CURRICULUM VITAE

Dr. Reji K Dhaman
Malathee Mangalam,
Kadakkavur (P O),
Kadakkavur, Thiruvananthapuram Dist,
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Career objective:

- Seeking a position to groom my technical and interpersonal skills by working in a professional and challenging environment that realizes my complete potential.
- To pursue a career in an organization, with a motivation that leads towards dynamic progress.

Academic Profile:

YEAR OF PASS OUT	NAME OF INSTITUTION & UNIVERSITY	DEGREE NAME WITH AGGREGATE MARKS
2019	Department of Optoelectronics, Kariavattom (University of Kerala)	**Ph.D. in Optoelectronics** **Faculty of Applied Science & Technology** **Area of Specialisation: Atmospheric Science**
2009	Department of Optoelectronics, Kariavattom (University of Kerala)	**M. Tech** in **Electronics and Communication (Optoelectronics and Optical communication)** **78.4%**
2004	S.N. College, Sivagiri, Varkala University of Kerala,	**M.Sc. Physics** *(Specialisation in Electronics)* **74.8%**
2002	S.N. College, Sivagiri, Varkala University of Kerala,	**B.Sc. Physics** **85.2%**
1999	S.N. College, Sivagiri, Varkala University of Kerala, Thiruvananthapuram	**Pre- Degree** **67.4%**
1997	S.S.P.B. High School, Kadakkavur (Board of Public Examination Kerala)	**S.S.L.C** **87.3%**

Research Experience:

- I have worked in Department of Optoelectronics, University of Kerala, Trivandrum as a Research Fellow under the guidance of Dr. M Satyanarayana, ***(Former Scientist "G" & Project Director, Space Borne Lidar Project, ISRO & Head –Atmospheric Lidars Division, SPL, VSSC, Thiruvananthapuram*),** Department of Optoelectronics, University of Kerala, Trivandrum since April 2011 till November 2017 that led to Ph.D. degree.

- I have acquired experience in elastic lidar data analysis, lidar instrument operation, computer simulation of lidar data etc.

Research Interests:

- Laser remote sensing using ground based and satellite based LIDARS.
- Lidar studies on atmospheric aerosols and clouds.
- Lidar inversion methods.

Academic Project Profile:

- Ph.D. Thesis: Investigations on the physical and optical properties of cirrus clouds during the Indian summer monsoon over the Indian sub-continent using lidar methods.
- M.Tech Project: Direct Writing of Optical Waveguides in Bk-7 Glass Using Femtosecond Laser for Telecommunication Application.
  [SAMEER (Society for Microwave Electronics Engineering and Research), IIT Mumbai Campus, Mumbai].
- M.Sc. Project: Variation of F-Region Peak Electron Density for a Low Latitude Japanese Station.
  (Sree Narayana College, Sivagiri, Varkala, Thiruvananthapuram, Kerala)
- B.Sc. Project: Fraunhofer Diffraction.
  (Sree Narayana College, Sivagiri, Varkala, Thiruvananthapuram, Kerala.

Experience Profile:

1. **Post: Guest Lecturer (F.I.P.) (32 months)**
   Name of Employer: Sree Narayana College, Chempazhanthy, Thiruvananthapuram.
   Period:June 2005 to February 2008
2. **Post: Project Trainee (10 months)**
   Name of Employer: SAMEER (Society for Microwave Electronics Engineering and Research), IIT Mumbai Campus, Mumbai.
   Period:January 2009 to November 2009
3. **Post: Guest Lecturer (F.I.P.) (04 months)**
   Name of Employer: Sree Narayana College, Sivagiri, Varkala, Thiruvananthapuram.
   Period:June 2010 to October 2010.
4. **Post: Junior Research Fellow & Senior Research Fellow (ISRO RESPOND PROJECT) (41 months)**
   Name of Employer: Department of Optoelectronics, University of Kerala, Kariavattom, Thiruvananthapuram.
   Period:October 2010 to March 2014
5. **Post: Assistant Professor (49 months)**
   Name of Employer: Indian Naval Academy, Ezhimala, Kannur.

Period: 01 Jul 2014 to 31 May 2015, 13 Jul 2015 to 12 Jun 2016, 01 Jul 2016 to 30 Nov 2016, 26 Dec 16 to 24 Nov 17 & 01 Jan 18 to 30 Nov 18.

6. **Post: Assistant Professor (05 months)**
   Name of Employer: UKF College of Engineering & Technology, Parippally, Kollam.
   Period: 23 January 2019 to 19 June 2019.
7. **Post: Assistant Professor (Govt. Guest) (06 months)**
   Name of Employer: Sree Narayana College, Sivagiri, Varkala, Thiruvananthapuram.
   Period: 01 July 2019 to 10 January 2020.
8. **Post: Assistant Professor (Adhoc)**
   Name of Employer: Department of Optoelectronics, University of Kerala, Kariavattom, Thiruvananthapuram.
   Period: 26 February 2020 onwards.

Achievements:

➢ Paper Publications in International Journals:

1. "*Investigation on Cirrus Clouds Ice Nuclei Characteristics and their effect on Optical Properties*", **Reji K Dhaman**, Malladi Satyanarayana, ***IOSR Journal of Applied Physics***, Vol. 12, Issue 2 Ser. IV (Mar. – Apr. 2020), PP 15-29.
2. "*Correlation analysis of lidar derived optical parameters for investigations on thin cirrus features at a tropical station Gadanki (13.5°N, 79.2°E), India*", Jayeshlal G. S., Satyanarayana M., Motty G S, **Dhaman R K** & Mahadevan Pillai V P, ***Indian Journal of Radio & Space Physics***, Vol.46, March 2018, pp 1-11.
3. "*Macrophysical, optical and radiative properties of tropical cirrus clouds and its temperature dependence at Gadanki (13.5° N, 79.2° E) observed by ground based lidar*", **Reji K. Dhaman**, Malladi Satyanarayana, Krishnakumar. V, V.P. Mahadevan Pillai, Jayeshlal G.S, K. Raghunath and M Venkat Ratnam, ***Indian Journal of Radio & Space Physics***, Vol.45, December 2016, pp 133-147.
4. "*Investigation of tropical cirrus cloud properties using ground based lidar measurements*", **Reji K. Dhaman**, Malladi Satyanarayana, Krishnakumar. V, V.P. Mahadevan Pillai, Jayeshlal G.S, K. Raghunath and M Venkat Ratnam, *Proc. SPIE* 9876, Remote Sensing of the Atmosphere, Clouds, and Precipitation VI, 98760P (May 5, 2016); doi:10.1117/12.2222314.
5. "*Investigation on the monthly variation of cirrus optical properties over the Indian sub-continent using cloud-aerosol lidar and infrared pathfinder satellite observation (Calipso)*", **Reji K. Dhaman**, Malladi Satyanarayana, Jayeshlal G.S, V.P. Mahadevan Pillai and Krishnakumar V, *Proc. SPIE* 9876, Remote Sensing of the Atmosphere,

Clouds, and Precipitation VI, 98762O (May 5, 2016); doi:10.1117/12.2223653.

6. "Lidar investigations on the structure and microphysical properties of cirrus at a tropical station Gadanki (13.50 N and 79.20 E), India", G S Jayeshlal, Malladi Satyanarayana, G. S. Motty, **Reji K. Dhaman**, V Krishnakumar, V P Mahadevan Pillai, *Proc. SPIE* 9876, Remote Sensing of the Atmosphere, Clouds, and Precipitation VI, 98761U (May 5, 2016); doi: 10.1117/12.2222294.
7. "*Deriving Aerosol Scattering Ratio using Range resolved Lidar Ratio*", **Reji K. Dhaman**, M. Satyanarayana, V. Krishnakumar, V.P Mahadevan Pillai and K. Raghunath, ***Pramana – J. Phys., Vol. 82, No. 2, pp.391-395, February 2014.***
8. "*Lidar Investigations on the Optical and Dynamical Properties of the Cirrus Clouds in the UTLS Region at a Tropical Station Gadanki, India (13.5^0N, 79.2^0E)*", Krishnakumar Vasudevan Nair, Satyanarayana Malladi, **Reji K Dhaman**, Jayeshlal Gloryselvan Suganthi Bai, Motty Gopinathan Nair Sreelakumari, V.P. Mahadevan Pillai, Karnam Raghunath, M. Venkat Ratnam, Duggirala Ramakrishna Rao, Sudhakar Pindlodi, Radhakrishnan Soman Radha, *J. Appl. Remote Sens.*, Vol-8, No-1, Pages: 083659-1 - 083659-21, March 2014.
9. "Seasonal and Optical Characterisation of Cirrus Clouds over Indian Sub-Continent Using LIDAR", G S Jayeshlal, Malladi Satyanarayana, **Reji K Dhaman**, G.S Motty, AIP Conf. Proc. 1620, 179-184 (2014); doi: 10.1063/1.4898237. (ISSN: 1551-7616).
10. "*Investigations on the physical and optical properties of cirrus clouds and their relationship with ice nuclei concentration using LIDAR at Gadanki, India (13.5^0N, 79.2^0E)*", Vasudevannair Krishnakumar, Malladi Satyanarayana, Soman R. Radhakrishnan, **Reji K. Dhaman**, Vellara P. Mahadevan Pillai, Karnam Raghunath, Madineni Venkat Ratnam, Duggirala Ramakrishna Rao, and Pindlodi Sudhakar, *J. Appl. Remote Sens.* 5, 053567 (2011), [doi:10.1117/1.3662877].
11. "*Writing low-loss waveguides in borosilicate (BK7) glass with a low-repetition-rate femtosecond laser*", J.A. Dharmadhikari, A.K. Dharmadhikari, A. Bhatnagar, A. Mallik, P. Chandrakanta Singh, **Reji K. Dhaman**, K. Chalapathi, D. Mathur", *Optics Communications*, Vol-284, No-2, Pages: 630 - 634, January 2011.
12. "*Simulation of femtosecond laser written waveguide in BK-7 glass for telecommunication application*", International Conference on Optics and Photonics (ICOP-2009), CSIO, Chandigarh, India.

Publications in International/ National Proceedings after peer review

1. G S Jayeshlal, Malladi Satyanarayana, **Reji K Dhaman**, G S Motty G S, "*Seasonal and Optical Characterisation of Cirrus Clouds over Indian Sub-Continent Using LIDAR*", AIP Conference Proceedings 1620, 179 (2014); [doi.org/10.1063/1.4898237].

2. Motty G S, M. Satyanarayana, V. Krishnakumar, and **Reji K. Dhaman**, "*Cirrus cloud-temperature interactions over a tropical station, Gadanki from lidar and satellite observations*", AIP Conference Proceedings 1620, 332 (2014); [doi: 10.1063/1.4898261]

3. Gloryselvan S Jayeshlal, Malladi Satyanarayana, Gopinathan Nair S Motty, **Reji K. Dhaman**, Vasudevannair Krishnakumar, Vellara P Mahadevan Pillai, "*Lidar investigations on the structure and microphysical properties of cirrus at a tropical station Gadanki (13.5^0 N and 79.2^0 E), India*", *Proc. SPIE* 9876, Remote Sensing of the Atmosphere, Clouds, and Precipitation VI, 98761U (May 9, 2016); doi:10.1117/12.2222294

4. Gloryselvan S Jayeshlal, Malladi Satyanarayana, Gopinathan Nair S Motty, **Reji K. Dhaman**, Vasudevannair Krishnakumar, Vellara P Mahadevan Pillai "*Investigation on the Lidar Ratio variations to study the effects of aerosols on cirrus clouds*", National space science symposium (NSSS-2016), Space Physics Laboratory, Vikram Sarabhai Space centre Thiruvananthapuram, February 9 to12,2016.

5. G.S Jayeshlal, Malladi Satyanarayana, **Reji K. Dhaman**, G.S Motty, V Krishnakumar, V.P Mahadevan Pillai, "*Investigation on the structure and microphysical properties of cirrus clouds using Lidar*" National seminar on Photonics and its applications (NSPA-2015), Department of Optoelectronics, University of Kerala, December 9-11,2015

6. 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 Venkateshwara University, Tirupati, December 3 to 6, 2014.

7. G S Jayeshlal, Malladi Satyanarayana, **Reji K. Dhaman**, G S Motty "*Seasonal and Optical Characterisation of Cirrus Clouds over Indian Sub-Continent Using LIDAR",* International Conference OPTICS'14, National Institute of Technology Calicut, March 19-21, 2014.

8. Motty G S, M. Satyanarayana, V. Krishnakumar, and **Reji K. Dhaman**, "*Cirrus cloud-temperature interactions over a tropical station, Gadanki from lidar and satellite observations",* International Conference OPTICS'14, National Institute of Technology Calicut, March 19-21, 2014.

9. **Reji K. Dhaman**, Krishnakumar. V, M. Satyanarayana, V.P. Mahadevan Pillai, Jayeshlal G.S, Radhakrishnan S.R., Motty G.S, K. Raghunath, M Venkat Ratnam, "*Investigation on the cirrus microphysics over the Indian sub – continent using Cloud - Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO)*", 101st Indian Science Congress, 3rd – 7th Feb 2014, University of Jammu, Jammu.

10. **Reji K. Dhaman**, M. Satyanarayana, Krishnakumar. V, V.P. Mahadevan Pillai, Jayeshlal G.S, Motty G.S, K. Raghunath, M Venkat Ratnam, "*Investigation on the monthly variation of cirrus optical properties over the Indian sub – continent using Cloud - Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO)*", 26th Kerala Science Congress, January 28-31, 2014, Wayanad, Kerala.
11. G.S. Jayeshlal, Malladi Satyanarayana, **Reji K Dhaman**, Vasudevannair Krishnakumar, "*Study of CIRRUS Clouds Using Ground Based LIDAR System*", UGC sponsored National Conference on Recent Trends in Electronic Communication and Signal Processing, Sree Ayyappa College Eramallikkara, Chengannur, Dec 20-21, 2013.
12. **Reji K. Dhaman**, M. Satyanarayana, V. Krishnakumar, V.P. Mahadevan Pillai, K Raghunath, "*Seasonal Variation of Aerosol Optical Properties Using Range Resolved Lidar Ratio by Ground Based Lidar at Low Latitude Inland Station, Gadanki, (13.5^0 N, 79.2^0 E)*", National Seminar on *Spectroscopic Techniques and its Applications for Material Characterization (NSST – 2013)*, October 3-4, 2013, Department of Optoelectronics, University of Kerala.
13. **Reji K. Dhaman**, V. Krishnakumar, V.P. Mahadevan Pillai, M. Satyanarayana, K Raghunath, "*Deriving Aerosol Scattering Ratio using Range resolved Lidar Ratio*", 21st National Laser Symposium (NLS-21), 6-9 February 2013, BARC, Mumbai, India.
14. **Reji K. Dhaman**, V. Krishnakumar, M. Satyanarayana, V.P. Mahadevan Pillai, S.R. Radhakrishnan, Jayeshlal G.S, K. Raghunath, M Venkat Ratnam, "*Seasonal variation of optical properties of aerosol at a low latitude tropical station Gadanki (13.5^0 N, 79.2^0 E), India*", 2nd workshop on 'Challenges and Opportunities in Air Pollution and Climate Change' under Germany – India 2012 programme, 23-25 January 2013, Sri Ramachandra Medical College & Research Institute, Chennai, India.
15. **Reji K. Dhaman**, V. Krishnakumar, V.P. Mahadevan Pillai, M. Satyanarayana, S.R. Radhakrishnan, Jayeshlal G.S, Motty G S, Karnam Raghunath, M Venkat Ratnam, "*Monthly Variation of Lidar Ratio and Depolarisation Ratio of Cirrus Clouds at a Low Latitude Inland Station, Gadanki (13.5^0 N, 79.2^0 E) - A Case study*", XXXVII National Symposium of Optical Society of India, 23-25 January 2013, Pondicherry University, Puducherry, India.
16. **Reji K. Dhaman**, Vasudevannair Krishnakumar, Vellara P. Mahadevan Pillai, Malladi Satyanarayana, Soman R. Radhakrishnan, Jayeshlal G.S, Karnam Raghunath, M Venkat Ratnam, "*A Case study on the Effect of Turbulence and Turbidity on Cirrus Microphysics at a Low Latitude Inland Station, Gadanki (13.5^0 N, 79.2^0 E)*", 100th Indian Science Congress, 3-7 January 2013, Kolkata, India.
17. **Reji K. Dhaman**, M Satyanarayana, V Krishnakumar, S.R. Radhakrishnan, V.P.

Mahadevan Pillai, K Raghunath and M Venkat Ratnam, "*Seasonal Variation of Physical and Optical Properties of Cirrus Clouds Determined from Ground Based Lidar at a Low Latitude Inland Station, Gadanki (13.5^0 N, 79.2^0 E)*", 39th COSPAR Scientific Assembly 14-22 July 2012, Mysore, Karnataka, India.

18. V. Krishnakumar, **Reji K. Dhaman**, S.R Radhakrishnan, V.P Mahadevan Pillai, M. Satyanarayana, K. Raghunath, M Venkata Ratnam, "*Effect of Turbulence in Cloud Microphysics a case study using ground based lidar data over the inland station Gadanki (13.5^0 N, 79.2^0 E)*", 39th COSPAR Scientific Assembly 14-22 July 2012, Mysore, Karnataka, India.
19. **Reji K. Dhaman**, M Satyanarayana, V Krishnakumar, S.R. Radhakrishnan, V.P. Mahadevan Pillai, K Raghunath and M Venkat Ratnam, "*Seasonal Variation of Physical and Optical Properties of Cirrus Clouds Determined from Ground Based Lidar at a Low Latitude Inland Station, Gadanki (13.5^0 N, 79.2^0 E)*", 17th National Space Science Symposium (NSSS),14-17 February 2012, S.V. University, Tirupati, India.
20. V. Krishnakumar, **Reji K. Dhaman**, S. R. Radhakrishnan, V. P. Mahadevan Pillai, M. Satyanarayana, K. Raghunath, M Venkata Ratnam "*Effect of Turbulence in Cloud Microphysics*", 17th National Space Science Symposium (NSSS),14-17 February 2012, S.V. University, Tirupati, India.
21. Soman R. Radhakrishnan, Malladi Satyanarayana, **Reji K. Dhaman**, Vasudevannair Krishnakumar, Vellara P. Mahadevan Pillai, Karnam Raghunath, Duggirala Ramakrishna Rao, and P. Sudhakar, "*Studies on the optical properties of aerosols in the upper troposphere and lower stratosphere over Gadanki (13.50 N, 79.20 E) using Lidar*", 17th National Space Science Symposium (NSSS),14-17 February 2012, S.V. University, Tirupati, India.

Training/Workshops/Refresher Course/FDP Attended:

1. Participated in the **Refresher Course** in "Moodle – Hands-on Training Programme for LMS" organized by Internal Quality Assurance Cell (IQAC), University of Kerala in association with UGC Human Resource Development Centre (HRDC), University of Kerala from 05.08.2020 to 18.08.2020.
2. Participated and completed an Online course "Student Assessment and Evaluation course" on **SWAYAM**, offered by National Institute of Technical Teachers Training and Research – Chennai in 2019.
3. Participated in One day **Faculty Development Program** on *Idea Pitching & Product Development Canvas - IGNITE* organized by Innovation & Entrepreneurship Development Center, UKF College of Engineering & Technology on March 2, 2019.

Memberships:

- Reviewer of "Remote Sensing Letters".
- Editorial Member of Journal "Remote Sensing", Pisco Med Publishing.
- Editorial Member of Journal "International Journal of Atmospheric and Oceanic Sciences", Science Publishing Group.
- "Photonic Society of India (PSI)" Life Member: **PSI LM 155**
- "Raman International Optronics Society (RIOS)" Member: **RIOS/0014/2022**

Awards/Achievements:

- Dr. V. R. Ravindran Memorial Award for the best outstanding researcher in 2016 in Department of Optoelectronics, University of Kerala.
- Certificate of Appreciation for organising Raman Optronics Webinar Series (ROWS 2020): A Virtual International Conference in Department of Optoelectronics, University of Kerala as Organising Secretary in 2020.
- Certificate of Appreciation for organising Raman Optronics Webinar Series (ROWS 2021): A Virtual International Conference in Department of Optoelectronics, University of Kerala as Organising Secretary in 2021.

Technical Skills:

- Operating Systems : Windows 9X, Xp
- Languages : C, C++.
- Other Software : MATLAB, Optisystem
- Other Skills :
  - Assembling PC, Operating System.
  - Experience in mathematical analysis and theoretical modelling of physics/optics/engineering related problems.
  - Familiar with various lab experiments related to physics, optics and electronics, fibre-optics, optical wave-guides, optoelectronics and optical communication etc.

Personal Profile:

Name	:	Dr. Reji K. Dhaman
Father's Name	:	G. Keerthi Dhaman
Mother's Name	:	M. S. Radhamani
Nationality	:	Indian
Date of Birth	:	22.April 1982
Marital status	:	Married
Spouse Name	:	Aswathy S R
Hobbies	:	Reading Science Magazines
Languages Known	:	English, Malayalam and Hindi

References:

1. **Dr. S. Sankararaman**
   Professor and Head, Department of Optoelectronics,
   University of Kerala, Thiruvananthapuram-695 581
   Phone (Off): +91-471-2308167 Mobile: +91-9447421844
   Email: drssraman@gmail.com
2. **Dr. K. G. Gopchandran**
   Director, School of Technology,
   Professor, Department of Optoelectronics,
   University of Kerala, Thiruvananthapuram-695 581
   Phone (Off): +91-471-2308167 Phone (Res): +91-471-2722285
   Mobile: +91-8129914751 Email: kggopchandran@gmail.com
3. **Dr. Sam Solomon**
   Professor, Department of Optoelectronics,
   University of Kerala, Thiruvananthapuram-695 581
   Phone (Off): +91-471-2308167 Mobile: +91-9847314237
   Email: sam.profopto.ku@gmail.com

Declaration:

I hereby declare that the information furnished above is true to the best of my knowledge.

Place: Thiruvananthapuram (**Dr. Reji K Dhaman)**