

CV of Ranjan Gupta

1. Name and DOB : Prof. Ranjan Gupta, Jan. 19, 1958
2. Date of Superannuation: Jan 31, 2018
3. Designation: Retired Senior Professor, Scientist 'H',
Level L14
Currently Consultant & Head IGO, IUCAA
4. Institution: IUCAA
Post Bag 4, Ganeshkhind
Pune-411007

5. Degrees conferred :

Degree	Institution conferring the degree	Field(s)	Year
B.Sc.(Hons)	Rajasthan University Jaipur	Physics (Honours) Chem. & Maths	1977
M.Sc.	Rajasthan University Jaipur	Physics	1979
Ph.D.	Physical Research Laboratory Ahmedabad	Physics	1987

6. Research/Teaching experience (in chronological order) :

Duration	Institution	Nature of work done
2 Years (1985-87)	Physical Research Laboratory Ahmedabad	Research
3 Years (1987-90)	Indian Institute of Geomagnetism Mumbai	Upper Atmospheric Research
25 Years (1990-till date)	IUCAA, Pune	Astronomy and Astrophysics Research and teaching Astronomy to MSc

7. PhD Students guided and ongoing:

PhD Students (completed and awarded degree): Arvind C. Ranade; Mahdi Bazarghaan; Archana Bora; Hillol K. Das and Nisha Katyal

PhD Students (currently under guidance): Pritesh Randive and Sandip Bhattacharyya

8. Research Interests:

- a. Astronomical Instrumentation
- b. Interstellar dust and its modeling
- c. Artificial Neural Networks and its application to stellar spectra

9. Membership of Committees etc.:

- Member of International Astronomical Union and IAU Commission 45 on Stellar Spectral Classification
- Member of Astronomical Society of India (ASI Membership no: 889/L)
- Member on technical committees for various Planetariums at Mumbai/Nashik/Surat/Delhi/Pune/Bhubhneswar/Patna etc
- Recognized PhD guide at Pune Univ/Guwahati Univ/Rajasthan Univ
- Member of Post Graduate Studies in Physics on Assam University, Silchar; Member of Board of Studies at Pondyicherry University, Pondyicherry.
- Co-opted committee member of (PAC) Program Advisory Committee for Physical Sciences (EMR - Extra Mural Research) of DST-SERB
- Member of Scientific Advisory Committee for Positional Astronomy Centre, Kolkata
- Member of Physical Sciences Research Committee of CSIR HRDG for its Extra Mural research grants

10. International Collaborations and visits:

In past 25 years of my academic career, I had opportunity to be part of several international collaborations and under these had spent various durations at USA; UK; Germany; Canada; France; Spain, Italy; Russia; Japan; Australia and South Africa. At most of these countries I also had attended International Conferences in the field of my research.

Publications list of Ranjan Gupta

K.C. Sahu, J.N. Desai, T.Chandrasekhar and **R.Gupta**, 1981 VIII Annual meeting of the Astronomical Society of India at Gorakhpur, Nov. 3-6, Proceedings Bull. Astron. Soc., India, 11,98. 'A study of the velocity structures of the planetary nebulae NGC 6720 and NGC 6210 using a pressure scanned photo-electric Fabry-Perot spectrometer'.

P.V. Kulkarni, R.T. Patel, N.S. Jog and **Ranjan Gupta**, 1982, IMAP workshop proceedings, ISRO-IMAP-SP-07-82,p.22. '1.27 Rocket infrared payload for measurement of ozone.'

N.S. Jog, R.T. Patel, **Ranjan Gupta** and P.V. Kulkarni, 1983, Jnl. of IETE, 29, 225. 'Rocket borne payload electronics system for 1.27 airglow.'

J.N. Desai, R. Raghavarao, **Ranjan Gupta**, R.Sekar and R. Narayanan, 1983, National Space Science Symposium, Dec. 7 -10, Poona, p.32 (Abstract book). 'Thermospheric diffusion and temperatures at twilight using artificial vapor releases'.

R. Raghavarao, J.N.Desai, B.G. Anandarao, R.Narayanan, R.Sekar, **Ranjan Gupta**, V.V. Babu and V. Sudhakar, 1984, JATP, 46, 355. 'Evidence for a large scale electric field gradient at the onset of equatorial spread-F'.

K.C. Sahu, **Ranjan Gupta**, Meenakshi Srinivasan and J.N. Desai, 1985, Applied Optics, 24, 10. 'Detection of nebulosity around stars using a Fabry-Perot Spectrometer: a new Technique.

Ranjan Gupta, J.N. Desai, R. Raghavarao, R.Sekar, R.Sridharan and R. Narayanan, 1986, Geophys.Res.Lett..13, 1055. 'Excess heating over the equatorial latitudes during storm sudden commencement'.

K.C. Sahu, J.N. Desai, M. Srinivasan and **R.Gupta**, 1986, SPIE, 627, Instrumentation in Astronomy VI, 50. 'Technique and advantages of using multiple zone apertures in Fabry- Perot Spectroscopy.'

T. Chandrasekhar, C. Debi Prasad, J.N. Desai, N.M. Ashok and **Ranjan Gupta** 1987, Symposium on the Diversity and Similarity of Comets, 6-9 April 1987, Belgium ESA SP-278 (September, 1987), 567. 'Study of the ionic and neutral species in the coma of comet Halley with an Image Intensifier Camera'.

C. Debi Prasad, T. Chandrasekhar, J.N. Desai, **Ranjan Gupta** and N.M. Ashok and K.N. Padia, B. Gopal Krishnan, K.L. Majumdar and A.K.S. Gopalan, 1987. Proceedings of the workshop on "Image processing in Astronomy" held at Ooty in March 1987. 'Digital Image Processing of Comet Halley Images and Interferogram'.

C. Debi Prasad, T. Chandrasekhar, J.N. Desai, N.M. Ashok and **Ranjan Gupta**, 1987. Proceedings of the National Symposium on Comet Halley, held at Indian Institute of Astrophysics, Bangalore, October 27-29, 1987, Editors : K.R. Sivaraman and G.S.D. Babu, P.59-65. 'Interferometric observations of Comet Halley'. ing in Astronomy" held at Ooty in March 1987. 'Digital Image Processing of Comet Halley Images and Interferogram'.

Ranjan Gupta and C. Debi Prasad, 1991, Applied Optics, 30, 373. 'Instrumental Broadening caused by the misalignment function in a Fabry-Perot etalon assembly'.

Ranjan Gupta, 1992, ASP Conf. Ser. vol. 34, pp249-252, Robotic Telescopes in the 1990's, Ed. A. V. Fillipenko. 'APT's for Indian Universities'

R.K. Gulati, **Ranjan Gupta**, Pradeep Gothoskar and Shyam Khobragade, 1994, ApJ, vol.426, pp.340-344. 'Stellar Spectral Classification using Automated Schemes'.

R.K. Gulati, **Ranjan Gupta**, P. Gothoskar and S. Khobragade, 1994, Vistas in Astronomy, vol.38, pp 293-298. 'Ultraviolet Stellar Spectral Classification using a multilevel tree Neural Network'.

R.K. Gulati, **Ranjan Gupta**, Pradeep Gothoskar and Shyam Khobragade, 1996, BASI, vol. 24, pp21-30. 'Classification of ultraviolet stellar spectra using artificial neural networks'.

Soma Mukherjee, Ujjwal Bhattacharya, S. K. Parui, **Ranjan Gupta** and Ravi K. Gulati, 1996 Astrophysics and Space Science vol.239 pp 361-373. 'A multi-layered backpropagation ANN algorithm for Spectral Classification of UV data'

R. K. Gulati, **Ranjan Gupta**, Pradeep Gothoskar and Shyam Khobragade, 1995, ASP Conf. Ser. vol. 77, pp253-256, Astronomical data Analysis, Software and Systems IV, Ed. R. A. Shaw et.al. 'Automated classification of a large database of stellar spectra'

R. K. Gulati, **Ranjan Gupta** and N. K. Rao, 1997, Astron. & Astrophys., 322, pp 933-937. 'A comparison of synthetic and observed spectra for G-K dwarfs using artificial neural networks'

R. K. Gulati, **Ranjan Gupta** and Harinder P. Singh, 1997, PASP, vol. 110, pp 843. 'E(B-V) determinations of O and B stars using artificial neural networks'

Harinder P. Singh, R. K. Gulati and **Ranjan Gupta**, MNRAS, 295, pp 312-318 (1998). 'Stellar Spectral Classification using Principal Component Analysis and Artificial Neural Networks'

D.B. Vaidya and **Ranjan Gupta**, A & A, 328, pp634-640 (1997). 'Extinction by porous silicate and graphite grains'

A.N. Ramaprakash, **Ranjan Gupta**, A.K. Sen and S.N. Tandon, A & A Supp. Ser. 128, pp369-375 (1998). 'An Imaging Polarimeter (IMPOL) for multi-wavelength observations'

A.N. Ramaprakash, S.N. Tandon and **R. Gupta**, in Proc. of the IAU Colloquium No. 166: The Local Bubble and Beyond, D. Breitschwerdt, M. J. Freyberg and J. Trumper, Eds., Lecture notes in Physics, vol. 506, (1998). 'Imaging polarimetry of nearby molecular clouds'

R.K. Gulati, **Ranjan Gupta** and H.P. Singh, in Proc. of the conference "Ultraviolet Astrophysics, Beyond the IUE Final archive", Sevilla, Spain, 11-14 Nov. 1997, ESA SP-413, pp. 711-713, Feb. (1998). 'Analysis of IUE

low-resolution spectra using Artificial Neural Networks'

H.P. Singh, **Ranjan Gupta** and R.K. Gulati in the ASP Conf. Series, 138, 309 (1998). 'Stellar Spectral Classification based on Principal Component Analysis and Artificial Neural Networks'

D.B. Vaidya and **Ranjan Gupta** A & A, vol.348, pp 594-599 (1999)
'Interstellar Extinction by Porous Grains'

A.K. Sen, **Ranjan Gupta**, A. N. Ramaprakash and S.N. Tandon A & A Supp. Ser., vol. 141, pp 175-183 (2000) 'Imaging polarimetry of some selected Dark Clouds'

D.B. Vaidya, B.G. Anandarao, J.N. Desai and **Ranjan Gupta**
J. Astrophys. Astr. 21, 91-99 (2000)
'Porous and Fluffy Grains in the Region of Anomalous Extinction'

R. Gupta, R.K. Gulati and H.P. Singh
ASP Conf. Series, vol.223 (2001), CDROM page 791. The Eleventh Cambridge Workshop on Cool Stars, Stellar Systems and Sun – Challenges for the New Millenium, Oct. 4-8, Tenerife, Spain. Editors: R.J. Garcia-Lopez, R. Rebolo & M.R. Zapatero Osorio.
'An investigation of convective overshoot from spectra of G and K dwarfs'

R. Gupta & D.B. Vaidya
ASP Conf. Series, vol.223 (2001), CDROM page 1238. The Eleventh Cambridge Workshop on Cool Stars, Stellar Systems and Sun – Challenges for the New Millenium, Oct. 4-8, Tenerife, Spain. Editors: R.J. Garcia-Lopez, R. Rebolo & M.R. Zapatero Osorio.
'Modeling of Interstellar Dust Grains'

Coryn A. L. Bailer-Jones, **Ranjan Gupta**, Harinder P. Singh
Automated Data Analysis in Astronomy, Editors: **Ranjan Gupta**, H. P. Singh, C. Bailer-Jones 2002, pp51, Narosa Publishing
'An Introduction to Artificial Neural Networks'

Harinder P. Singh, Coryn A. L. Bailer-Jones, **Ranjan Gupta**

Automated Data Analysis in Astronomy, Editors: **Ranjan Gupta**, H. P. Singh, C. Bailer-Jones 2002, pp69, Narosa Publishing
'Principal Component Analysis and its Application to Stellar Spectra'

Ranjan Gupta, Kevin Volk, Sun Kwok, Harinder P. Singh
Automated Data Analysis in Astronomy, Editors: **Ranjan Gupta**, H. P. Singh, C. Bailer-Jones 2002, pp115, Narosa Publishing
'Automated Classification of IRAS Sources'

Ranjan Gupta, V. Francesco Polcaro, Harinder P. Singh
Automated Data Analysis in Astronomy, Editors: **Ranjan Gupta**, H. P. Singh, C. Bailer-Jones 2002, pp139, Narosa Publishing
'Slitless Spectroscopy and ANN Based Automated Analysis'

B. Biswal, Harinder P. Singh, **Ranjan Gupta**
Automated Data Analysis in Astronomy, Editors: **Ranjan Gupta**, H. P. Singh, C. Bailer-Jones 2002, pp149, Narosa Publishing
'Predicting Dynamics through Artificial Neural Networks'

A. K. Sen, **Ranjan Gupta**, A. N. Ramaprakash, S. N. Tandon
Automated Data Analysis in Astronomy, Editors: **Ranjan Gupta**, H. P. Singh, C. Bailer-Jones 2002, pp355, Narosa Publishing
'Reduction of Imaging Polarimetry Images'

D.B. Vaidya, **Ranjan Gupta**, J.S. Dobbie and P. Chylek
A & A, vol. 375, pp 584-590 (2001)
'Interstellar Extinction by Composite Grains'

D.B. Vaidya, **Ranjan Gupta**, J.S. Dobbie and P. Chylek
Light scattering by non-spherical particles: Halifax Contributions – 5th conference of light scattering by non-spherical particles, Ed. G. Videen, Q. Fu and P. Chylek, (2000) ISBN-0-9702316-0-1, pp.253
'Scattering Properties of Composite Dust Grains'

Ranjan Gupta
BASI, vol. 29(3), Sept. 2001, 471

'Small/automated telescope and background instrumentation for teaching purpose'

S.P. Bhatnagar, Umesh Dodia, M. N. Anandram, B. A. Kagli and **Ranjan Gupta** J. Instrum. Soc. India, Vol 31 (3 & 4) p 234-239.

'A 14" Schmidt Cassegrain Automated Telescope for Bhavnagar and Bangalore Universities'

Ranjan Gupta, M. Burse, H.K. Das, A. Kohok, A.N. Ramaprakash, S. Engineer and S.N. Tandon BASI, 30, 785-790 (2002).

'IUCAA 2 meter telescope and its first light instrument IFOSC'

D.B. Vaidya, **Ranjan Gupta**, J.S. Dobbie and P. Chylek

'Scattering properties of composite grains: application to comet dust'

Sixth conference on light scattering by nonspherical particles at Gainsville
"Electromagnetism and light scattering by nonspherical particles" Eds. B.A.S. Gustafson, L. Kolokolova and G. Videen, pp 315-318, ISBN 0-9702316-2-8, A.R.L., Maryland, U.S.A. (2002)

Francisco Valdes, **Ranjan Gupta**, James A. Rose, Harinder P. Singh and David J. Bell

'The Indo-U.S. Library of Coude Feed Stellar Spectra'

ApJS, 152n2, 251, June (2004).

Ranjan Gupta, Harinder P. Singh, Kevin Volk and S. Kwok

'Automated Classification of 2000 Bright IRAS Sources'

ApJS, 152n2, 201, June (2004).

A.C. Ranade, N.M. Ashok, **Ranjan Gupta** and Harinder P. Singh

'A Near-Infrared Stellar Spectral Library: I . H-Band Spectra'

BASI, 32, 311-333 (2004)

Ranjan Gupta, D.B. Vaidya, J.S. Dobbie and P. Chylek

'Scattering Properties and Composition of Cometary Dust'

Astrophysics & Space Science, 301, issue 1, pp. 21-31, 2006

A.K. Sen, T. Mukai, **R. Gupta** and H.S. Das

'An analysis of the distribution of background star polarization in dark clouds'

MNRAS, 361, 177-190, (2005)

Ranjan Gupta, Tadashi Mukai, D.B. Vaidya, Asoke K. Sen and Yasuhiko Okada

'Interstellar Extinction by Spheroidal Dust Grains'

A&A 441, 555-561 (2005)

Ranjan Gupta, N.M. Ashok, Harinder P. Singh and Arvind C. Ranade

'A near-IR stellar spectral library in H band using the Mt. Abu telescope'

BASI, 33, 175 (2005)

Harinder P. Singh, Manabu Yuasa, Nawo Yamamoto and **Ranjan Gupta**

'Reliability Checks on the Indo-US Stellar Spectral Library using Artificial Neural Networks and Principal Component Analysis'

Publ. Astron. Soc. Japan 58, pp177-186 (2006)

D.B. Vaidya, **Ranjan Gupta** and T.P. Snow

'Composite Interstellar Grains'

MNRAS 379, 791-800 (2007)

A.C. Ranade, H.P. Singh, **Ranjan Gupta** and N.M. Ashok

'A Near-Infrared Stellar Spectral Library: II . K-Band Spectra'

BASI, 35, 87 (2007)

A. K. Sen, T. Mukai, **R. Gupta** and Y. Okada

'Proposal for UV observations of star forming clouds'

BASI, 35, 239 (2007)

Ranjan Gupta, S. Jotin Singh and Harinder P. Singh

'Cross checking reliability of some available stellar spectral libraries using artificial neural networks'

in Stellar Populations as Building blocks of Galaxies, Proc. of IAU 241 Symposium at LaPalma, Tenerife, Spain during 10-16 Dec. 2006, Ed. A. Vazdekis and R. Peletier, CUP, p. 93 (2007)

Harinder P. Singh, S. Jotin Singh, **Ranjan Gupta** and M. Yuasa

'Filling Gaps in the INDO-US Stellar Spectral Library using Principal Component Analysis'

in Stellar Populations as Building blocks of Galaxies, Proc. of IAU 241 Symposium at LaPalma, Tenerife, Spain during 10-16 Dec. 2006, Ed. A. Vazdekis and R. Peletier, CUP, p. 101 (2007)

Arvind C. Ranade, N M Ashok , Harinder P. Singh and **Ranjan Gupta**
'A Near-Infrared Stellar Spectral Library: III. J-Band Spectra'
BASI, 35, 359, (2007)

Archana Bora, **Ranjan Gupta**, Harinder P. Singh, Jayant Murthy, Rekesh Mohan and K. Duorah

'A 3D Automated Classification Scheme for the TAUVE X data pipeline'
MNRAS, 384, 827 (2008)

Mahdi Bazarghan & **Ranjan Gupta**

'Automated Classification of Sloan Digital Sky Survey (SDSS) Stellar Spectra using Artificial Neural Networks'
Astrophysics & Space Sci. 315, 201-210 (2008)

Deepak Vaidya & **Ranjan Gupta**

'Composite interstellar grains and the 2175Å feature'
Organic Matter in Space- Proceedings IAU Symposium No. 251, pp77-78, 2008 S. Kwok & S. Sandford, eds.

'Composite Grains: Effects of Porosity and Inclusions on the 10μm Silicate Feature'

Deepak B. Vaidya and **Ranjan Gupta**

JQSRT, 110, 1726-1732 (2009)

'A study of frequency and size distribution dependence of extinction for astronomical silicate and graphite grains'

Ashim K. Roy, Subodh K. Sharma and **Ranjan Gupta**

JQSRT, 110, 1733-1740 (2009)

'Automated star-galaxy segregation using spectral and integrated band data for TAUVE X/ASTROSAT satellite data pipeline'

Archana Bora, **Ranjan Gupta**, Harinder P. Singh & K. Duorah

New Astronomy, 14 (2009), 649-653

'Frequency and size distribution dependence of visible and infrared extinction for astronomical silicate and graphite grains'

Ashim K. Roy, Subodh K. Sharma and **Ranjan Gupta**
JQSRT, 111, 795-801 (2010)

Polarimetric observations of two ROSETTA targets : 67P/Churyumov-Gerasimenko and 21 Lutetia; E. Hadamcik, A K Sen, A . C Levasseur-Regourd, R. Gupta and J. Lasue, 2009, presented in AOGS 2009 Singapore.

'Recent polarimetric observations of comet 67 P/Churyumov-Gerasimenko'
Anny-Chantal Levasseur-Regourd, Edith Hadamcik, Asoke K. Sen, **Ranjan Gupta** and Jeremie Lasue

Icy Bodies of Solar System, Proc. of IAU Symp. No. 263, 2009, Ed: D. Lazzaro et al.

"Polarimetric observations of comet 67P/Churyumov-Gerasimenko during its 2008-2009 apparition"

E. Hadamcik, A. K. Sen, A. C. Levasseur-Regourd, **R. Gupta** and J. Lasue
Astron. Astrophys., p. 517, A86 (2010) DOI: 10.1051/0004-6361/201014167

'A CCD photometric study of the late type contact binary EK Comae Berenices'

Sukanta Deb, Harinder P. Singh, T. Seshadri and **Ranjan Gupta**
New Astronomy, 15, 662 (2010)

Photopolarimetric study of the star-forming clouds CB3, CB25, and CB39
A. K. Sen, V. F. Polcaro, I. Dey, **R. Gupta**
A&A, 522, A45 (2010)

'Optical Spectroscopy of Candidates of Young Stellar Objects in NGC 1333'

Yoichi Itoh, **Ranjan Gupta**, Yumiko Oasa, Asoke Sen, Munechika Tanaka, Tsuyoshi Terai, and Seina Nakaoka
Publ. Astron. Soc. Japan PASJ 62, No. 5, pp.1149-1154 (2010)

'Coude-feed stellar spectral library - atmospheric parameters'

Yue Wu, Harinder P. Singh, Philippe Prugniel, **Ranjan Gupta**, Mina Koleva
A&A, 525, A71 (2011)

'Infrared Emission from the Composite Grains: Effects of Inclusions and Porosities on the 10 and 18 μm Features'

D.B. Vaidya and **Ranjan Gupta**
A&A, 528, A57 (2011)

'A CCD photometric study of the newly discovered contact binary ASAS 134738+0410.1.'

Deb, S., Singh, H. P., Seshadri, T. R., **Gupta, R.** 2010 BASI, 38, 77.

'The photometric study of light scattering from the surface of alumina powder and interpretations by Hapke formula'

D. Deb, A. K. Sen, H. S. Das and **R. Gupta**
Advances in Space Research 48 (2011) 1274-1278

'Interstellar Grains: Effect of Inclusions on Extinction'

Nisha Katyal, **Ranjan Gupta** and D.B. Vaidya
Earth, Planets and Space (EPS) Journal, 63, pp1041-1045 (2011)

'Interstellar Dust Grains'

R. Gupta & D.B. Vaidya
Journal of Cosmology, Volume 16, pp 6661- 6670, 2011

'Modelling Laboratory Data of Bidirectional Reflectance of a Regolith Surface Containing Alumina'

C. Bhattacharjee Deb, H. S. Das, A. K. Sen, and **R. Gupta**
Publications of the Astronomical Society of Australia, 2011, 28, 261-265

'Analytic formulas for frequency and size dependence of absorption and scattering efficiencies of astronomical polycyclic aromatic hydrocarbons'

Ashim K. Roy, Subodh K. Sharma, **Ranjan Gupta** and Pritesh Ranadive
JQSRT 113 (2012) 624-631

'High-Resolution Near-Infrared Polarimetry of a Circumstellar Disk around UX Tau A'

R. Tanii, Y. Itoh, T. Kudo, T. Hioki, Y. Oasa, **Ranjan Gupta**, A.K. Sen and others
PASJ, 64, 124, 2012

'Dust in Comet 103P/Hartley 2 coma during EPOXI mission'

E. Hadamcik, A.K. Sen, A.C. Levasseur-Regourd, **R. Gupta**, J. Lasue, R. Botet,
Icarus, 222 (2), 774-785, 2013

'Dust coma of comet C/2009 P1 (Garradd) by imaging polarimetry'
E. Hadamcik, A.K. Sen, A.C. Levasseur-Regourd, S. Roy Choudhury, J. Lasue, **R. Gupta** and R. Botet,
Meteoritics & Planetary Science 49, Nr 1, 36-44 (2014)

'Interstellar dust models towards some IUE stars' N. Katyal, **R Gupta** and D B Vaidya
PASP, Vol. 125, No. 934, December 2013, pp. 1443-1454

'Dust properties from GALEX observations of a UV halo around Spica'
P. Shalima, J. Murthy, and **R. Gupta**
EPS vol. 65 no. 10 pp. 1123-1126, 2013

'Composite Grains: Carriers of Diffuse Interstellar Bands'
D.B. Vaidya and **R. Gupta**
The Diffuse Interstellar Bands, Proc. IAU Symposium No. 297, 2013 J. Cami & N.L.J. Cox. Eds.

'Imaging polarimetry of the rotating Bok globule CB67'
M.S. Prokopjeva, A.K. Sen, V.B. Il'in, N.V. Voshchinnikov & **R. Gupta**
JQSRT, 146 (2014) 410-416

'The Dust Content and Radiation Fields of Sample of Galaxies in the ELAIS-N1 Field'
P. Shalima, Rupjyoti Gogoi, Amit Pathak, Ranjeev Misra, **Ranjan Gupta** & D. B. Vaidya
PASP, 127, 726-731, 2015

'Interstellar Dust and Extinction'
D.B. Vaidya and **Ranjan Gupta**, Asian Journal of Physics, Vol. 24, No 8 (2015) 1075-1079

'Light scattering models and their intercomparison'
Ranjan Gupta, Asian Journal of Physics, Vol. 24, No 8 (2015) 1081-1085

'Laboratory photometry of regolith analogue: effect of porosity'
Amritaksha Kar, Asoke K Sen & **Ranjan Gupta** ICARUS, 277, (2016),
300-310

'Composite Circumstellar Dust Grains'
Ranjan Gupta, Dipak B. Vaidya & Rajeshwari Dutta, MNRAS, 462(1),
867-875 (2016)

'Optical Spectroscopy and Photometry of Main-Belt Asteroids with a
High Orbital Inclination'

Iwai, Aya; Itoh, Yoichi; Terai, Tsuyoshi; **Gupta, Ranjan**; Sen, Asoke;
Takahashi, Jun
RAA, Vol. 17, No.2 (2017)

'Unveiling Vela - Time Variability of Interstellar Lines in the Direction of
the Vela Supernova Remnant II. Na D and Ca II'

N. Kameswara Rao, David L. Lambert, Arumalla B. S. Reddy, **Ranjan
Gupta**, S. Muneer, Harinder P. Singh
MNRAS, 467 (1), 1186-1192 (2017)

'The effect of porosity of dust particles on polarization and color with
special reference to comets'

A. K. Sen, R. Botet, R. Vilaplana, Naznin R Choudhury, **Ranjan Gupta**,
JQSRT, 198, 164-178 (2017)

Books/Proceedings/Popular Articles :

1. Automated Data Analysis in Astronomy

Ranjan Gupta, H. P. Singh and C. Bailer-Jones
2001, Narosa Publishing, New Delhi

2. Basics of Astronomy – Block I – Unit 3 – Astronomical Techniques
Basics of Astronomy – Block II – Unit 7 – Stellar Spectra and classification
IGNOU course book PHE-15 Astronomy and Astrophysics January 2006

'Dust and its Role in Interstellar Extinction'

Ranjan Gupta

in Niharika, vol. 3, no. 1, Mar-Aug, 2008, Positional Astronomy Centre,

Kolkata, 6 monthly publication – www.packolkata.org