UNIVERSITÀ DEGLI STUDI DI MILANO

TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO ID CODE 6212

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** Fisica Aldo Pontremoli

Scientist- in – charge: Prof. Smirne Andre

[Name and surname]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Saha
Name	Saptarshi

PRESENT OCCUPATION

Appointment	Structure
Senior Research Scholar	Dept. Of Physical Sciences, IISER Kolkata, India

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree (Bachelor)	Physics	RKMRCN, Kolkata	2015
Specialization			
PhD	Physics	IISER Kolkata	2024 (Expected)
Master	Physics	IIT Guwahati	2017
Degree of medical specialization			
Degree of European specialization			
Other			

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City

28 July, 2017	Dept. of Physical Sciences, IISER Kolkata	Kolkata

FOREIGN LANGUAGES

Languages	level of knowledge
English	Advanced

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2015	Masters entrace test qualified (National rank 235)
2017	Graduate aptitude test in Engineering qualified (National rank 105)
2017	PhD entrance exam qualified (National rank 178), Phd Scholar (May, 2018 - May, 2023)

TRAINING OR RESEARCH ACTIVITY

description of activity - Programming Language (Julia, Mathematica), Document Creation (LaTex)

PROJECT ACTIVITY - No such funded project activity and every publication is a part of PhD project

Year	Project
N.A.	N.A.

PATENTS

Patent
NA

CONGRESSES AND SEMINARS - A separate list is attached

Date	Title	Place

PUBLICATIONS - A separate list is attached

Books
[title, place, publishing house, year ...]
[title, place, publishing house, year ...]

[title, place, publishing house, year ...]

Articles in reviews
[title of the article, review, place, publishing house, year ...]
[title of the article, review, place, publishing house, year ...]
[title of the article, review, place, publishing house, year ...]

Congress proceedings
[title, structure, place, year]
[title, structure, place, year]
[title, structure, place, year]

OTHER INFORMATION

1. A separate list on Mentorship and Teaching Assistantship is attached
2. Student representative of the department Journal club (August, 2021 - January 2024)

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: Kolkata, India, 15/01/2024

Mentorship details:

No.	Details
1.	Abhinaba Ghosh, Masters thesis- 2020, Thesis title - *Dynamics of total magnetic moments for a coupled spin chain: a classical vs quantum analysis.*
2.	Yeshma Ibrahim, Masters thesis- 2021, Thesis title - *Studies using Quantum Master Equation- Quantum simulations and intermediate time-scale dynamics of spin-chains* .
3.	Shubhamay Panja, Integrated PhD thesis- 2023, Thesis title - *Prethermalization in multi-spin network* .
4.	Gourab Das, Research project- 2024, Research topic - *Discrete time-crystals in open quantum systems* (Ongoing) .

Teaching Assistantship:

No.	Semester	Course name	Advisor
1	Autumn, 2018	Mathematical methods of Physics	Dr. Ananda Dasgupta, Associate Professor, IISER Kolkata
2	Spring, 2019	Advanced Quantum Mechanics	Dr. Ananda Dasgupta, Associate Professor, IISER Kolkata
3	Autumn, 2019	Classical Mechanics	Prof. Rangeet Bhattacharyya Professor, IISER Kolkata

Publications:

Accepted article

No.	Article
1.	Prethermalization in an open quantum system coupled to a spatially correlated Bosonic bath: Saptarshi Saha, Rangeet Bhattacharyya, **arXiv:2401.03269**.

Published articles in the chronological order

No.	Article
1.	Prethermal discrete time crystal in driven-dissipative dipolar systems: Saptarshi Saha, Rangeet Bhattacharyya, *Phys. Rev. A*, **109**, 012208 (2024).
2.	Cascaded dynamics of a periodically driven dissipative dipolar system: Saptarshi Saha, Rangeet Bhattacharyya, *Phys. Rev. A*, **107**, 022206 (2023).
3.	Effects of dipolar coupling on an entanglement storage device: Saptarshi Saha, Rangeet Bhattacharyya, *J. Phys. B: At. Mol. Opt. Phys*, **55**, 235501 (2022).
4.	Time-periodic interaction between a spin-pair: A quantum master equation approach: Saptarshi Saha, Rangeet Bhattacharyya, *Journal of Magnetic Resonance Open*, **10**, 100046 (2022)
5.	Retarded resonance Casimir-Polder interaction of a uniformly rotating two-atom system: Saptarshi Saha, Arpan Chatterjee, Chiranjeeb Singha, *Eur. Phys. J. C*, **81**, 265 (2021)
6.	How the mass of a scalar field influences resonance Casimir-Polder interaction in Schwarzchild spacetime: Arpan Chatterjee, Saptarshi Saha, Chiranjeeb Singha, *Eurphys. Lett*, **130**, 50004 (2020)

Preprints and Articles under review presented in the chronological order

No.	Article
1.	Emergence of superradiance in a dissipative dipolar-coupled system: Saptarshi Saha, Yeshma Ibrahim, Rangeet Bhattacharyya. (review under *Phys. Rev. A*).
2.	Applications of dissipative dipolar systems in quantum technology: Saptarshi Saha, Rangeet Bhattacharyya. (review under *European Physics Journal Special Topics*).
3.	Can a pure state remain pure in the Unruh effect: Saptarshi Saha, Arpan Chatterjee, Chiranjeeb Singha, **arXiv:2105.14172**.

Conferences & Seminars:

Attended Conferences in the chronological order

No.	Date.	Title.	Place	Description.
1.	18-22 December, 2023	STATPHYS KOLKATA XII	SNBNCBS Kolkata, India	Presented a talk, titled - *How Prethermalization leads to Discrete Time Crystals*
2.	27-30 November, 2023	Annual conference on Quantum Condensed matter	NISER Bhubaneswar, India	Presented a poster, titled *Prethermal discrete-time crystal in dissipative dipolar systems.*
3.	28-29 June, 2023	Physics Trends	IISER Kolkata, India	Presented a talk, titled *Discrete time-crystalline phase in dissipative dipolar systems.*
4.	12-23 June, 2023	Periodically and Quasi-Periodically Driven Complex Systems	ICTS Bangalore, India.	Online participant.
5.	12-15 June, 2023	Researcher meet on Quantum information and Quantum Technology	IISER Kolkata, India.	Presented a talk, titled - *Prethermalization in a Dissipative dipolar system.*
6.	12-15 June, 2023	Researcher meet on Quantum information and Quantum Technology	IISER Kolkata, India.	Presented a talk, titled - *Prethermalization in a Dissipative dipolar system.*
7.	20-22 March, 2023	APS March meeting (Online)	Las Vegas, USA & Virtual	Presented a virtual talk, titled- *Effect of the dipolar coupling on an entanglement storage device.*
8.	15-18 February, 2023	Young Quantum	HRI, Prayagraj, India	Presented a talk, titled- *Effect of the dipolar coupling on an entanglement storage device.*
9.	21-25 March, 2022	STATPHYS KOLKATA XI	IISER Kolkata & SNBNCBS Kolkata, India	Presented a poster, Titled - *Can we make a good quantum storage device using dipolar coupled spin ?*
10.	22-26 March, 2021	Non-Hermitian Physics	ICTS Bangalore, India.	Online Participation.
11.	17-28 June, 2019	Bangalore School on Statistical Physics-X	ICTS Bangalore, India	Offline participation.

Selected as a participant of the upcoming conferences,

No.	Date.	Title.	Place	Description.
1.	15-26 January, 2024	Stability of Quantum matter in and out of equilibrium at various scales.	ICTS Bangalore, India	Presented a poster, titled - *Prethermal discrete-time crystal in dissipative dipolar systems.*
2.	3-8 March, 2024	APS March meeting (Online)	Minneapolis, USA & Virtual	Presented a virtual talk, titled- *Prethermal discrete-time crystal in dissipative dipolar systems.*