



Dayanand Science College, Latur

Report of Collaborative activities conducted With The Inter-University Centre for Astronomy and Astrophysics, Pune, India



Department of Physics and Electronics (Astrophysics Lab), Dayanand Science College, Latur have an active research collaboration with the “Inter-University Centre for Astronomy and Astrophysics”, Pune, India. The main aspect behind this joint research collaboration is to enhance the research activities, exchange the research students and faculties to carry out state-of-art cutting edge research in respective field of interests.

List of Collaborative Activities

Sr no	Name of the activity	Beneficiary	Date of Activity	Number of beneficiaries	Impact
1	Visiting Associate ship at IUCAA Pune for research from 1 st August 2020 to three years	Dr. M. B. Pandge	01.08.2020	01	Proposed research visit yields SCI indexed journal publication.
2	France Visit- Poster presentation entitled “Discovery of MPC-SCALE X-ray Tail and third surface brightness edge in MACS0553.4-3342” XIth Marseille Cosmology Conference Galaxy clusters across cosmic time, M.B. Pandge, Joydeeo Bagchi; organized by the Laboratoire d’Astrophysique de Marseille, which was held in Aix-En-Provence from July 10 th – 13 th 2017.	Dr. M. B. Pandge	July 10 th – 13 th 2017	01	
3	Resource Person Paper presentation in international workshop-cum school “The Franco-Indian school on From reionization to large scale structure a multiwavelength approach”, which was held during February 11-17, 2018 at the Inter-University Center for Astronomy and Astrophysics, Pune.	Dr. M. B. Pandge	February 11-17, 2018	01	



अंतर-विश्वविद्यालय केंद्र : खगोलविज्ञान और खगोलभौतिकी

IUCAA

Inter-University Centre for Astronomy and Astrophysics

An Autonomous Institution of the University Grants Commission

Prof. Kandaswamy Subramanian

September 11, 2020.

Dean, Visitor Academic Programmes

By Speed-Post

Dr. Mahadev B. Pande,
Dayanand Science College,
Barshi Road,
Latur - 413 512.

Dear Dr. Pande,

I am very happy to inform you that your term of Visiting Associateship at IUCAA has been extended for a further period of three years with effect from August 1, 2020. We hope that this will enable you to continue to make good use of our facilities through your next term, and that your visits to IUCAA will prove to be very productive.

I am enclosing along with this letter of invitation (1) a copy of the letter I have sent to the Principal of your College, explaining the programme and requesting him/her to treat your visits to IUCAA under this programme as "on duty", (2) a copy of a letter sent in September 2, 2004 to the Vice-Chancellors of different universities by Professor Arun Nigavekar, the then Chairman of the University Grants Commission (UGC). You may use these letters when you apply for leave for visits to IUCAA, if you find that necessary.

I shall look forward to your response to this letter of invitation and hope that IUCAA will benefit from your regular visits, participation and advice. The Terms and Conditions of the Associateship Programme are also enclosed along with this letter.

With kind regards,

Sincerely,

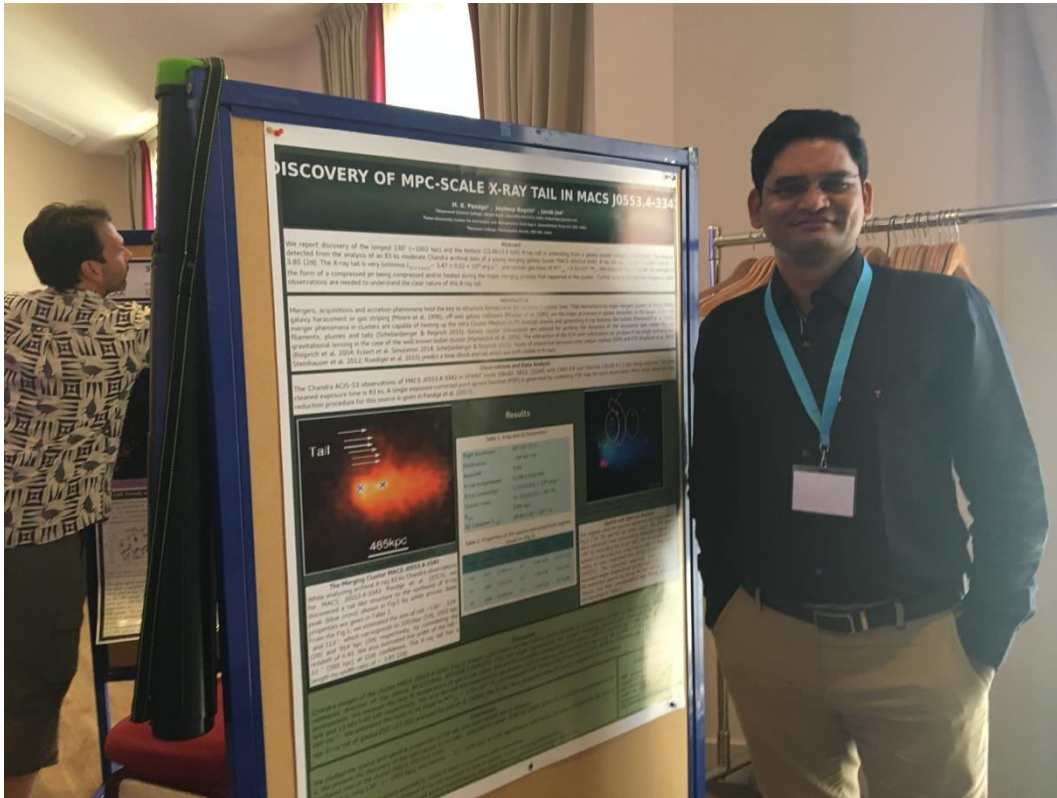
Kandaswamy Subramanian

Professor Kandaswamy Subramanian

Encl : (1) Copy of the letter sent to the Principal of your College; (2) Copy of letter sent by UGC;
(3) Terms and Conditions of the Associateship Programme.

France Visit.

Poster presentation entitled “Discovery of MPC-SCALE X-ray Tail and third surface brightness edge in MACS0553.4-3342” XIth Marseille Cosmology Conference Galaxy clusters across cosmic time, M.B. Pandge, Joydeeo Bagchi; organized by the Laboratoire d’Astrophysique de Marseille, which was held in Aix-En-Provence from July 10th – 13th20



Laboratoire d'Astrophysique de Marseille
UMR 7326

Marseille, May 12th, 2017

To whom it may concern

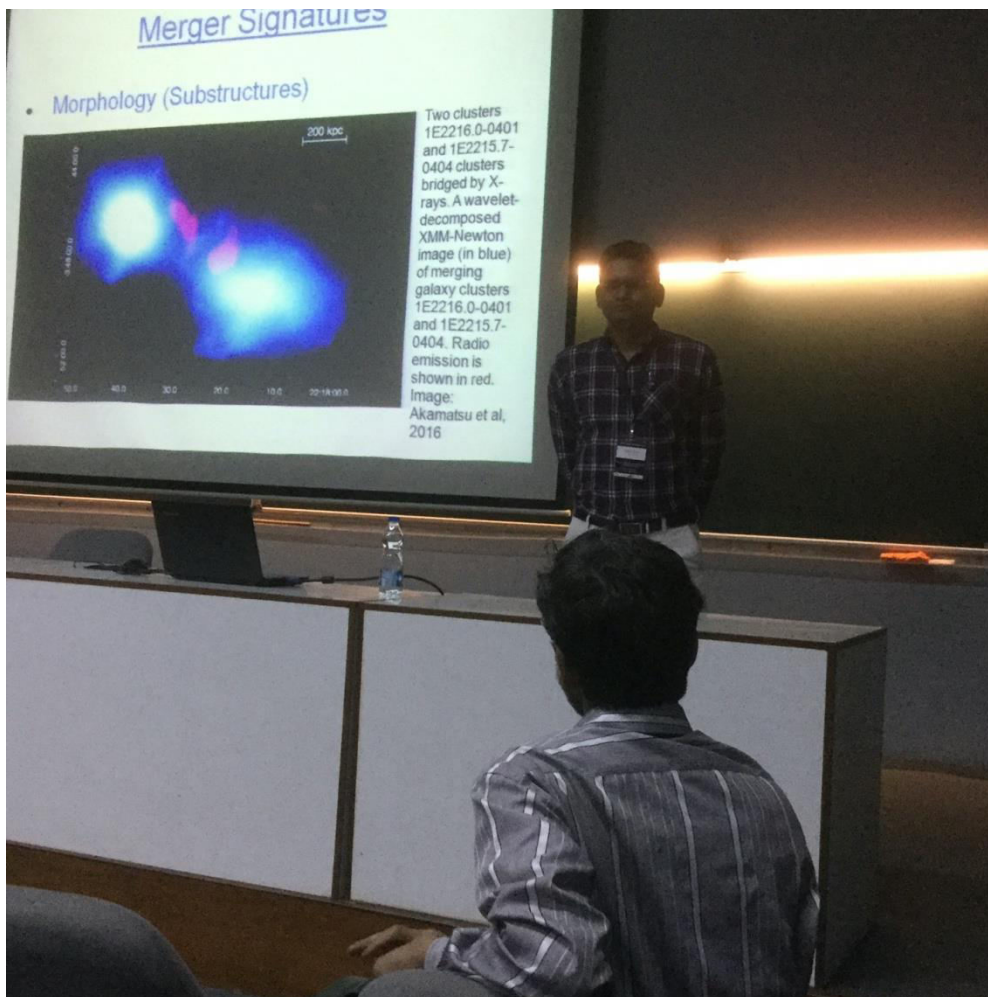
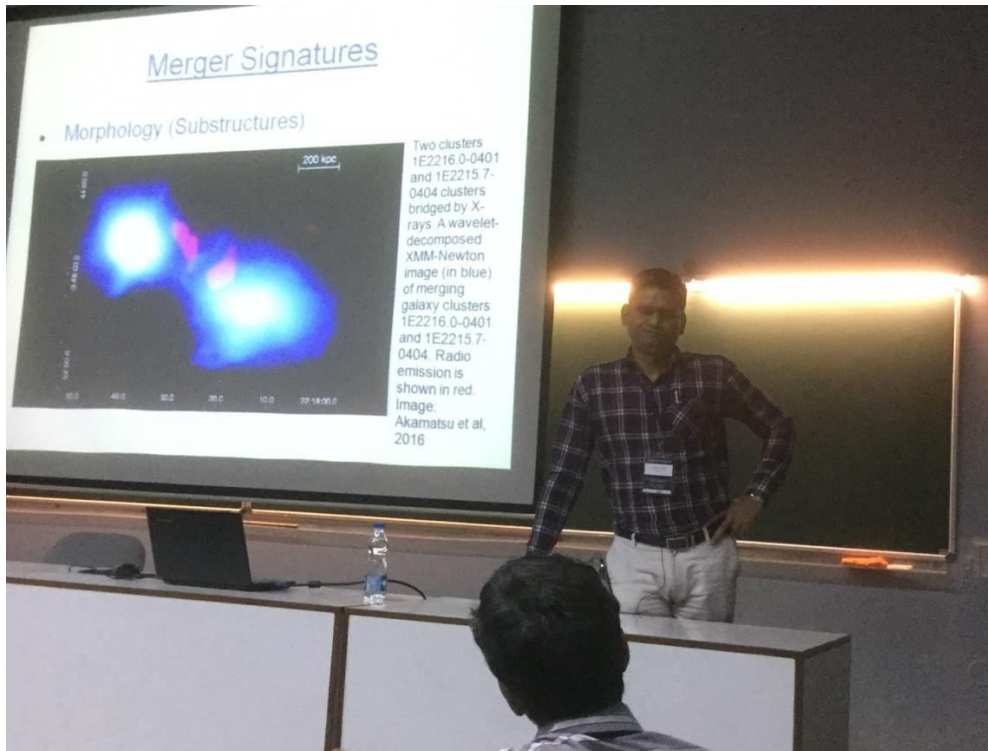
I thereby certify that Dr. Mahadev Pandge has been invited to present an oral contribution at the XIth Marseille Cosmology Conference « Galaxy clusters across cosmic time », organized by the Laboratoire d'Astrophysique de Marseille, that will be held in Aix-En-Provence from July 10th to 13th.

For the LOC

Vincent Le Brun
Assistant Professor
Organizer of the Conference
LAM/Aix-Marseille Université



Resource Person Paper presentation in international workshop-cum school "The Franco-Indian school on From reionization to large scale structure a multiwavelength approach", which was held during February 11-17, 2018 at the Inter-University Center for Astronomy and Astrophysics, Pune.



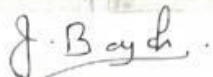


Certificate of Participation

This is to certify that *Mahadev Pandge* from
Dayanand Science College, Latur, India has attended
the Franco-Indian Astronomy school 'From Re-ionization to Large Scale Structure - A
multiwavelength approach' from 11th-17th February 2018, held at IUCAA-Lyon (India).

Coordinator


CRAL-Lyon, France


IUCAA-Lyon, India



Centre de Recherche
Astrophysique de Lyon



LABEX
LIO
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Inter-University Centre for
Astronomy and Astrophysics

Activity 3: 10 SCI indexed Research Publications yields as a part of research faculty visits to the IUCAA. Duration of visits are listed below and list of publication attached.

Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	October 10, 2019	November 15, 2019
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	April 15, 2019	June 13, 2019
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	January 10, 2019	January 24, 2019
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	October 24, 2018	October 31, 2018
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	July 17, 2018	July 21, 2018
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	April 1, 2018	April 30, 2018
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	February 9, 2018	February 16, 2018
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	May 15, 2017	May 30, 2017
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	April 1, 2017	April 30, 2017
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	January 25, 2017	March 3, 2017
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	October 20, 2016	October 28, 2016
Dr. Mahadev Pandge	DAYANAND SCIENCE COLLEGE, LATUR	September 1, 2016	September 25, 2016

Research Publications

Journal Articles

- 1 Pandge, M. B., Sebastian, B., Seth, R., & Raychaudhury, S. (2021). A detailed study of X-ray cavities in the environment of the cool core cluster Abell 3017. *mnras*. doi:10.1093/mnras/stab384. arXiv: 2102.04650 [astro-ph.CO]
- 2 Mirakhor, M. S., Walker, S. A., Bagchi, J., Fabian, A. C., Barth, A. J., Combes, F., ... Pandge, M. B. (2021). Exploring the hot gaseous halo around an extremely massive and relativistic jet launching spiral galaxy with XMM-Newton. *mnras*, 500(2), 2503–2513. doi:10.1093/mnras/staa3404. arXiv: 2010.15131 [astro-ph.GA]
- 3 Pandge, M. B., Monteiro-Oliveira, R., Bagchi, J., Simionescu, A., Limousin, M., & Raychaudhury, S. (2019). A combined X-ray, optical, and radio view of the merging galaxy cluster MACS J0417.5-1154. *mnras*, 482(4), 5093–5105. doi:10.1093/mnras/sty2937. arXiv: 1810.12071 [astro-ph.CO]
- 4 Pandge, M. B., Sonkamble, S. S., Parekh, V., Dabhade, P., Parmar, A., Patil, M. K., & Raychaudhury, S. (2019). AGN Feedback in Galaxy Groups: A Detailed Study of X-Ray Features and Diffuse Radio Emission in IC 1262. *apj*, 870(2), 62. doi:10.3847/1538-4357/aaf105. arXiv: 1811.05647 [astro-ph.GA]
- 5 Mandal, A. K., Rakshit, S., Kurian, K. S., Stalin, C. S., Mathew, B., Hoenig, S., ... Pandge, M. B. (2018). Determination of the size of the dust torus in Ho507+164 through optical and infrared monitoring. *mnras*, 475(4), 5330–5337. doi:10.1093/mnras/sty200. arXiv: 1801.07018 [astro-ph.GA]
- 6 Iqbal, A., Kale, R., Majumdar, S., Nath, B. B., Pandge, M., Sharma, P., ... Raychaudhury, S. (2017). Active Galactic Nucleus Feedback with the Square Kilometre Array and Implications for Cluster Physics and Cosmology. *Journal of Astrophysics and Astronomy*, 38(4), 68. doi:10.1007/s12036-017-9491-4. arXiv: 1705.04444 [astro-ph.CO]
- 7 Pandge, M. B., Bagchi, J., Sonkamble, S. S., Parekh, V., Patil, M. K., Dabhade, P., ... Jacob, J. (2017). MACS J0553.4-3342: a young merging galaxy cluster caught through the eyes of Chandra and HST. *mnras*, 472(2), 2042–2053. doi:10.1093/mnras/stx2028. arXiv: 1701.00197 [astro-ph.CO]
- 8 Biju, K. G., Bagchi, J., Ishwara-Chandra, C. H., Pandey-Pommier, M., Jacob, J., Patil, M. K., ... Djorgovski, S. G. (2017). 'Zwicky's Nonet': a compact merging ensemble of nine galaxies and 4C 35.06, a peculiar radio galaxy with dancing radio jets. *mnras*, 471(1), 617–628. doi:10.1093/mnras/stx1476. arXiv: 1607.05080 [astro-ph.GA]
- 9 Parekh, V., Durret, F., Padmanabh, P., & Pandge, M. B. (2017). A hot X-ray filament associated with A3017 galaxy cluster. *mnras*, 470(3), 3742–3749. doi:10.1093/mnras/stx1457. arXiv: 1705.07344 [astro-ph.GA]
- 10 Sahu, S. K., Navale, N. R., Pandey, S. K., & Pandge, M. B. (2017). Optical imaging and spectral study of FR-I type radio galaxy: CTD 086 (B2 1422+26B). *apss*, 362(9), 158. doi:10.1007/s10509-017-3139-3. arXiv: 1707.05052 [astro-ph.GA]