversely Polarized Beam using Complex Spiral Phase Mask”, *Optical and Quantum Electronics* 47 (2014) 1027 – 1033 (**Impact Factor – 2.79**) [Springer].
4. **K. Lalithambigai**, R. C. Sarasvathi, P. M. Anbarasan, K. B. Rajesh and Z. Jaroszewicz, “Generation of Multiple Focal Hole Segments Using Double Ring Shaped Azimuthally Polarized Beam”, *Journal of Atomic and Molecular Physics* 2013 (2013) 1- 4 [Hindawi Publishing].
5. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Generation of Multiple Focal Holes for Tight Focusing of Azimuthally Polarized Beam through Complex Phase Mask”, *Optik* 125 (2014) 2225 - 2228. (**Impact Factor – 2.84**) [Elsevier].
6. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Effect of complex phase plate on tight focusing of azimuthally polarized double ring shaped beam”, *Optik* 125 (2014) 4047 - 4050 (**Impact Factor – 2.84**) [Elsevier].
7. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Generation of ultra-long focal depth by tight focusing of double-ring-shaped azimuthally polarized beam”, *Journal of Optics* 43 (2014) 278 - 283 [Springer].
8. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Tight Focusing of Double-ring-shaped Azimuthally Polarized Beam Using High NA Lens Axicon”, *Journal of Environmental Nanotechnology* 3 (2014) 39 – 42 [IEN - Institute of Environmental Nanotechnology].
9. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Study on higher order azimuthally polarized Laguerre-Gaussian mode beams with high NA lens”, *Journal of Theoretical and Applied Physics* 8 (2014) 1 - 9 [Springer].
10. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Creation of needle of transversely polarized beam in vacuum by using complex phase plate”, *Journal of Environmental Nanotechnology* 3 (2014) 67 – 72 [IEN - Institute of Environmental Nanotechnology].
11. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Creation of super-long bright channel using high NA lens axicon with dedicated multibelt binary phase mask”, *Optical and Quantum Electronics* 47, 2009–2016 (2015) (**Impact Factor - 2.79**) [Springer].
12. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Creation of super-length optical tube by phase modulated azimuthally polarized beam with multi-zone phase filter”, *Optik* 126 (2015) 554 -557. (**Impact Factor – 2.84**) [Elsevier].
13. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Creation of multiple transversally polarized focal spots using complex spiral phase mask,” *Science Letters Journal* 4:116 (2015) [Cognizure].

14. **K. Lalithambigai**, P.M. Anbarasan and K.B. Rajesh, “Formation of optical needle by high NA lens axicon with dedicated complex spiral phase mask”, *Optical and Quantum Electronics* 47, 2017–2025 (2015) (**Impact Factor – 2.79**) [**Springer**].
15. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Combination of spherical aberration and defocusing effect for azimuthally polarized beam, **Science Letters Journal** 2015, 4: 113 [**Cognizure**].
16. P. M. Anbarasan, K. Vasudevan, P. Sentil kumar, A.Prakasam, M.Geetha and **K. Lalithambigai**, “Structural and spectral properties of 4-phenoxyphthalonitrile dye sensitizer for solar cell application”, *Bulletin of Materials Science* 35 (2012) 265 - 275 (**Impact Factor - 1.878**) [**Springer**].
17. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Generation of optical chain for double-ring-shaped azimuthally polarized beam” **Science Letters Journal** 2015, 4: 183. [**Cognizure**].
18. **K Lalithambigai**, PM Anbarasan, KB Rajesh, Creation of Movable Optical Chain by High NA Lens with Complex Phase Annular Obstruction, *Advanced Science, Engineering and Medicine* 8 (7), 526-532. [**ASP – American scientific publisher**].
19. **K Lalithambigai**, PM Anbarasan, KB Rajesh, Generation of needle of transversely polarized beam using complex spiral phase mask, *Optical and Quantum Electronics* 47, 1027–1033 (2015) (**Impact Factor – 2.79**) [**Springer**].

Publications (National Journals)

Nil

Publications (International Conferences)

1. **K. Lalithambigai**, P. M. Anbarasan and K. B. Rajesh, “Generation of Nano-Scale Transversally Polarized Multiple Focal Spot Using Complex Phase Filter”, in: D. Managalaraj, N. Ponpandian, C. Viswanathan & A. Balamurugan (Eds.), *Multifunctional Nanomaterials and Nanocomposites - Volume II* (2013), pg. 31-36 (ISBN- 978-81-9212).
2. **K. Lalithambigai**, C. Mohana Sundaram and P. M. Anbarasan, “Generation of Multi Ring Focus by Nondiffracting Transversally Polarized Beam with Complex Phase Filters”, *Proceedings of the National Conference on Recent Advances in Photonics* (2013), pg. 89.
3. G. Therese Anita, R. Mahesh Kumar, **K. Lalithambigai**, K. B. Rajesh and P. M. Anbarasan, “Effect of Spherical Aberration in Tight Focusing of Azimuthally Polarized Double Ring Shaped Beam”, *International Conference on Computational Intelligence and Computing Research, IEEE Xplore Publisher* (2012), pg.1-4 (ISBN- 978-1-4673-1342-1).

4. **K. Lalithambigai**, K. Leelavathi, P. M. Anbarasan and K. B. Rajesh, “Generation of Sub Wavelength Super Long Dark Channel Using Complex Phase Filter”, *International Conference on Fiber Optics and Photonics*, OSA Publisher (2012) (<http://dx.doi.org/10.1364/PHOTONICS.2012.MPo.17>).
5. **K. Lalithambigai**, V. Ravi, K. Prabakaran, Z. Jaroszewicz, K. B. Rajesh, P. M. Anbarasan and T. V. S.Pillai, “Generation of Nano Scale Focal Hole with Extended Depth of Focus for Trapping Array of Nanoparticles” in: B. Pal, A. Sharma, M. R. Shenoy, J. Joseph (Eds.), *The XXXVI Optical Society of India Symposium on Frontiers in Optics and Photonics* (2012), pg. 71 (ISBN-9788130919645).
6. **K. Lalithambigai**, R. C. Sarasvathi, R. Chandraseker, A. Cyrac Peter, K.B. Rajesh and P.M. Anbarasan, “Generation of Axially Tunnable Sub Wavelength Focal Hole with A Binary Phase Filter and High NA Lens System” in: M. Umadevi, R. Parimaladevi, N. Geetha, & T.S. Geetha (Eds.), *Proceedings of the International Conference on Nanomaterials and Applications* (2012), pg. 79-81 (ISBN-93-82062-00-9).

Paper Presented in Conferences/Seminars: 7

1. **K. Lalithambigai**, “Generation of Nano-Scale Transversally Polarized Multiple Focal Spot Using Complex Phase Filter”, *Third National Conference on Multifunctional Nanomaterials and Nanocomposites (NCMNN-2013)* held at Bharathiyar University, Coimbatore, Tamilnadu, India on February 25 & 26, 2013 – **Poster Presentation**.
2. **K. Lalithambigai**, “Generation of Multi Ring Focus by Nondiffracting Transversally Polarized Beam with Complex Phase Filters”, *National Conference on Recent Advances in Photonics (NCRAP-2013)* held at Meenakshi College for women, Chennai, Tamilnadu, India on February 8 & 9, 2013 - **Oral Presentation**.
3. **K. Lalithambigai**, “Effects of Spherical Aberration and Defocusing Effects for Azimuthally Polarized Double Ring Shaped Beam”, *12th Tamilnadu Science Congress-2012*, held at Periyar University, Salem, Tamilnadu, India on August 23-25, 2012 - **Oral Presentation**.
4. **K. Lalithambigai**, “Generation of Axially Tunnable Sub Wavelength Focal Hole with A Binary Phase Filter and High NA Lens System”, *International Conference on Nanomaterials and Applications (ICNMA-2012)*, Mother Teresa Women’s University, Kodaikanal, Tamilnadu, India on February 28 & 29, 2012 - **Oral Presentation**.
5. **K. Lalithambigai**, “Generation of Nanoscale Sub Wavelength Super-Long Dark Channel Using High NA Lens Axicon”, *National Conference on Advanced Nanomaterials (ANM-2012)* held at

Centre for Nanoscience and Nanotechnology, Periyar University, Salem- 636 011, Tamilnadu, India on February 6 & 7, 2012 - **Oral Presentation - Cash Award as Best Oral Presentation.**

6. **K. Lalithambigai** “Generation of Nanoscale Focal Hole with Extended Depth of Focus for Trapping Array of Nanoparticles”, *The XXXVI Optical Society of India Symposium on Frontiers in Optics and Photonics held at IIT Delhi*, New Delhi, India on December 3-5, 2011 - **Oral Presentation.**
7. **K. Lalithambigai**, “Generation of Nanoscale Focal Hole with Extended Focal Depth for Trapping Array of Nanoparticles”, *National Conference on Nanoscience and Nanotechnology* held at National Centre for Nanoscience and Nanotechnology, University of Madras, Maraimalai Campus, Chennai, Tamilnadu, India on August 25-27, 2011 - **Poster Presentation.**

Fellowships/Awards/Recognitions:

1. Best Oral Presentation Award at ANM 2012
2. JRF in BSR Research Fellowship under UGC Non-SAP scheme (2012-2015)
3. University Rank Holder (M.Sc. Physics)
4. Second Prize in the CHESS competition in College Sports Day 2005.