

FACULTY PROFILE

Dr. MOTTY G S

DESIGNATION : ASSISTANT PROFESSOR OF
PHYSICS

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SASTHANAGAR, PANGODE,
THIRUVANANTHAPURAM

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EDUCATIONAL QUALIFICATIONS : M. Sc., B.Ed, M.Phil, Ph. D.

AREA OF INTEREST/SPECIALIZATION : OPTOELECTRONICS

FIELD OF RESEARCH : Atmospheric Science, Laser Remote
Sensing atmospheric clouds etc.

TEACHING EXPERIENCE

- I. Guest Lecturer at All Saint's College, Thiruvananthapuram from Aug, 2019 to March 2020.
- II. Guest Lecturer at All Saint's College, Thiruvananthapuram from July, 2020 to March 2021.
- III. Guest Lecturer at All Saint's College, Thiruvananthapuram from July, 2021 to March 2022.
- IV. Guest Lecturer at All Saint's College, Thiruvananthapuram from June, 2022 to March 2023.

POSITIONS HELD

- (i) Arts Club Coordinator (2023-2024)
- (ii) Science Club Coordinator (2023-2024)
- (iii) PTA Treasurer (from 2024)

TRAINING PROGRAMMES ATTENDED

- I. Basic course on **Remote Sensing, GIS and GNSS** (IIRS outreach program)
- II. **“Basic Principles of Remote Sensing Technology”** (IIRS outreach program)
- III. **“Make & Edit Video Classes”** an online training course conducted by Internal Quality Assurance Cell of Christ College, from 01st May 2020 to 05th May 2020.
- IV. A 10 days’ workshop on digital tools for E-Teaching "**i-teach: A course in E-Teaching (Phase 3)**" offered by AKPCTA.
- V. Faculty Development Program on **“How Teachers Can Make a Difference”**, conducted by Teaching Learning Centre, IIT Madras and organised by The Teresian Teaching Learning Centre, St. Teresa's College (Autonomous), Ernakulam
- VI. Massive Open Online Course (MOOC) on **Geospatial Application for Disaster Risk Management** (basic module) being jointly offered by United Nations Office for Outer Space Affairs (UNOOSA) Vienna and Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) Indian Institute of Remote Sensing (IIRS) Dehradun, India.
- VII. **“5-day Capacity Building Workshop on Effective Research Methodology and Publication Strategies”** Online Faculty Development Programme jointly organized by AIACHE, New Delhi and Madras Christian College, Chennai from 27th February - 3rd March 2023.
- VIII. Faculty Development Programme on **“ICT Tools for Teaching and Learning”** from 16 – 22 January, 2023 by Teaching Learning Centre, Ramanujan College University of Delhi.

PUBLICATIONS

:

1. **G S Motty**, Malladi Satyanarayana, G S Jayeshlral, V Krishnakumar and V P Mahadevan Pillai, “Lidar observed structural characteristics of higher altitude cirrus clouds over a tropical site in Indian subcontinent region”, **Journal of Atmospheric and Solar-Terrestrial Physics**, 179, 367-377, 2018.doi.org/10.1016/j.jastp.2018.08.013.
2. Gopinathan Nair S. **Motty**, Malladi Satyanarayana, Glory Selvan Jayeshlral, Vellara P. Mahadevan Pillai, "Climate sensitivity characteristics of tropical cirrus clouds using lidar

measurements," **Journal of Applied Remote Sensing**, 10(4), 046005 (2016), doi: 10.1117/1.JRS.10.046005.

3. **Motty,G.S.**, Malladi Satyanarayana, Jayeshlal,G.S. , Krishnakumar,V. and Mahadevan Pillai,V.P., "Optical Properties of Cirrus Clouds in the Tropical Tropopause Region during two Contrasting Seasons", **Indian Journal of Radio & Space Physics**, 44, 155-166 (2015).
4. **G S Motty**; G S Jayeshlal; Malladi Satyanarayana; V P Mahadevan pillai " Lidar studies on climate sensitivity characteristics of tropical cirrus clouds ", Proceedings of SPIE-9876, Remote Sensing of the Atmosphere, Clouds, and Precipitation VI, 98761X (May 9, 2016); doi:10.1117/12.2223301;http://dx.doi.org/10.1117/12.2223301.
5. **Motty G S**, Satyanarayana M, Krishnakumar V, Reji k Dhaman and Jayeshlal G. S "Cirrus Cloud -Temperature Interactions Over A Tropical Station, Gadanki From Ground Based And Satellite Lidar Observations", AIP Conf.Proc.1620,332 (2014).
6. **Motty, G. S.**, Jayeshlal, G. S., and Satyanarayana, M., "Climatology of Thin Cirrus Clouds at Gadanki (13.5°N, 79.2°E) Using Ground Based Lidar and Satellite Based Measurements", Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-8, 283-286(2014), [doi: 10.5194/isprsarchives-XL-8-283-2014, 2014].
7. **Motty G S**, Satyanarayana M and Jayeshlal G S, "Cirrus climatological results over a tropical station, Gadanki using ground based and satellite-based measurement techniques", Proceedings of 27th Kerala Science Congress, Alappuzha, India 27-29 January 2015.
8. Jayeshlal, G. S., Satyanarayana,M., Dhaman,R.K., & **Motty, G.S.**; "Seasonal and Optical Characterisation of Cirrus Clouds over Indian Sub-Continent Using LIDAR", AIP Conf. Proc. 1620, 179-184 (2014).
9. Jayeshlal, G. S., Satyanarayana, M., **Motty G.S.**, Dhaman, R. K., Krishnakumar, V. & Pillai, V. P. M., "Lidar investigations on the structure and microphysical properties of cirrus at a

tropical station Gadanki (13.5° N and 79.2° E), India”, Proceedings of SPIE, 9876, 98761U (1 – 8) (2016).

10. Jayeshlal, G.S., Satyanarayana,M., **Motty G.S.**, Dhaman,R.K., Sudheer, S., Krishnakumar,V., & Pillai,V.P.M., “Correlation analysis of lidar derived optical parameters for investigations on thin cirrus features at a tropical station Gadanki (13.5° N, 79.2° E)”,Indian Journal of Radio &Space Physics; IJRSP-353, 2017.
11. Krishnakumar, V., Satyanarayana, M., Radhakrishnan,S.R., Dhaman,R.K., Jayeshlal,G. S., **Motty G.S.**, Pillai,V.P.M., Regunath,K., Ratnam,M.V., Rao, D.R., & Sudhakar, P., “Lidar investigations on the optical and dynamical properties of cirrus clouds in the upper troposphere and lower stratosphere regions at a tropical station, Ggadanki, India (13.5° N, 79.2° E)”,Journal of Applied Remote Sensing, 8, 083659(1-21) (2014).
12. Jayeshlal, G. S., Satyanarayana, M., **Motty, G. S.**, Dhaman, R. K., Krishnakumar, V., Mahadevan Pillai, V. P., Ramakrishnarao, D., Sudhakar, P., and Kalavathi, P.: Lidar Studies on The Optical Characteristics of High Altitude Cirrus Clouds at A Low Latitude Station, Gadanki (13.5°N , 79.2°E) India, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-8, 253-256, <https://doi.org/10.5194/isprsarchives-XL-8-253-2014>, 2014.

BOOK CHAPTER

Study on Properties of cirrus from lidar measurements over an inland tropical station Gadanki (13.5°N, 79.2° E), *Recent trends in Electronic communication and signal processing*, ISBN 978-81-925229-4-4, 2013, Aksharam publishers.

SEMINARS/CONFERENCES ATTENDED :

1. **Motty G.S.**, Satyanarayana M and Krishnakumar V, “Study on Properties of cirrus from lidar measurements over an inland tropical station Gadanki (13.5°N, 79.2° E)”, National Conference on Recent Trends in Electronic Communication and Signal Processing (CECASP) -2013, Department of Electronics, Sree Ayyappa College, Eramallikkara, December 20 & 21, 2013.

2. **Motty G S**, Satyanarayana M, Krishnakumar V, Reji k Dhaman and Jayeshlal G. S “Cirrus Cloud -Temperature Interactions Over a Tropical Station, Gadanki from Ground Based and Satellite Lidar Observations”, The International conference on Light: Optics’14, NIT Calicut, March 19 to 21, 2014.
3. **Motty G S**, Satyanarayana M, Krishnakumar V, Reji k Dhaman and Jayeshlal G. S “Seasonal Variations of Optical Properties of Cirrus Clouds Using Laser Remote Sensing Methods”, International Conference on ‘Advanced Materials and its Applications’ (ICAMA 2014), Alphonso College, Pala, March 26 to 28, 2014.
4. **Motty G S**, Satyanarayana M, Krishnakumar V, Reji k Dhaman and Jayeshlal G. S “Properties of cirrus clouds from the lidar measurements over Gadanki during south west monsoon season”, National Laser Symposium (NLS)-23, Department of Physics, Sri Venkateswara University, Tirupati, December 3 to 6, 2014.
5. **Motty G S**, Jayeshlal G. S and Satyanarayana M, “Climatology of thin cirrus clouds at Gadanki (13.50N,79.20E) using ground based lidar and satellite-based measurements”, ISPRS TC VIII Mid-Term Symposium-2014, Hyderabad, India, December 9 to 12, 2014.
6. **Motty G S**, Satyanarayana M and Jayeshlal G. S, “Cirrus climatological results over a tropical station, Gadanki using ground based and satellite-based measurement techniques”, 27th Kerala Science Congress, Alappuzha, 27-29 January, 2015.
7. **Motty G S**, Jayeshlal G. S, Malladi Satyanarayana and V P Mahadevan Pillai, “Lidar studies of Microphysical properties of tropical cirrus clouds”, National Seminar on photonics and its Applications- NSPA-2015, Department of Optoelectronics, Kariavattom campus, University of Kerala, Thiruvananthapuram, 9–11 December,2015.
8. **Motty G S**, Malladi Satyanarayana, G S Jayeshlal and V P Mahadevan Pillai,” Study on the Aerosol influence on cirrus radiative properties”, 19th National Space Science Symposium (NSSS-2016), VSSC, Thiruvananthapuram, 09 - 12 February 2016.

9. **G. S. Motty**, G. S. Jayeshlal , Malladi Satyanarayana, V P Mahadevan Pillai, “Lidar studies on climate sensitivity characteristics of tropical cirrus clouds”, SPIE Asia-Pacific Remote Sensing 2016, New Delhi,4-7 April,2016.

10. **G S Motty**, Vimal Raj, V Krishnakumar, G S Jayeshlal, Malladi Satyanarayana, V P Mahadevan Pillai, “Dependence of tropical cirrus clouds characteristics on sea and land surface temperature over Indian sub-continent using Lidar observations International Topical Meeting On Applied and Adaptive Optics (INTOPMAA-17)” Department of Physics, Indian Institute of Space Science & Technology, Thiruvananthapuram,11- 13 August 2017.

11. **G S Motty**, Malladi Satyanarayana,V P Mahadevan Pillai, “ Cirrus characteristics over Indian Peninsular Plateau during Tropical Cyclones “ International Symposium on Tropical Meteorology “Changing Climate: Consequences and Challenges (INTROMET-C4), Cochin University of Science and Technology (CUSAT), November 23-26, 2021.

12. Jayeshlal,G.S., Satyanarayana,M., Dhaman,R.K., & **Motty,G.S.**, “Seasonal and Optical Characterization of Cirrus Clouds over Indian Sub-Continent using LIDAR”, The International conference on Light: Optics’14, NIT Calicut, March 19 to 21, 2014.

13. Jayeshlal,G.S., Satyanarayana ,M., **Motty G.S.**, Dhaman, R.K., Krishnakumar,V., Pillai,V.P.M., Ramakrishnarao D., Kalavathi,S.P., “Lidar Studies on the Optical Characteristics of High Altitude Cirrus Clouds at A Low Latitude Station, Gadanki (13.50n, 79.20e) India”, ISPRS TC VIII Mid-Term Symposium-2014, Hyderabad, India, December 9 to 12, 2014.

14. Jayeshlal G.S., Satyanarayana, M., Dhaman,R.K., **Motty,G.S.**, Krishnakumar, V. & Pillai, V.P.M., “Investigation on the structure and microphysical properties of cirrus clouds using Lidar”, National Seminar on photonics and its Applications- NSPA-2015, Department of Optoelectronics, Kariavattom campus, University of Kerala, Thiruvananthapuram, 9-11December ,2015.

15. Jayeshlal G.S., Satyanarayana, M., **Motty,G.S.**, Dhaman,R.K., Krishnakumar, V., & Pillai, V.P.M., “Investigation on the Lidar Ratio variations to study the effects of aerosols

on cirrus clouds”, 19th National Space Science Symposium (NSSS-2016), VSSC, Thiruvananthapuram, 09 - 12 February 2016.

16. Jayeshlal G.S., Satyanarayana, M., **Motty, G. S.**, Dhaman, R. K., Krishnakumar, V. & Pillai, V. P. M., “Lidar investigations on the structure and microphysical properties of cirrus at a tropical station Gadanki (13.5° N and 79.2°E), India”, SPIE Asia-Pacific Remote Sensing 2016, New Delhi, 4-7 April, 2016.