Curriculum Vitae [1]

Name	:	YALIA DIVAKARA MAYYA
Current Nationality	:	MEXICAN
Country of Origin	:	INDIA
Date of Birth	:	30 Jan 1964
Address	:	Intituto Nacional de Astrofísica, Óptica y Electrónica (INAOE) Luis Enrique Erro 1, Tonantzintla Apdo Postal 51 y 216, CP 72840, Puebla, Pue. México
E-mail	:	ydm@inaoep.mx **WWW:** http://www.inaoep.mx/˜ydm
Telephone	:	52-222-2663100 ext.1317 **Fax** : 52-222-2472231

Present and past positions :

- *Investigador Titular* "B" at INAOE, México from May 2001
- *Investigador Titular* "A" at INAOE, México from June 1997–April 2001
- *Guillermo Haro fellow* at INAOE, México from June 1996–May 1997
- *Postdoctoral fellow* at Tata Institute of Fundamental Research, Bombay, India from Dec 1993 – May 1996

Degrees :

- **Ph.D.** (1993) Indian Institute of Science, Bangalore, India
  Title : Star Formation in Giant Extragalactic H II Regions
- **Masters in Science (M.Sc.)** (1986) in Physics,
  Specialization: Solid State Physics (Mangalore Univ., India)
- **Bachelor in Science (B.Sc.)** (1984) in Physics, Chemistry and Mathematics (Mangalore Univ., India)

Research Field and Experiences:

- Starburst phenomenon, Population of young massive stellar clusters and their evolution.
- Ring galaxies, Galactic and extragalactic star forming regions, Population Synthesis, galactic nuclei, surface photometry of galaxies.
- Author of a Population Synthesis code (Mayya 1995, 1997).
- Optical and near infrared (NIR) observations, Calibration of CCDs and NIR arrays etc.
- Development of software packages using Fortran and IRAF tasks.

Principal investigator of CONACyT Project Grants:

- "Historia de Formación de estrellas y cúmulos compactos en galaxias cercanas" (proyecto de grupo #155142-G3 2012–2015)
- "Formation and evolution of Ring galaxies" (#58956-F1 2007–2010).
- "Photo-chemical evolution of interacting galaxies" (#39714-F 2003–2006).
- "Determination of star formation history of starburst galaxies" (#25869-E 1998–2001).

[1] Updated on 29th Nov 2012

Memberships

• International Astronomical Union (IAU) (Life membership)
• Astronomical Society of India (ASI) (Life membership)
• *Sistema Nacional de Investigadores Nivel* I (1998–2001) and *Nivel* II (2001–2011) .
• *Academia Mexicana de Ciencias* from 2005.

Supervising thesis and teaching

• Completed Thesis:

Ph.D.:

1. Olga Vega, "Study of the Dense Interstellar Medium and the Evolution of the Starbursts in Luminous Infrared Star-forming galaxies (INAOE 2007)",
2. Roberto Romano, "Optical and near infrared photometric study of ring galaxies and their comparison with the theoretical predictions", (INAOE 2006),

Masters:

1. Roberto Romano, "Physical interpretation of the asymmetry parameter in galaxies", (INAOE 1999),
2. Ricardo Retes, "Young Star formation in Galactic molecular cloud associated with the source IRAS 18236-1205", (INAOE 2008).
3. Mayra Santiago Cortes, "Search of star clusters in M81 using the Hubble Space Telescope Images", (INAOE 2008).
4. Karla Ziboney Arellano Córdova, "Estudio de Regiones HII en M81 utilizando espectros de GTC", (INAOE 2012).

Bachelors:

1. Dulce Isabel González, "Giant Ionized Regions", (BUAP 1999),
2. Liliana Hernández, "Interstellar Extinction", (Universidad Veracruzana 2003).
3. María Fernanda Navarro Poupard, "Efectos ambientales en la evolución de galaxias espirales: imágenes del cercano infrarrojo en el cúmulo Abell 85", (Universidad de Guanajuato 2011).

• Thesis in progress:

Ph.D.:

1. Mayra Santiago Cortes, "Study of star clusters in M81 using HST images", 2008– (INAOE).
2. Ricardo Retes, "Star formation in Galactic molecular clouds", 2008– (INAOE).

Masters:

1. Kenia Osorio López, "Abundancia de Oxigeno/Nitrogeno y propiedades de la formación estelar en las regiones HII de las galaxias anilladas Arp141 y Arp143" 2007– (IA-UNAM)

Bachelors:

1. Gisela Dominguez, "Abundancias quimicas de Cartwheel" 2012– (BUAP)

- Master's level courses imparted at INAOE
  - Observactional Astronomy and Instrumentation (5 times).
  - Extragalactic Astronomy (once).
  - Galactic structure and stellar dynamics (once).
  - Interstellar Medium (4 times).
  - Interstellar Medium - advanced topics (once).
  - Galaxies - advanced topics (2 times).
  - Seminar I (2 times).

- Examiner of more than 10 (Ph.D. and M.Sc.) thesis at INAOE.

Administrative Experiences:

- *Representante Docente* de astrofísica del INAOE desde 2010.
- Co-organizer of Guillermo Haro Workshop on "Compact superstar clusters, birth, evolution and feedback" in 2010
- Current Member of the committee to plan the construction of the San Pedro Martir Telescope using the 6.5-m INAOE mirror. Represented INAOE for more than 2 years in the SASIR project.
- Organization of weekly group seminars based on recent published papers from 2006.
- Web-master of Astrophysics department of INAOE 2005–2010
- Web-based programming, creation and maintanance of web pages of various conferences organized by INAOE during 1998–2003.
- Member for 3 years of the Time Allocation Committee for the 2.1-m Telescope of OAGH.

Publications in Refereed International Journals [2]

32. Mayya, Y. D., Rosa González, D., Vega, O., Méndez-Abreu, J., Terlevich, R., Terlevich, E., Bertone, E., Rodríguez-Merino, L. H., Muñoz-Tuñón, C., Rodríguez-Espinosa, J. M., Sánchez Almeida, J., & Aguerri, J. A. L.
2012, PASP, 124, 885
"Flux calibrated emission line imaging of extended sources using GTC/OSIRIS Tunable Filters"

31. Meńdez-Abreu, J., Sánchez Almeida, J., Muñoz-Tuñón, C., Rodríguez-Espinosa, J. M., Aguerri, J. A. L., Rosa González, D., **Mayya, Y. D.**, Vega, O., Terlevich, R., Terlevich, E., Bertone, E., Rodrguez-Merino, L. H.
2011, PASP, 123, 1107
"Wavelength Calibration for OSIRIS/GTC Tunable Filters"
Total Citations: 1 Citations 2010-2012: 1

30. L.H. Rodríguez-Merino, D. Rosa-González & **Y.D. Mayya 2011, ApJ, 726, 51**
Spatially Resolved Star Formation History Along the Disk of M82 Using Multi-band Photometric Data

29. M. Santiago-Cortés, **Y.D. Mayya** & D. Rosa-Gonzalez **2010, MNRAS 405, 1293**
Wide-field HST/ACS images of M81: The population of Compact Star Clusters

28. A. Luna, **Y.D. Mayya**, L. Carrasco & L. Bronfman **2010, ApJ, 713, 45L**
"The Discovery of a Molecular Cavity in the Norma I arm Associated to H.E.S.S Gamma-ray source in the Direction of Westerlund 1"

27. S. Barway, Y. Wadadekar, A.K. Kembhavi & **Mayya, Y. D.**
2009 MNRAS, 394, 1991
"Near-Infrared bulge-disk correlatons of lenticular galaxies"

26. Romano, R., **Mayya, Y. D.** & Vorobyov, E. I. **2008, AJ, 136, 1259-1289**
"Stellar disks of Collisional Ring Galaxies I. Deep multiband images, Radial intensity and color profiles, and confrontation with N-body simulations"

25. Mayya, Y. D., Romano, R., Rodriguez-Merino, H., Luna, A., Carrasco, L. & Rosa-Gonzalez, D. **2008, Astrophysical Journal, 679, 404**
"HST/ACS Imaging of M82: A Comparison of Mass and Size Distribution Functions of the Younger Nuclear and Older Disk Clusters"

24. Barway, S., Kembhavi, A., Wadadekar, Y., Ravikumar, C. D. & **Mayya, Y. D.**
2007, Astrophysical Journal, 661, L37-40
"Lenticular Galaxy Formation: Possible Luminosity Dependence"

23. Mayya, Y. D., Bressan, A., Carrasco, L. & Hernandez-Martinez, L.
2006, Astrophysical Journal, 649, 172-180

[2] A complete list in all Journals with links to the full text can be found at http://adsabs.harvard.edu/cgi-bin/nph-abs_connect?author=Mayya%2C+Y.+D.

"The Star Formation History of the Disk of the Starburst galaxy M 82"

22. Mayya, Y. D., Carrasco, L. & Luna, A.
2005, Astrophysical Journal, 628, L33–L36
"The Discovery of Spiral Arms in the Starburst Galaxy M 82"

21. Mayya, Y. D., Bizyaev, D., Romano, R., Garcia-Barreto, J.A., & Vorobyov, E.I. ,
2005, Astrophysical Journal, 620, L35–L38
"The detection of non-thermal radio continuum spokes and the study of star formation in the Cartwheel"

20. Barway, S., **Mayya, Y. D.**, Kembhavi, A.K., and Pandey, S.K.
2005, Astronomical Journal, 129, 630–646
"Multicolor Surface Photometry of Lenticulars I. The Data"

19. Kamath, U.S., Anupama, G.C., Ashok, N.M., **Mayya, Y. D.**, & Sahu, D.K.
2005, Monthly Notices of Royal Astronomical Society, 361, 1165–1172
Optical and Near-Infrared spectroscopy of Nova V1494 Aquilae 1999 No.2

18. Mayya, Y.D., Bressan, A. Rodriguez, M., Valdes, J.R. & Chavez, M.
2004, Astrophysical Journal, 600, 188–203
" Star Formation History and Extinction in the Central Kiloparsec of M82-like Starbursts "

17. Binette, L.; González-Gómez, D. I., & **Mayya, Y. D.**
2002, Rev Mex de Astronoma y Astrofísica 38, 279–288
"Density Gradients and Internal Dust in the Orion Nebula"

16. Korchagin, V.I., **Mayya, Y.D.**, Vorobyov, E.I.
2001, Astrophysical Journal, 554, 281–290
"Optical Color Gradients in Star-forming Ring Galaxies"

15. Dewangan, G.C., Singh, K.P., **Mayya, Y.D.**, & Anupama, G.C.
Monthly Notices of Royal Astronomical Society, **2000, MNRAS, 318, 309–320**
"Active Nucleus in a Poststarburst Galaxy: KUG 1259+280"

14. Korchagin, V.I., Vorobyov, E.I. & **Mayya, Y.D.**
1999, Astrophysical Journal, 522, 767-771
"Chemical Abundance Gradients in the Star-forming Ring Galaxies"

13. Mayya, Y.D., Swara Ravindranath & Carrasco, L.
1998, Astronomical Journal, 116, 1671–1678
"Near infrared and optical morphology of the dusty galaxy NGC 972"

12. Korchagin, V.I., **Mayya, Y.D.,** Vorobyov, E., & Kembhavi, A.K.
1998, Astrophysical Journal, 495, 757–764
"Surface brightness gradients produced by ring waves of star formation"

11. Mayya, Y.D. 1997, Astrophysical Journal, 482, L149–L153

"Use of Red Supergiant spectral features as age indicators in starburst regions"

10. Mayya, Y.D., & Rengarajan, T.N. **1997, Astronomical Journal, 114, 932–945**
"Spatial Distribution of Far infrared emission in Spiral galaxies
I. Relation with Radio continuum Emission"

9. Mayya, Y.D., & Rengarajan, T.N. **1997, Astronomical Journal, 114, 946–957**
"Spatial Distribution of Far infrared emission in Spiral galaxies
II. Heating sources and gas-to-dust ratio"

8. Mayya, Y.D., & Prabhu, T.P. **1996, Astronomical Journal, 111, 1252–1266**
" Embedded Clusters in Giant Extragalactic H II Regions:
III. Extinction and Star Formation"

7. Mayya, Y.D. 1995, Astronomical Journal, 109, 2503–2521
" Embedded Clusters in Giant Extragalactic H II Regions:
II. Evolutionary Population Synthesis Model"

6. Korchagin, V.I., Kembhavi, A.K., **Mayya, Y.D.,** & Prabhu, T.P.
1995, Astrophysical Journal, 446, 574–582
"Are Nuclear Hotspots in Galaxies Sites of Sequential Star formation?"

5. Prabhu, T.P., **Mayya, Y.D.,**...*et. al*
1995, Astronomy & Astrophysics, 295, 403–412
" SN 1993J in M 81: The first two months"

4. Mayya, Y.D. 1994, Astronomical Journal, 108, 1276–1287
" Embedded Clusters in Giant Extragalactic H II Regions: I. BVRHα Photometry"

3. Stirpe, G.M.,...,**Mayya, Y.D.,**...*et. al*
1994, Astrophysical Journal, 425, 609–621
" Steps towards determination of the size and structure of the broad-line region in AGN VI. Variability of NGC 3783 from ground-based data"

2. Prabhu, T.P., **Mayya, Y.D.,** & Anupama, G.C.
1992, J. Astrophys. Astr., 13, 129–144
"Gain Calibration of CCD Systems at VBO "

1. Mayya, Y.D. 1991, J. Astrophys. Astr., 12, 319–331
"Photometric Calibration of the CCD Camera of 1-m Telescope at VBO"

Invited Reviews in Conferences:

• Invited Commentary "On Two H II Regions near the nucleus of M82 by Recillas-Cruz & Peimbert (1970)": The archetype Galaxy of the Starburst Phenomena" (Eds. Torres-Peimbert & O. López-Cruz) by E. Recillas, **Y.D. Mayya**, M. Peimbert, 2011, Revista Mexicana de Astronoma y Astrofsica (Serie de Conferencias) Vol. 39, 14–19

• Invited Review titled "M82 as a Galaxy: Morphology and Stellar Content of the Disk and Halo" en "A Long Walk Through Astronomy: A Celebration of Luis Carrasco's 60th Birthday" (Eds. E. Recillas, A. Luna, & **Y. D. Mayya**) by **Y. D. Mayya** & L. Carrasco, 2009, Revista Mexicana de Astronoma y Astrofsica (Serie de Conferencias) Vol. 37, 44–55

• *Contribution in International Astronomical Union (IAU) Circular*

◦ **Y.D. Mayya**, I. Puerari and O. Kuhn, IAU Circular No. 6907, 1998 May 16, "Supernova 1998bu in NGC 3368" (JHK photometry for 3 **pre-maximum** nights)

◦ Bhattacharyya, J.C.,...,**Y.D. Mayya**, et al. IAU Circular No. 4913 "HDE 245770"

• *The Astronomer's Telegram*

◦ L. Carrasco, ... **Y.D. Mayya**, .. et al. (2010–2012) 54 telegrams on Blazar variability using CANICA

Resume of my Ph.D. thesis:
◦ Publications of Astronomical Society of Pacific, 106, 424–424 (1994)
◦ *Bull Astr. Soc. India*, 21, 367–369 (1993) (Mumbai, March 1993, XV ASI meeting) and
◦ J. Astrophys. and Astr., 16, 281–284 (1995) (Pune, August 1993, VI APM-Astronomy)

Books Edited:

• "A Long Walk Through Astronomy: A Celebration of Luis Carrasco's 60th Birthday" (Eds. E. Recillas, A. Luna, & **Y. D. Mayya**) Revista Mexicana de Astronoma y Astrofsica (Serie de Conferencias) Vol. 37

• "New Quests in Stellar Astrophysics: The Link Between Stars and Cosmology" Edited by Miguel Chávez, Alessandro Bressan, Alberto Buzzoni & **Divakara Mayya**, Astrophysics and Space Science Library, Vol. 274, Dordrecht: Kluwer Academic Publishers (2002) (Proceedings of the international conference held in Puerto Vallarta, Mexico, 26-30 March 2001)