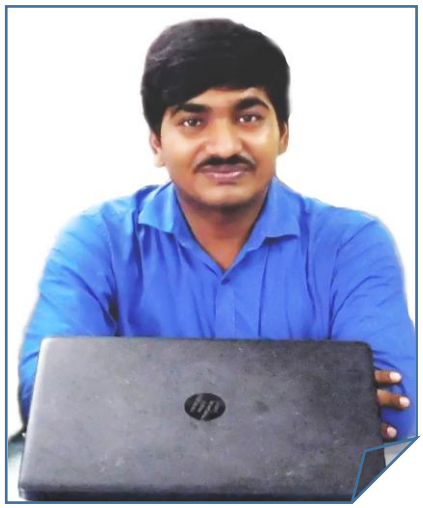
Dr. CHAYAN KANCHAN KARMAKAR

Professional Introduction



Designation: Assistant Professor
Department: Physics
Affiliation: Netaji Mahavidyalaya

Contact Details for Communication

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Education and Degree Details

Bachelor Degree: 2010, Vivekananda Mahavidyalaya, Burdwan University
Master Degree: 2012, Burdwan University
Bachelor of Education: 2013, Government Training College, Burdwan University
Doctor of Phylosopy: 2023, Indian Institute of Engineering Science and Technology (IIEST), Shibpur, Howrah

Field of Interest

Specialization: Laser and Non-linear Optics
Research: Condensed Matter Physics and Ultrasonics
Area of Interest: Astronomy and Astrophysics, Nano Technology

Experience

Research: 17.08.2016 – 25.08.2023, (IIEST, Shibpur)
Professional: 04.04.2017 – Till Now (Netaji Mahavidyalaya, Arambag)

Book(s)

1. **Astrophysics for Beginners**; *Dr. Binay Malakar, Dr. Chayan Kanchan Karmakar*; Spellbound Publishers & Distributars, ISBN 978-81-980966-3-0.

Journal Paper

- **Chayan K. Karmakar**, Biplab Dutta and Sampad Mukherjee, "*Study of frequency and concentration dependence of ultrasonic attenuation of NiO nanoparticle embedded in polyvinilidyne fluoride*", J. Pure Appl. Ultrason., Vol. 39, No. 2 (2017).

- **Chayan Kanchan Karmakar**, Samad Mukherjee, "*Investigation of acoustic frequency band gap of one dimensional bi-mass system considering lattice vibrational model and considering phonon dispersion relation*", Focus, Vol 8 (2017).

- **Chayan Kanchan Karmakar**, Priyanka Betal, Sampad Mukherjee, "*Evaluation of gel time of TEOS using the idea of phononic band-gap for macro bi-mass system*", Physica B 595 (2020) 412371.

Presented Paper

- **Chayan Kanchan Karmakar**, Priyanka Betal, Sampad Mukherjee, "*Study of the effect on phononic bandgap during the phase transition of silica sol by using ultrasonic wave*", XXth International Workshop on The Physics of Semiconductor Devices (IWPSD- 2019).

- P Betal, **C K Karmakar**, S Mukherjee, "*Ultrasonics study of freezing kinetics of wax*", XXth International Workshop on The Physics of Semiconductor Devices (IWPSD- 2019).

- **Chayan Kanchan Karmakar**, Priyanka Betal, Sampad Mukherjee, "*Ultrasonic study on the effect on forbidden band introducing transition metal ion in colloidal liquid*", International Conference on Condensed Matter Physics (IEMPHYS- 2019).

- P Betal, **C K Karmakar**, S Mukherjee, "Studies of forbidden frequency band using one dimensional mass chain model with different combination of metamaterials", International Conference on Condensed Matter Physics (IEMPHYS- 2019).

- **Chayan Kanchan Karmakar**, Priyanka Betal, Sampad Mukherjee, "*Application of modified form of forbidden frequency band using silica gel and concrete composite*", National Seminar on Recent Trends in Condensed Matter Physics including Laser Applications (NSCMPLA-2019)

- P Betal, **C K Karmakar**, S Mukherjee, "*Modified form of forbidden frequency band using one dimmensional mass chain model and its experimental verification*", National Seminar on Recent Trends in Condensed Matter Physics including Laser Applications (NSCMPLA-2019).

- **Chayan Kanchan Karmakar**, Priyanka Betal, Sampad Mukherjee, "*Inclusion of the alkali metal (Potassium) and transition metal (Copper) ion on the forbidden gap and gelation time of the silica sol-gel transition of concrete-silica gel bi-mass system*", International Conference on Frontiers in Physics (ICFP 24).

- **C K Karmakar,** S Mukherjee, *"Acoustical band gap using bi-mass system and effect on it due to the inclusion of metal ions"*, International Seminar on Recent Advancement in Materials Science and Engiineeriing (RAMSE-2025)

Course Work, Induction Program, Refreshers, Short Term

- Course work on Research Methodology, (2014), Burdwan University.
- Course work on Research Methodology, (2017), IIEST, Shibpur.
- Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutes of Higher Education", (2020), HRDC, Teaching Learning Centre, Ramanujan College University of Delhi
- Refresher Course in Advances in Nano-Science and Nano-Technology, (2021), UGC-HRDC, University of Burdwan.
- 12th Online Faculty Induction Programme, (2022), UGC-HRDC, Aligarh Muslim University, Aligarh.
- NEP 2020 Orientation and Sensitization Programme-3, (2023), UGC, Malaviya Mission Teacher Training Centre, The University of Burdwan.

Workshop Course

- "Workshop on syllabus (sixth semester CBCS) of Physics (Hons) course of studies". Department of Physics, University of Burdwan.
- "Workshop on Scilab". Department of Physics, University of Burdwan
- "Workshop on some advanced topics in undergraduate studies under CBCS system". Department of Physics, University of Burdwan.

Other Course(s)

- Advanced Diploma in Information Technology Application (2012), Burdwan Youth Computer Training Centre, Government of West Bengal and CFAC.

Project Details

Project fellow –NASF, ICAR (GOI).

Award

- ***Lectureship in Joint CSIR-UGC-NET***, (2014), Council of Scientific and Industrial Research.
- ***Dr. Parthasarathi Memorial Award – 2017*** for best journal paper, November 10, 2018, Ultrasonics Society of India.