



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE: 6096

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Chimica**.

Scientist- in - charge: Prof. Rocco Martinazzo

Abhirup Roy Karmakar

[Name and surname]

## CURRICULUM VITAE

### PERSONAL INFORMATION

Surname	Roy Karmakar
Name	Abhirup

### PRESENT OCCUPATION

Appointment	Structure
Senior Research Fellow	Graduate Program

### EDUCATION AND TRAINING

Degree	Course of studies	University	Year of achievement of the degree
Bachelor of Science	Physics (Honours)	University of North Bengal, WB, India	2016
Master of Science	Physics	Indian Institute of Technology Kharagpur, WB, India	2018
PhD	Condensed Matter Physics	Indian Institute of Technology Kharagpur, WB, India	2024

### FOREIGN LANGUAGES

Languages	Level of knowledge
English	Proficient



## AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2013	Awarded INSPIRE Scholarship by DST, Govt. of India
2016	Qualified Joint Admission Test for M.Sc. (JAM)
2016	Qualified UGC-CSIR National Eligibility Test (JRF)
2017	Qualified UGC-CSIR National Eligibility Test (LS)
2018	Qualified GATE (Physics)
2018	Awarded Junior Research Fellowship by MHRD, Govt. of India
2020	Awarded Senior Research Fellowship by MHRD, Govt. of India

## RESEARCH ACTIVITY

<b>PhD Thesis:</b> Theoretical Investigations of Berry Curvature-Induced Phenomena in Topological Semimetals <b>Supervisors:</b> Prof. Gour Prasad Das <i>and</i> Prof. Arghya Taraphder <b>Year:</b> 2018 - 2024
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## PROJECT ACTIVITY

Year	Project
2017 - 2018	<b>Title:</b> Study of multi-electron atoms using Hartree-Fock approach <b>Advisor:</b> Prof. Sonjoy Majumder, Department of Physics, IIT Kharagpur, India

## CONGRESSES AND SEMINARS

Date	Title	Place
Feb 2020	First-principles investigation of Dirac semimetal ZrTe <sub>5</sub>	MRSI AGM, Saha Institute of Nuclear Physics, WB, India
May 2021	Introduction to hands-on DFT calculation	Atomistic Modelling and Simulation of Materials, IIT Kharagpur, WB, India
Sep 2022	First-principles investigation of anomalous transport properties in Weyl semimetal Co <sub>3</sub> Sn <sub>2</sub> S <sub>2</sub>	QMAT, IIT Kanpur, UP, India
Mar 2023	Giant anomalous thermal Hall effect in tilted type-I magnetic Weyl semimetal Co <sub>3</sub> Sn <sub>2</sub> S <sub>2</sub>	APS March Meeting, Las Vegas, USA



## PUBLICATIONS

Articles
Reversible temperature-dependent photoluminescence in semiconductor quantum dots for the development of a smartphone-based optical thermometer Partha Kumbhakar, <i>Abhirup Roy Karmakar</i> , G. P. Das, Jayjeet Chakraborty, Chandra S. Tiwary, and Pathik Kumbhakar <a href="#">Nanoscale, 13, 2946-2954</a> (2021)
Probing mirror anomaly and classes of Dirac semimetals with circular dichroism <i>Abhirup Roy Karmakar</i> , S. Nandy, G. P. Das, and Kush Saha <a href="#">Phys. Rev. Research 3, 013230</a> (2021)
Giant anomalous thermal Hall effect in tilted type-I magnetic Weyl semimetal $\text{Co}_3\text{Sn}_2\text{S}_2$ <i>Abhirup Roy Karmakar</i> , S. Nandy, A. Taraphder, and G. P. Das <a href="#">Phys. Rev. B 106, 245133</a> (2022)
Large circular photogalvanic effect in non-centrosymmetric magnetic Weyl semimetal CeAlSi <i>Abhirup Roy Karmakar</i> , A. Taraphder, and G. P. Das <a href="#">arXiv:2308.00045</a> (2023)

## SCHOOLS AND WORKSHOPS

Date	School	Place
Dec 2018	Modelling and Simulations of Materials for Energy and the Environment	JNCASR, Bangalore, India
Dec 2019	Machine Learning in Materials Research	HRI, Allahabad, India

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN this form.

Place and date: Kharagpur, WB, India; 02/01/2024