TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE 6566**

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**

Scientist- in – charge:

Prof. Milani Paolo

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Waghela
Name	Chetan

PRESENT OCCUPATION

Appointment	Structure
Casual Appointment, IIT Delhi	1) Working on quantum control techniques using microwave pulses on superconducting hardware 2) Assisting in NQM mission grant proposal writing

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree			
Specialization			
PhD	Physics (Thesis Title: Non reciprocal transmission and non hermitian quantum sensing using defective operators)	IIT, Ropar	2023
Master	Physics	Savitribai Phule Pune University	2012
Degree of medical specialization			
Degree of European specialization			

Other			

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City

FOREIGN LANGUAGES

Languages	level of knowledge
English	Proficient

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2015	UGC-CSIR-NET fellowship. All India Rank 195 among several thousands students who appeared for the exam in June 2015.
2021	Sunny Oberoi Student Leadership Award. Awarded a sum of Rs. 25k and a certificate by IIT Ropar and Sarbat da Bhalla trust for working towards education around the town of Ropar.
2022	Master Instructor at BIMTECH (Jun 2022) Awarded for conducting a program “Quantum Computing for Managers” at BIMTECH, Noida.
2024	Showcase of our article at AIP Kudos, “Access extremely precise exceptional point quantum sensors through your computer.”

TRAINING OR RESEARCH ACTIVITY

1) Worked on Pseudo-Hermitian Quantum theory. Specifically studying Quantum Brachistochrone problem and rate of entanglement production in such systems.
2) During my PhD I worked on Optomechanical isolators. The task was to tackle the bandwidth limit in such systems and to study the physics behind these devices.
3) I also explored Exceptional Point quantum sensors during my PhD. I not only studied it theoretically but also simulated the system on a quantum hardware and studied the Quantum Fisher Information.
4) During M.Sc I worked on understanding the physics of Self-organised critical processes using simulations. I specifically used the Metropolis Hastings algorithm for simulation.
5) As an Advisory Scientist at Qkrishi Quantum Pvt Ltd. I advised them on various quantum algorithms and also worked briefly on Post-Quantum cryptography.
6) Proficient in discrete variable quantum computing platforms like Qiskit.
7) Proficient in continuous variable quantum computing platforms like Strawberry Fields.
8) Proficient in Python and its machine learning libraries and Mathematica.

PROJECT ACTIVITY

Year	Project

PATENTS

Patent

CONGRESSES AND SEMINARS

Date	Title	Place
Jun-2018	NON-HERMITIAN PHYSICS- PHHQP XVIII, ICTS Bangalore	Bangalore

PUBLICATIONS

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

Articles in reviews
Waghela, C., & Dasgupta, S. (2023). Simulation of exceptional-point systems on quantum computers for quantum sensing. AVS Quantum Sci, 6 (1), 014403
Waghela, C., & Dasgupta, S. (2021). Optomechanical isolation with tunable center frequency. Journal of Physics B: Atomic, Molecular and Optical Physics, 54(17), 175502.

Congress proceedings
Garrach, M. A., Waghela, C., Mathews, M. M., & Sreekuttan, L. S. (2022, October). Benchmarking Speed of Post-Quantum Lattice Based PKE/KEM Schemes Using Liboqs. In 2022 International Conference on Trends in Quantum Computing and Emerging Business Technologies (TQCEBT) (pp. 1-5). IEEE.
Beyond the Classroom: Learning Quantum Algorithms Through Mass Screening Problem (Submitted to QSEEC 2024)
[title, structure, place, year]

OTHER INFORMATION

EDX, Online—Instructor May 2023 Created a course titled “Introduction to Quantum Circuits” along with collaboration with The Linux Foundation. The course is aimed at mathematically untrained students. LFQ103X "Introduction to Quantum Circuits”.
IISER Tirupati, Tirupati—Main Instructor May 2022- Jul 2022 Total 20 hours of instruction with lectures, tutorials and lab sessions. Aimed towards academics. Lab sessions were conducted on IBM Qiskit Framework. The course was also accompanied by projects ranging from benchmarking quantum computers to hacking QKD protocols

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: 26-04-2024