Mihir Arjunwadkar :: Publications

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Journal Articles

Journal H-indices and Q-rankings quoted are for 2023 as reported at `https://www.scimagojr.com/`

1. Bhalchandra S. Pujari, Sagar Gehlot, Mihir Arjunwadkar, Dilip G. Kanhere, Raymond Duraiswami, *On the relative abundances of Cavansite and Pentagonite*, Physica Scripta **99**(5) 055979 (2024). DOI:10.1088/1402-4896/ad3e3a arXiv:2308.06825 IF(2024):2.6 H97 **Q2**

2. Dipanjan Mitra, Rahul Basu, George I. Melikidze, and Mihir Arjunwadkar, *A Single spark model for PSR J2144−3933*, Monthly Notices of the Royal Astronomical Society 492 2468-2480 (2020). DOI:10.1093/mnras/stz3620 IF(2019):5.231 H372 **Q1**

3. Rohit Sharma, Divya Oberoi, and Mihir Arjunwadkar, *Quantifying weak non-thermal solar radio emission at low radio frequencies*, The Astrophysical Journal 806 69 (2018). DOI:10.3847/1538-4357/aa9d96 arXiv:1610.08139 IF(2016):5.533 H479 **Q1**

4. Mihir Arjunwadkar, Akanksha Kashikar, and Manjari Bagchi, *Neutron stars in the light of Square Kilometre Array: Data, statistics, and science*, Journal of Astrophysics and Astronomy 37(4) 1-28 (2016). **Special Issue on Science with the SKA: An Indian Perspective.** DOI:10.1007/s12036-016-9410-0 arXiv:1610.08139 IF(2015):0.329 H35 **Q3**

5. Dipanjan Mitra, Joanna Rankin, and Mihir Arjunwadkar, *Core and Conal Component Analysis of Pulsar B1933+16 – Investigation of the Segregated Modes*, Monthly Notices of the Royal Astronomical Society 460(3) 3063-3075 (2016). DOI:10.1093/mnras/stw1186 IF(2015):4.952 H372 **Q1**

6. Dipanjan Mitra, Mihir Arjunwadkar, and Joanna Rankin, *Polarized quasiperiodic structures in pulsar radio emission reflect temporal modulations of non-stationary plasma flow*, The Astrophysical Journal 806 236 (2015). DOI:10.1088/0004-637X/806/2/236 IF(2014):5.993 H479 **Q1**

7. Amir Aghamousa, Arman Shafieloo, Mihir Arjunwadkar, and Tarun Souradeep, *Unveiling acoustic physics of the CMB using nonparametric estimation of the temperature angular power spectrum for Planck*, Journal of Cosmology and Astroparticle Physics JCAP02(2015) 007 (2015). DOI:10.1088/1475-7516/2015/02/007 IF(2014):5.810 H141 **Q2**

8. Joseph C. Fogarty, Mihir Arjunwadkar, Sagar A. Pandit, and Jianjun Pan, *Atomically detailed lipid bilayer models for interpretation of scattering data*, Biochimica et Biophysica Acta - Biomembranes 1848 662-672 (2015). DOI:10.1016/j.bbamem.2014.10.041 IF(2014):4.554 H218 **Q1**

9. Prasun Dutta, Jayaram N. Chengalur, Nirupam Roy, Anthony H. Minter, W.M. Goss, Mihir Arjunwadkar, Crystal L. Brogan and T.J.W. Lazio, *On Measuring AU Scale H*I *Opacity Fluctuation in Our Galaxy*, Monthly Notices of the Royal Astronomical Society 442 647-655 (2014). DOI:10.1093/mnras/stu881 IF(2014):5.521 H372 **Q1**

10. Amir Aghamousa, Mihir Arjunwadkar and Tarun Souradeep, *Model-independent forecasts of CMB angular power spectra for the Planck mission*, Physical Review D 89 023509 (2014). DOI:10.1103/PhysRevD.89.023509 arXiv:1303.5143 IF(2012):4.17 H393 **Q1**

11. Leelavati Narlikar, Nidhi Mehta, Sanjeev Galande and Mihir Arjunwadkar, *One Size Does Not Fit All: On How Markov Model Order Dictates Performance of Genomic Sequence Analyses*, Nucleic Acids Research 41(3) 1416-1424 (2013). DOI:10.1093/nar/gks1285 IF(2012):8.026 H637 **Q1**

12. Amir Aghamousa, Mihir Arjunwadkar and Tarun Souradeep, *Evolution of the CMB Power Spectrum Across WMAP Data Releases: A Nonparametric Analysis*, The Astrophysical Journal 745, 114 (2012). DOI:10.1088/0004-637X/745/2/114 IF(2011):6.024 H479 **Q1**

13. D. G. Kanhere, Mihir Arjunwadkar and Abhijat M. Vichare, *Rise and Decline of India's State University System: Neglect, Design, or Neglect by Design?* Current Science 97(7) 1013-1021 (2009). IF(2009):0.782 H137 **Q2**

14. Christopher R. Genovese, Christopher J. Miller, Robert C. Nichol, Mihir Arjunwadkar and Larry Wasserman, *Nonparametric Inference for the Cosmic Microwave Background*, Statistical Science 19(2) 308-321 (2004). **This work received the American Statistical Association's 2005 Outstanding Application Award.** DOI:10.1214/088342304000000161 arXiv:astro-ph/0410140 IF(2006):1.531 H119 **Q1**

15. Mihir Arjunwadkar, Marc Fasnacht, Joseph B. Kadane and Robert H. Swendsen, *A Bayesian Analysis of Monte Carlo Correlation Times for the Two-Dimensional Ising Model*, Physica A: Statistical Mechanics and its Applications 323 487 (2003). DOI:10.1016/S0378-4371(03)00007-4 IF(2010):1.562 H187 **Q2**

16. Ajay Nandgaonkar, P. Durganandini, Mihir Arjunwadkar and D. G. Kanhere, *Static and Dynamical Properties of a Single Impurity in a Strongly Correlated Host*, International Journal of Modern Physics B 13, 807 (1999). DOI:10.1142/S0217979299000679 IF(2010):0.558 H81 **Q2**

17. Ajay Nandgaonkar, P. Durganandini, Mihir Arjunwadkar and D. G. Kanhere, *Numerical Simulations of Strongly Correlated Systems: an Impurity in One Dimension*, Indian Journal of Pure and Applied Physics 35 665 (1997). IF(2010):0.340 H46 **Q3**

18. G. Baskaran, Rahul Basu, Mihir Arjunwadkar and D. G. Kanhere, *Superconducting Gap Nodal Surface and Fermi Surface: Their Partial Overlap in Cuprates*, Modern Physics Letters B 9, 1243 (1995). DOI:10.1142/S0217984995001224 IF(2009):0.512 H55 **Q3**

19. Mihir Arjunwadkar, Padmakar V. Panat and D. G. Kanhere, *Spin-Charge Separation in Two Dimensions: A Numerical Study*, Physical Review B 48, 10563 (1993). DOI:10.1103/PhysRevB.48.10563 IF(2010):3.475 H497 **Q1**

20. Mihir Arjunwadkar, G. Baskaran, Rahul Basu and V. N. Muthukumar, *Numerical Study of the Wheatley-Hsu-Anderson Interlayer Tunneling Mechanism of High–T_c Superconductivity*, Physical Review Letters 70, 674 (1993). DOI:10.1103/PhysRevLett.70.674 IF(2010):7.180. H700 **Q1**

21. Prabhakar Pradhan, Mihir Arjunwadkar and Avinash W. Joshi, *Energy Bands of a One-Dimensional Lattice with Two Rectangular Potential Barriers Per Unit Cell*, Physics Education (India) 9, 343 (1993). Available at `http://www.researchgate.net/profile/Mihir_Arjunwadkar/`.

22. D. G. Kanhere and Mihir Arjunwadkar, *Configuration Interaction Method for Model Hamiltonian Clusters*, Solid State Communications 77, 613 (1991). DOI:10.1016/0038-1098(91)90934-N IF(2010):1.557 H142 **Q2**

23. Mihir Arjunwadkar and D. G. Kanhere, *A Simulated Annealing Based Algorithm for the Eigenvalue Problem*, Computer Physics Communications 62, 8 (1991). DOI:10.1016/0010-4655(91)90116-3 IF(2010):1.958 H209 **Q1**

24. C. D. Kalkar and Mihir Arjunwadkar, *Chemiluminescence of Luminol in Dimethyl Sulphoxide*, Indian Journal of Pure and Applied Physics 26, 433 (1988). IF(2010):0.340 H46 **Q3**

Conference Proceedings

1. Sushan Konar, Mihir Arjunwadkar, et al., *Neutron Star Physics in the SKA Era: An Indian Perspective* (2015). *Indian Participation in the SKA*, Satellite workshop, Astronomical Society of India Meeting, February 2015.

2. Kaustubh Rajwade, Yashwant Gupta, Ujjwal Kumar and Mihir Arjunwadkar, *Probing nulling in Milli-Second Pulsars.* Astronomical Society of India Conference Series 13 73-77 (2014).

3. Mihir Arjunwadkar, Kaustubh Rajwade and Yashwant Gupta, *Inferring Pulsar Null Fraction Using Gaussian Mixtures.* Astronomical Society of India Conference Series 13 79-81 (2014).

4. Mihir Arjunwadkar, Dipanjan Mitra and Joanna Rankin, *Inferring a characteristic timescale for pulsar microstructure.* Astronomical Society of India Conference Series 13 83-85 (2014).

5. Sushan Konar and Mihir Arjunwadkar, *Glitch Statistics of Radio Pulsars: Multiple populations.* Astronomical Society of India Conference Series 13 87-88 (2014).

6. Mihir Arjunwadkar and Dipanjan Mitra, *Tuning an Antenna Array to Perform as a Sensitive Single Dish.* Astronomical Society of India Conference Series 13 405-407 (2014).

7. Mihir Arjunwadkar and Abhijat Vichare, *The Making of an Academic Programme in Modeling and Simulation*, Invited contribution in the Proceedings of the NIME National Conference on Mathematics Education, Homi Bhabha Centre for Science Education (TIFR), Mumbai, India (2012). Available at `https://scms.unipune.ac.in/reports/pd-20120121/`.

8. Mihir Arjunwadkar, Padmakar V. Panat and D. G. Kanhere, *Spin-Charge Separation in 2D: a Discussion with Reference to Quantum Currents*, in: *Condensed Matter Theories* **11**, ed. E. V. Ludeña, P. Vashishta and R. F. Bishop, 137 (Nova Science Publishers, Inc., 1996; ISBN: 1560723742).

9. D. G. Kanhere and Mihir Arjunwadkar, *Numerical Simulations of Strongly Correlated Systems*, in: *Strongly Correlated Electron Systems–Theory and Experiment*, ed. S. Ramasesha and D. D. Sarma, 196 (Narosa Publishing House, India, 1996; ISBN: 8173190623; ISBN13: 9788173190629).

10. Akshara Bhoite, D. G. Kanhere and Mihir Arjunwadkar, *An Iterative Eigenvalue Algorithm to Find Lowest Eigenvalues Using Data Parallelism on Transputer Network*, in: *Proceedings of Supercomputing Symposium '91*, ed. V. C. Bhavsar and U. G. Gujar, 121 (University of New Brunswick Press, Fredericton, NB, Canada, 1991).

Preprints

1. Mihir Arjunwadkar, Bhalchandra Pujari, and Bhalchandra Gore. *Teaching mathematical modeling to biologists: Breaking barriers, building bridges.* Technical report CMS-TR-20150706 of the Centre for Modeling and Simulation, Savitribai Phule Pune University (2015).

2. Amir Aghamousa, Mihir Arjunwadkar and Tarun Souradeep, *From Nonparametric Power Spectra to Inference About Cosmological Parameters: A Random Walk in the Cosmological Parameter Space* (2012). arXiv:1211.2585

Book Chapter

1. Mihir Arjunwadkar, *Simulation Methods.* Contributed chapter in the (post)graduate text *Thermodynamics and Statistical Mechanics* by Padmakar V. Panat; Alpha Science International Ltd, UK, 2008 (isbn13: 9781842654958) and Narosa Publishing House, 2008 (ISBN13: 9788173199370). Available as `https://scms.unipune.ac.in/~mihir/archive/simulation-methods.pdf`.