

Senior Professor Dr. D. KarunaSagar



Education: MSc, PhD.

Doctor of Philosophy:

Thesis title: Studies on the performance of Optical Systems Apodised with Generalized Hanning amplitude Filters

Teaching and Research Experience: 27 YEARS

Research Fields:

- ❖ PSF engineering.
- ❖ Apodization filters.
- ❖ Coherent and incoherent imaging.
- ❖ Diffractive Optics.
- ❖ Imaging and Super-resolution

Number of Research Students Enrolled for Ph.D	Thesis Submitted	Degree awarded
20 (twenty)	-----	16 (Fourteen)

List of Ph.D Degrees awarded with Reference Number under my guidance:

1. Mr Abdul Muhith Ref. No: PHD 10466 (16th January, 2012)
Studies on the performance of Apodised Optical systems with defect of focus under the influence of Primary Spherical Aberration and Astigmatism.
2. Ms. V. Keerthi Ref. No: PHD 29477 (16th April, 2014)
Hyperspectral Image Processing and Analysis.
3. Mr. M. Venkanna Ref. No: PHD 29594 (30th July, 2014)
Studies on the Edge Imaging Characteristics of Aberrated Coherent Optical Systems by Amplitude Filters.
4. Mr. A. NareshkumarReddy Ref. No: PHD 29711 (22nd November, 2014)
Studies on Imaging of Point Object and Composite Image of two object points of asymmetrically apodised optical systems with complex pupil filters.
5. Mr. B. Sambaiah Ref. No: PHD 30019 (27th August, 2015)
Studies on the Super-resolution of Optical Imaging Systems with Amplitude and Phase Filters.
6. Mr. A. Narsaiah Ref. No: PHD 30232 (26th March, 2016)
Studies on the Annular Apodisers for Low sensitivity to Defocus of an Aberrated Optical System.

7. Mr.Kiran Kumar Thota Ref. No: PHD 41037 (04th March, 2017)
Studies on Two-Line Resolution of Aberrated Optical Systems Under Shaping and Shading of the Apertures.
8. Mr. P. Rama Krishna Ref. No: PHD 41651 (30th June, 2018)
Studies on Imaging Characteristics of Aberrated Optical Systems with Non-Uniform Transmission Pupils.
9. Mr. T. VenkatRao Ref. No: P7/PhD/20103/08-10/TV/ECE/2020*
*JNTUHDept. of ECE as a Co-Supervisor (30th March, 2021)
Enhanced Quality of Service and Fast Scheduling Strategies for Optical Burst Switching in WDM Networks
10. Mr.BairysatyanarayanaRef. No: PHD 43609 (29th December, 2022)
Synthesis and Characterization of MgCuZnNanoferrites and MCuZn-NiCuZnNanoferrite Composites for Microinductor Applications.
11. Mr.LachimalaRamprasad Ref. No: PHD 43665 (12th January, 2023)
Studies on Diffracted Field Characteristics of Optical Systems with Variable Apodisation.
12. Mr. T. Mohan Kumar Ref.No: PHD 43747 (06th February, 2023)
Preparation and Characterization of Rare Earth Doped Compound Semiconductors for Opto-Electronic Device Applications
13. Ms. S. Vidya Rani Ref. No: PHD 44576 (20th November, 2023)
Studies on the Performance of Aberrated Optical Imaging Systems with Variable Apodization
14. Ms.Anitha P Ref. No: PHD 44589 (28th November, 2023)
Studies on Light Intensity Distribution at the Focus and Out of Focus Planes of Optical Systems with Complex Pupil Function.
15. Mr.NagarajuGudipoodi Ref. No: PHD 44748 (5th February, 2024)
Impact of Lead Halides on Physical, Optical, FTIR and Raman Studies of CdO-Bi₂O₃-B₂O₃ Glasses: Applications to Radiation Shielding.
16. Ms. N .SabithaRef. No: PHD 44846 (21st March, 2024)
Studies on the point spread functions of aberrated optical systems with defect-of-focus

Areas of Teaching Experience

List of subjects taught:

Assistant Professor :

- Electronic Devices and Circuits
- Electromagnetic Theory
- Quantum Mechanics
- Statistical Mechanics

Associate Professor :

- Microcontroller 8051
- Mobile Cellular Communications
- Digital Image Processing

Professor :

- Digital System Design using VHDL
- Digital Signal Processing and Processors
- Control Systems
- Nano-Photonics
- Modern Optics

PROFESSIONAL MEMBERSHIPS / ORGANIZATIONS

- Indian Science Congress, Kolkata.
- Optical Society of India (L.627)

Publications: [Google scholar link](#)

<https://scholar.google.com/citations?user=vS2HFCcAAAAJ&hl=en>