



## DR. SAMPURN ANAND

ASSISTANT PROFESSOR

### Contact:

Department of Physics  
Central University of Tamil Nadu

Email: [sampurn@cutn.ac.in](mailto:sampurn@cutn.ac.in)

### Web links:

ORCID id: <https://orcid.org/0000-0003-4346-6276>

### INSPIRE Link:

<https://inspirehep.net/literature?sort=mostrecent&size=25&page=1&q=ea%20anand%2C%20sampurn&ui-citation-summary=true&ui-exclude-self-citations=true>

## ACADEMIC QUALIFICATIONS

- ✚ PhD | University of Delhi (2016)  
Thesis Title: Cosmology and Particle Physics from higher dimensional theories
- ✚ M.Sc. (Physics) | University of Delhi (2010)
- ✚ B.Sc. (Physics Hons.) | University of Delhi (2008)

## POSITIONS HELD

- ✚ Assistant professor (2020 - present)  
Department of Physics Central University of Tamil Nadu, Tiruvarur
- ✚ National Post-Doctoral fellow (2019 - 2020)  
Department of Physics, IIT Madras, Chennai
- ✚ Assistant Professor (2018 – 2019)  
Department of Physics, St. Stephen's College, University of Delhi, Delhi
- ✚ Post-Doctoral Fellow (2016-2018)  
Theoretical Physics Division, Physical Research Laboratory, Ahmedabad

## ACADEMIC ACHIEVEMENTS

- ✚ National Post-Doctoral Fellowship, Department of Science and Technology, Government of India
- ✚ CSIR- UGC NET
- ✚ Life member, Indian Association for General Relativity and Gravitation
- ✚ Visiting Associate, IUCAA, Pune-India

## TRAINING PROGRAMMS ATTENDED

- ✚ **Participant**, Faculty Induction programme, HRDC Osmania University, Hyderabad (07 Feb 2022 – 07march 2022)

---

**DR. SAMPURN ANAND**

ASSISTANT PROFESSOR

- ✚ Tutor, IUCAA-CUTN Winter School on Gravity and Cosmology, Central University of Tamil Nādu, Tiruvarur (Jan, 2020)
- ✚ Guest Lecturer, In-service course for teachers of Kendriya Vidyalaya Sangathan held at IIT Madras, (Dec, 2019)
- ✚ Resource person, one day radio astronomy workshop organized at St. Stephen's College (March, 2019)
- ✚ Resource person, International Physics Olympiad training and selection camp (June, 2015)

**COURSES TAUGHT**

- ✚ Mathematical Physics
- ✚ Mechanics
- ✚ Quantum Mechanics
- ✚ Astrophysics

**RESEARCH INTEREST**

- ✚ Late time acceleration & Dark Energy
- ✚ Cosmic magnetic field
- ✚ Gravitational Waves

**RESEARCH GUIDANCE**

- ✚ Ph.D.: Nil
- ✚ Master's Thesis: 04

**RESEARCH PUBLICATIONS**

- ✚ A.K.Pandey and **Sampurn Anand**, *Generating a seed magnetic field à la chiral Biermann battery*, **Phys. Rev. D 104 (2021), 063508**,  
<https://doi.org/10.1103/PhysRevD.104.063508>
- ✚ P.Saha, **Sampurn Anand**, and L.Sriramkumar, *Accounting for the time evolution of the equation of state parameter during reheating*, **Phys. Rev. D 102 (2020), 2,103511**  
<https://doi.org/10.1103/PhysRevD.102.103511>

---

**DR. SAMPURN ANAND**  
ASSISTANT PROFESSOR

- ✚ Sampurn Anand, J.R.Bhatt and A.K.Pandey, *Chiral plasma instability and primordial gravitational waves*, *Eur. Phys. J. C* 79 (2019) 2, 119  
<https://doi.org/10.1140/epjc/s10052-019-6619-5>
- ✚ Sampurn Anand, P.Chaubal, A.Mazumdar, S.Mohanty and P.Parashari, *Bounds on neutrino mass in Viscous Cosmology*, *JCAP* 05 (2018) 031  
<https://doi.org/10.1088/1475-7516/2018/05/031>
- ✚ Sampurn Anand, P.Chaubal, A.Mazumdar, and S.Mohanty, *Cosmic Viscosity as a remedy for tension between PLANCK and LSS data*, *JCAP* 11(2017) 005  
<https://doi.org/10.1088/1475-7516/2017/11/005>
- ✚ Sampurn Anand, J.R.Bhatt and A.K.Pandey, *Chiral Battery, Scaling laws and magnetic fields*, *JCAP* 07 (2017) 051  
<https://doi.org/10.1088/1475-7516/2017/07/051>
- ✚ Sampurn Anand, U.K.Dey and S.Mohanty, *Effects of QCD equation of state on stochastic Gravitational Wave background*, *JCAP* 03 (2017) 018  
<https://doi.org/10.1088/1475-7516/2017/03/018>
- ✚ Sampurn Anand, D.Choudhury, A.A.Sen and S.SenGupta, *A geometric approach to modulus stabilization*, *Phys. Rev. D* 92 (2015), 2, 026008  
<https://doi.org/10.1103/PhysRevD.92.026008>
- ✚ Sampurn Anand and A.A.Sen, *DBI Galileon and late time acceleration of the Universe*, *JCAP* 12 (2012) 019  
<https://doi.org/10.1088/1475-7516/2012/12/019>

## CONFERENCE PROCEEDINGS

- ✚ S.Mohanty, **Sampurn Anand**, P.Chaubal, A.Mazumdar and P.Parashari,  $\sigma_8$  discrepancy and its solution, *J. Astrophys. Astron.* 39 (2018) 4, 46  
<https://link.springer.com/article/10.1007/s12036-018-9543-4>
- ✚ P.Parashari, **Sampurn Anand**, P.Chaubal, Gaetano Lambiase, S.Mohanty, and A.Mazumdar *Status of  $\sigma_8$*

---

**DR. SAMPURN ANAND**

ASSISTANT PROFESSOR

*tension in different Cosmological models*, Springer Proc. Phys. 261(2021), 907

[https://link.springer.com/chapter/10.1007/978-981-33-4408-2\\_129](https://link.springer.com/chapter/10.1007/978-981-33-4408-2_129)

## BOOK CHAPTERS

- ✚ Written a chapter on group theory for Indian adaptation of Mathematical Methods in the Physical Sciences by Mary L Boas 3ed, Wiley India.
- ✚ Developed content for Indian adaptation of Mathematical Methods in the Physical Sciences by Mary L Boas 3ed, Wiley India.

## INVITED TALKS

- ✚ Kirori Mal College, University of Delhi, Delhi (2022)
- ✚ Nirmala College for Women, Coimbatore, (2022)

## ADMINISTRATIVE RESPONSIBILITIES

- ✚ Nodal Coordinator, ISRO Space Science & Technology Awareness Training (START) program.
- ✚ Internal Member of Board of Studies (BoS), Department of Physics, Central University of Tamil Nadu (2020-2023)
- ✚ Admission committee member for Ph.D. and I. MSc. Program
- ✚ Department Coordinator, Official Language Implementation