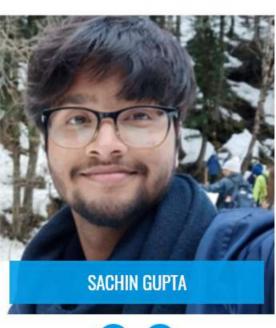
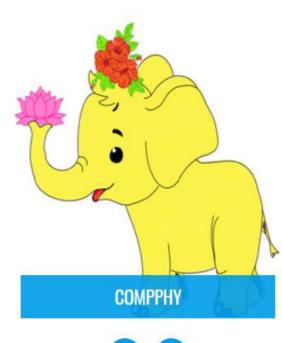


# **TEAM MEMBERS**

































#### Prabhat Kumar cprabhat.70707@gmail.com>

#### meteor streams

Dr.Jasieet Singh Bagla <iasieet@iisermohali.ac.in>

9 February 2021 at 16:45

To: Binayak Bhushan Roy <br/>
sinayyakbhroy@gmail.com>, niranjaniiserm@gmail.com, Prabhat Kumar <br/>
crabhat.70707@gmail.com>

Hello.

Introducing you to each other: Binayak, Prabhat (both from St. Stephens) and Niranjan (from IISER Mohali). Niranjan has worked on the meteor streams project during last summer. Niranjan: please rope in others from the group who contributed actively to discussions.

#### Tasks:

- Analytical. If a comet (take Halley's comet as prototype) expels rocks with a typical speed u (take ~ 0.1 km/s, 1 km/s) then find the range of orbital parameters for the rocks. Plot their trajectories for the two cases.
- Numerical. Have the comet expel rocks while it is within 1 A.U. of the Sun and follow trajectories of rocks. Compare with the estimates from #1.
- 3. Numerical. Add planets into the mix and see how their gravity affects the orbits of meteor streams.

Please let me know if you have any questions.

with best wishes, Jasjeet

Jasjeet Singh Bagla
Department of Physical Sciences
Indian Institute of Science Education and Research (IISER) Mohali
Knowledge City, Sector 81
Sahibzada Ajlt Singh Nagar
Punjab 140306
India
India
India
India



#### Prabhat Kumar prabhat.70707@gmail.com>

### Thank you for your valued participation in SWANtenna20

1 message

Swan Challenge <swantenna20@gmail.com> To: Swan Challenge <swantenna20@gmail.com> Cc: Prof Dhruba J Saikia <dhrubasaikia@iucaa.in>, avideshi@gmail.com Bcc: prabhat.70707@gmail.com

12 December 2020 at 00:08

Dear Participants,

Thank you very much for your participation in the SWANtenna20 competition, which we really value. We admire the enthusiasm and hard work you have put in towards the project. We are also pleased to note that the design proposed by you meets the minimum specifications defined for the antenna element.

While going through all the submitted entries the jury panel and we were also looking for the ones with the most innovative ideas in building new antenna elements for radio astronomy applications, besides of course satisfying the minimum requirements of the competition. As you are aware, a major component of the history of radio astronomy has been a quest to detect weaker and weaker signals via innovative ideas incorporating new technological developments.

In this context, the jury have shortlisted only a very limited number of entries for the next level, and we are sorry that your one is not one of them. We however appreciate and value your contribution and participation. We trust you have enjoyed participating in the SWANtenna20 competition, and we look forward to your engagement with us on similar events that we may organize in the future.

With our warmest regards and best wishes,

D J Saikia

Head, Teaching Learning Centre and National Research Centre Astronomy Centre for Educators Inter-University Centre for Astronomy and Astrophysics (IUCAA)

Founding Vice-Chancellor Cotton University

# Name's Swan, James Swan LPDA-007

#### Mentors

Dr. Geetanjali Sethi <sup>1</sup> and Dr. Akshay Rana <sup>2</sup> St. Stephen's College, Delhi University, New Delhi, 110007

#### **Student Point of Contact**

Chaitanya Varma<sup>3</sup>

#### Team Members

Rahul Mallikarjun, Binayyak Bhushan Roy, Prabhat, Rudra Kalra, Neel Lohit Dash, Mahak Sadhwani, Trisha Debnath<sup>4</sup>

#### 1 Introduction

The first phase of SWAN, a proof-of-concept design - the Murchison Widefield Array (MWA) was set-up at RRI for radio-astronomy. The MWA, which operates at a frequency range of 80 - 330 MHz, consists of two bow-tie shaped antenna elements placed at right angles, resulting in dual orthogonal linear polarization. The second phase aims at building an antenna that maximizes the bandwidth to a 50 - 500 MHz range, and effectively receives about 84% of the power falling on it in the frequency range of at least 80 - 320 MHz.

A dual-polarized antenna unit with suitable broadband has to be designed for the second phase of the Indian Sky Watch Array Network (SWAN) Initiative. The antenna element should conform to the following requirements:

- 1. Dual Orthogonal linear polarization reception using two separate sub-units oriented at 90 degrees to one another.
- 2. Efficient radiative coupling over the band from 50 MHz to 500 MHz, with a return loss of more than 8 dB over at least 80-320 MHz (i.e. S11 < -8 dB).
- 3. The total projected span of the structure  $(Width \times Breadth)$  to be within 1 square meter, and an extended conducting reflector below, defining the 'ground plane' (for the entire array), is to be an integral part of the design.

Aluminum should be used as the conducting material in the EM simulations and suitable non-conducting material may be considered for the central cylindrical hub (such as for housing Low-noise amplifiers, etc. with approximately 10 cm diameter), and other support/isolation purpose, with emphasis on low-cost and ease in manufacturing. EM simulations can be made using any available simulation package.

<sup>&</sup>lt;sup>1</sup>Assiatant Professor, Department of Physics, getshethi@ststephens.edu

<sup>&</sup>lt;sup>2</sup>Assistant professor , Department of Physics, akshay@ststephens.edu

<sup>&</sup>lt;sup>3</sup>Undergraduate Student, B.Sc.(H)PHYSICS) St. Stephen's College.

<sup>&</sup>lt;sup>4</sup>Undergraduate Students, B.Sc.(H)PHYSICS) St. Stephen's College.

#### 4.2 LPDA-007(M)

The results are divided into two band of frequencies since the meshing rule changes over this range a lot. So to reduce computational error we have provided you the data separately. These are the stable results for model M.

The results are obtained from Altair FEKO 2020 for the LPDA-007(M).

#### 4.2.1 Return Loss/S11

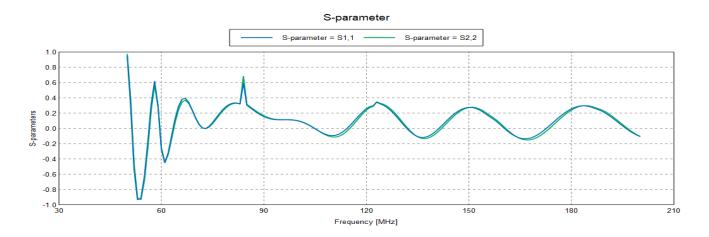


Figure 18: LPDA-007(M): S-Parameters: Real Part 50-200 MHz. Since there are two sources in the antenna for two sub-units we have included S11 for both of them.

As you can see there's a glitch for 81 MHz, which can be resolved hopefully through electronic circuits.

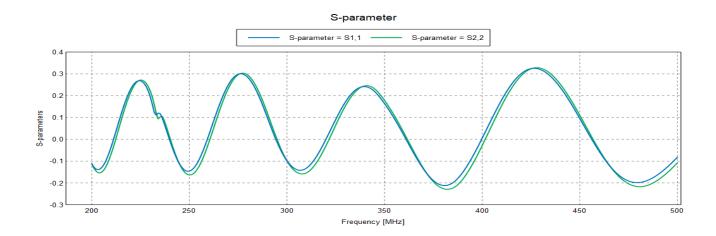


Figure 19: LPDA-007(M): S-Parameters: Real Part from the frequency band of 200-500 MHz



Prabhat Kumar <prabhat.70707@gmail.com>

#### Jury feedback on your SWANtenna20 entry, and Thanks for your participation

Swan Challenge <swantenna20@gmail.com>

13 May 2021 at 05:34

To: GEETANJALI SETHI -MPoC <getsethi@ststephens.edu>, CHAITANYA VARMA -SPoC <chaitanyamvarma@gmail.com>, AKSHAY RANA -MM <aksrana92@gmail.com>, TRISHA DEBNATH -SM <mailtrisha1416@gmail.com>, MAHAK SADHWANI -SM <mahaks6700@gmail.com>, RUDRA KALRA -SM <ru>drakalra20@gmail.com>, PRABHAT -SM <prabhat.70707@gmail.com>, BINAYYAK BHUSHAN ROY -SM <br/>sinayyakbhrov@gmail.com>, RAHUL MALLIKARJUN -SM <rahmallikariun@gmail.com>, NEEL LOHIT DASH -SM

Cc: Prof Dhruba J Saikia <dhrubasaikia@iucaa.in>, desh@iucaa.in

From: SWANtenna20 Challenge 12-May-2021

Dear Participants,

<dreellohit@gmail.com>

#### Greetings!

Trust you all and yours are doing well and keeping safe, in these difficult times.

We had written to you earlier soon after the Jury panel had made initial short-listing of the entries received for the SWANtenna20 Challenge. Although we had hoped to share with you all further details and feedback sooner, there has been unavoidable delay, which we feel sorry for.

We are happy to share with you that 18 teams from across the country,

including your team, had submitted their designs of a broad-band antenna element for the Sky Watch Array Network. Five teams were invited to make presentations based on detailed assessment by a jury of eminent antenna experts of the country. The jury headed by Prof. Raghunath Shevgaonkar (Former Director, IIT, Delhi, and Vice-Chancellor, Bennett University), consisted of Professors Subramaniam Ananthakrishnan (Former Dean, NCRA-TIFR, Pune, and presently at the Savitribai Phule Pune University), Ajit T. Kalghatgi (Former Director, R & D, BEL), Shiban Koul (Emeritus Professor, Centre for Applied Research in Electronics, IIT, Delhi), Surendra Pal (Professor Satish Dhawan Professor and Senior Adviser. Satellite Navigation Centre, ISRO), and K. P. Ray (Dean, DIAT, Pune).

They recommended three teams whose antenna element design can be prototyped when possible given the current pandemic situation. These three teams are from BITS-Pilani, Goa, Fergusson College (Autonomous) Pune, and Thapar Institute of Engineering and Technology, Patiala. The two other teams who were invited to make presentations are from SSN College of Engineering, Chennai and IIST, Trivandrum.

Regardless of the outcome, we hope that the design pursuit has been an enjoyable experience for you all. The short-listed teams had the opportunity to interact with the Jury panel, and have their feedback directly. Although it was demanding on their time and effort, the Jury have kindly provided feedback on all the designs, which will go a long way in enriching the learning experience.

The implied encouragement for the teams from such feedback/advice/suggestions cannot be overstated, particularly coming from the truly eminent experts in the field. We have appended below the Jury comments, and we hope that these will help you in possible follow up on your design, including possible refinement/revision.



# भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान कोलकाता

(भारत सरकार के मानव संसाधन विकास मंत्रालय द्वारा स्थापित एक स्वायत्तशासी संस्थान)

### INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH KOLKATA

(An Autonomous Institute established by Ministry of Human Resource Development, Government of India)

### TO WHOMSOEVER IT MAY CONCERN

Dear Committee,

This is a letter confirming that Prabhat, of St. Stephen's College (University of Delhi), worked on a project entitled "Quantum Simulation of Lennard-Jones Potential" from December 2019 to January 2020 (3 weeks) as a Winter Research Fellow under my supervision.

With regards,

Prasanta K. Panigrahi

Professor, Dean of International Relations and Outreach,

Browt & U. Panguah

Department of Physical Sciences,

Indian Institute of Science Education and Research Kolkata,

Mohanpur 741246, India.

Mail Id - pprasanta@iiserkol.ac.in

#### Simulation of Lennard-Jones Potential on a Quantum Computer

Prabhat<sup>1,\*</sup> and Bikash K. Behera<sup>2,†</sup>

<sup>1</sup>Physics Department, St.Stephen's college, University of Delhi, Sudhir Bose Marg, University Enclave, New Delhi, Delhi 110007, India <sup>2</sup>Bikash's Qauntum (OPC) Pvt. Ltd., Balindi, Mohanpur 741246, Nadia, West Bengal, India

Simulation of time dynamical physical problems has been a challenge for classical computers due to their time-complexity. To demonstrate the dominance of quantum computers over classical computers in this regime, here we simulate a semi-empirical model where two neutral particles interact through Lennard-Jones potential in a one dimensional system. We implement the above scenario on IBM quantum experience platform using a 5-qubit real device. We construct the Hamiltonian and then efficiently map it to quantum operators onto quantum gates using the time-evolutionary unitary matrix obtained from the Hamiltonian. We verify the results collected from the qasm-simulator and compare it with that of the 5-qubit real chip ibmqx2.

#### I. INTRODUCTION

The age of quantum simulation on quantum computers started in the 1980s when Benioff showed that a computer could operate under the laws of quantum mechanics, which is further backed with the famous paper by Feynman at the first conference on the physics of computation, held at MIT in May 1980. He presented in the talk, titled as 'Quantum mechanical Hamiltonian models of discrete processes that erase their histories: application to Turing machines', how efficient can a quantum computer be for NP Hard and EXP problems [1] and there proposed a basic model for a quantum computer [2]. The problem of simulating the full-time evolution of arbitrary quantum systems is intractable due to the exponential growth of the size of a system. For example, it would need 2<sup>47</sup> bits to record a state of 47 spin- $\frac{1}{2}$  particles, which is equal to  $1.4 \times 10^{14}$  bits, a little less than 20 TB which is the largest storage capacity of hard disk currently [3–5]. Feynman gave simple examples of one quantum system simulating another and conjectured that there existed a class of universal quantum simulators capable of simulating any quantum system that evolved according to local interactions [6]. These local interactions, if controlled, could be exploited to mimic the dynamics of the quantum systems very efficiently. Essentially, each tweaking will move the system in specific directions in Hilbert space which corresponds to an operation, we are mimicking through it.

Classical information was first carefully defined by Shannon in his paper in 1948 [7]. Any change could be considered as a signal if it can be encoded with some data by the sender and retrieved by the receiver. 'Bit' is the most popular unit of classical data. A bit can either store 1 or 0 in form of voltages generally. However, in simple terms, due to the quantum nature of the qubit (quantum bit), it can store more information than a bit. A qubit

is an abstraction of any two-state quantum system, like a bit, is an abstraction of a two-state classical system. Information can be encoded on photons, spins, atoms, or the energy state of electrons in quantum dots. A gate is the function of bits. Since a qubit is more versatile than a bit (can be in a state, which is a combination of its two states simultaneously, is one of them), there are many more fundamental gates. These gates control the output and a series of them can perform any complicated tasks. Though now the number of qubits required will be 47 (exponentially small), the number of operations is still the same to evolve the system through time. It is a branch of computer science, physics, and engineering in its infant stages, growing rapidly. The quest for more QS is described in referred works [8–22]. Currently, using an online accessible quantum computing platform, IBM quantum experience, a number of research works have been performed among which the following [23–47] can be referred.

The organization of the paper is as follows. In Section II, the theoretical background and the algorithm is laid out. Then the mapping is given in Sec. III. The simulation is then done using the Qiskit of IBM quantum experience platform. Finally, the experimental results of simulation and comparisons are given in Sec. IV. The analysis and future scope is discussed in the Sec. V.

#### II. SIMULATION

Since on a computer, the notion of infinitesimal change can not be applied. Thus, as a numerical approximation, the system's evolution has been studied discretely (Fig. 1). We can always make our time step sufficiently small, for depicting it as close as to a physical system. But there is always a limit to this. This limit depends on the ability of our computer to handle these numbers, the runtime one can afford and the precision one wants in the system. Therefore, only the discretized system and its operators are being considered in subsequent sections.

It is said that, given the dynamical law (Eq. 2) of a system, the whole state-space can be determined for

<sup>\*</sup> prabhat.70707@gmail.com

<sup>†</sup> bikash@bikashsquantum.com



Programme code: PFMSPHSA

Important information about your offer of a place on MSc Physics

Mr Prabhat.

House No. G-4/112 Sector-15 Rohini New Delhi

110089

8 April 2021

Application No: 21100570 (Please quote this in all communications with the University).

Dear Mr.

#### **Welcome to Cardiff University**

We are delighted that you have chosen to apply to study at Cardiff University and are pleased to offer you admission to the programme of study detailed below.

Programme: MSc Physics which will be based in the Cardiff School of Physics & Astronomy.

You will study on the programme as a Full-Time student which will commence on 27/Sep/2021 which includes Enrolment week and is due for completion on 26 September 2022.

Date of Birth: 19 December 2000

The HECOS (CAH3) code for your programme is CAH07-01-01 Physics. Further information on HECOS codes can be found at https://www.hesa.ac.uk/innovation/hecos

OFFER: Conditional

Conditions/Comments: This offer is conditional. This offer is conditional upon you obtaining your Bachelors of Science (HONS) Physics Degree at University of Delhi with a minimum of 6.0 / 10 CGPA.

Please upload evidence of your qualifications to the applicant portal at sims.cf.ac.uk

ATAS Research Statement of Purpose: MSc Physics provides comprehensive skills training & hands-on experience, enabling students to pursue further academic research, physical science industrial practice, R&D or other highly skilled numerate careers. A full-time 1-yr course of taught modules (120 credits) and a 4 month research project (60 credits) after the successful completion of the taught portion. Modules include - CORE (40 credits): Advanced Experimental Techniques in Physics and Study & Research Skills; OPTIONAL (80 credits): Large Molecules & Life; Quantum Field Theory; Magnetism, Superconductivity & their Applications; Data Analysis; Low-Dimensional Semiconductor Devices; Modern Quantum Optics & Quantum Theory of Solids

Academic Technology Approval Scheme (ATAS) - Please note that the programme of study you have applied for is subject to the Academic Technology Approval Scheme (ATAS). If you require a student route visa to study in the UK, you must obtain your ATAS clearance before applying for your visa. If you are in the UK on another type of visa, or a student route visa for another programme you will not be able to commence your programme of study until you have obtained ATAS Clearance. You will also need to re-apply for ATAS clearance within 28 days if your research proposal changes, or there are any changes to the content of your course. Details of the process that you must follow in order to obtain ATAS clearance are outlined on the UK Government website at «a href="https://www.gov.uk/guidance/academic-technology-approval-scheme"»https://www.gov.uk/guidance/academic-technology-approval-scheme"»https://www.gov.uk/guidance/academic-technology-approval-scheme scheme «/a». If you have any queries about the scheme or how to undertake the required process you should contact the Foreign,

Commonwealth and Development Office by email at «a href="mailto:ATAS@fcdo.gov.uk"»ATAS@fcdo.gov.uk«/a»

Cardiff University has a policy of asking applicants to pay a deposit towards their course tuition fees in order to secure a place at the University. Further information can be found at <a href="https://www.cardiff.ac.uk/study/postgraduate/tuition-fees/deposits-for-postgraduate-taught-">https://www.cardiff.ac.uk/study/postgraduate/tuition-fees/deposits-for-postgraduate-taught-</a> programmes. After accepting your offer you need to pay a deposit. The deposit amount is £1000 and must be paid by 31/Jul/2021. Please note that the deposit payment will be required before the University can issue a Confirmation of Acceptance for Studies (CAS).

This offer is subject to you accepting your place and meeting the exact conditions of your offer a minimum of 14 days before the start date of your programme, unless otherwise agreed by the University. This includes provision of official documentation as required, to evidence the conditions of offer have been met. Where stipulated, payment of a deposit by the stated deadline is also required to secure your place.

#### Confirmation of your full name

Your name as provided in your application is given at the top of this document. Please ensure it is correct and matches your official

documentation (passport, birth certificate etc.) as this information will be checked at enrolment.

#### Confirmation of your fee status

Fee Status: Overseas

Your fee status has been assessed on the basis of the information provided in your application. If you think your fee status is incorrect you have 28 days, from the date of your offer, to query your status. You can submit a fee assessment questionnaire by going to our web pages at <a href="http://www.cardiff.ac.uk/public-information/students-applicants/admissions-policies/fee-status">http://www.cardiff.ac.uk/public-information/students-applicants/admissions-policies/fee-status</a>.

Fees:

The fees for the first year of your programme of study are outlined below:

Tuition Fee: £21950. Fees stated are for 2021/2 entry and are fixed for the duration of your programme.

#### Fees for entry in subsequent years

Fees for entry in subsequent years are subject to increase and will be confirmed by the end of October in the year preceding your start date of your programme.

Tuition fees cover all reasonable costs required for you to complete the degree programme stated. Please note that you may choose to participate in study trips, associated placements or purchase equipment while studying on your degree programme which will be at your own cost. Tuition fees do not include living costs such as accommodation, subsistence or travel.

#### <u>Important legal information:</u>

As a student of the University you will be required to comply with the Terms and Conditions set out on the University Website at <a href="http://www.cardiff.ac.uk/public-information/students-applicants/admissions-policies/terms-and-conditions-of-offer">http://www.cardiff.ac.uk/public-information/students-applicants/admissions-policies/terms-and-conditions-of-offer</a>. Details of the Terms and Conditions are also provided at the bottom of this letter. Please make sure you read these carefully as they contain important information about your rights and responsibilities as a student of the University.

#### What will be the next steps?

To accept this offer you should log into SIMS at https://sims.cf.ac.uk.

As your offer is subject to conditions, you must inform the Admissions Team as soon as you have satisfied the conditions of your offer. Please upload copies of any relevant certificates or supporting documentation using SIMS.

If you accept this offer and your place is confirmed you will be required to enrol online at the start of your programme of study. You will be contacted approximately three weeks prior to the start date of your programme by e-mail with instructions on how to enrol.

#### Any questions?

If you have any queries or need information about your programme before you start, please do not hesitate to contact us by emailing admissions@cardiff.ac.uk

I hope very much that you will decide to accept this offer and look forward to welcoming you to our community at Cardiff.

Yours sincerely,

Sally Rutterford

Head of Admissions

Telephone: +44 (0)29 2087 9999

Mr Prabhat . House No. G-4/112 Sector-15 Rohini Delhi Delhi India 110089 16 March 2021

Student Id/UUN: s2246747

#### Dear Prabhat

I am delighted to inform you that the University is offering you admission to MSc Theoretical Physics – 1 Year (PTMSCTHEPH1F) under the Terms and Conditions below. Please read this offer and the specific terms carefully and complete the instructions as necessary.

This offer is governed by the University's admissions terms and conditions: https://www.ed.ac.uk/studying/admissions/terms-conditions.

You will find information relating to your offer and your right to cancel (should you choose to accept it and then change your mind), as well as information such as how to pay your tuition fees, how to find out about any other charges you may incur as a student, and what you should do if you have a complaint.

If you decide to accept our offer, you will also be accepting our admissions terms and conditions, as well as the other University regulations that form part of the student contract: https://www.ed.ac.uk/students/academic-life/contract

Your offer is CONDITIONAL on you meeting the requirements as detailed. Please submit the requested documentation as soon as you have it. Once you have met the conditions, we shall be able to send you an unconditional offer of admission.

#### Conditions to be met:

Evidence of award of honours degree at 2.1 or above or an equivalent standard from an overseas/EU university plus

Provision of one satisfactory reference

This is equivalent to a final average of 8.0 in your degree from India. Please provide a copy of your final transcript and degree certificate once you complete your degree. Please also provide a second academic reference which comments on your academic ability and suitability for the MSc applied to. The letter must be signed, dated within the last six months and written on official headed paper.

In order to secure your place, you must respond to this offer by 12/04/2021, as competition for places at the University of Edinburgh is very high. Please note, by accepting an offer, you are not committing yourself to study at the University. Accepting your offer helps with our admission process and may help you in applying for funding, accommodation or a student visa (if required). If you later decide not to study at the University, you can withdraw your acceptance at any time. We would encourage you to accept your offer as soon as possible.

# Offer of Admission College of Science and Engineering

Date of offer:	15 March 2021
Applicant name:	Prabhat .
Date of birth:	19 December 2000
Student ID code/UUN:	s2246747
Programme of study:	MSc Theoretical Physics – 1 Year
Programme of Study code:	PTMSCTHEPH1F
Programme Type:	Taught
School:	School of Physics and Astronomy

Attendance date:	Monday, 13 September 2021
Period of study:	1 Years
Expected end date:	31 August 2022
Mode of study:	Full time
Programme Director:	Dr Brian Pendleton
Tuition fee status:	Overseas/International fee rate. If you think that this is incorrect, then it is important that you inform us before accepting any offer of a place at the University of Edinburgh. For further information, please go to the Finance tab of your application in the Applicant Hub.
Estimated annual tuition fees:	£24,000.00
Additional programme costs:	£0.00 per annum
ATAS clearance required:	Yes

#### **Academic Technology Approval Scheme (ATAS)**

UK immigration rules state that visa-holding students may need to obtain a clearance certificate under the Academic Technology Approval Scheme – the ATAS certificate. It is your responsibility to check if you require ATAS clearance: the indication below is provided based on your primary nationality. Please refer to the information on ATAS found on the Foreign and Commonwealth Office (FCO) website at <a href="https://www.fco.gov.uk/en/about-us/what-we-do/services-we-deliver/atas/">www.fco.gov.uk/en/about-us/what-we-do/services-we-deliver/atas/</a>

In consideration of your primary nationality you may need to apply for and obtain an ATAS clearance certificate before you can apply for a Student visa or to extend your stay as a Student in the UK. The ATAS application process can take up to 6 weeks. You should also note that the possession of an ATAS clearance certificate does not guarantee that a visa will be issued as you will still need to meet the other UK Visas and Immigration requirements for studying in the UK.

To submit a request for an ATAS certificate you will need to complete and submit the free, online application form available at <a href="https://www.fco.gov.uk">www.fco.gov.uk</a>, using the information that we have provided in this offer.

Guidance on applying for your ATAS clearance is available at: <a href="https://www.ed.ac.uk/student-administration/immigration/applying-for-visa/tier-4/requirements/atas">https://www.ed.ac.uk/student-administration/immigration/applying-for-visa/tier-4/requirements/atas</a>

When your ATAS application is successful, the Foreign & Commonwealth Office (FCO) will send you an email with your ATAS certificate attached as an electronic pdf document. You should save this email from the FCO and keep it safe for the duration of your studies. They will also send us a copy. Once we have received this and your acceptance of the unconditional offer we will issue your Confirmation of Acceptance for Studies (CAS) through your University portal in good time for you to apply for your visa and start your studies. You must use the CAS and print-out of your ATAS certificate to apply for your visa.

#### ATAS Classification

HECoS/CAH Subject Code: CAH07-01-01 (THEORETICAL PHY)

#### Courses (modules) related to this programme:

A full list of courses available for this programme of study can be found in the University's Degree Regulations & Programmes of Study at <a href="http://www.drps.ed.ac.uk">http://www.drps.ed.ac.uk</a>.

If you have been charged with an offence or you have an unspent criminal conviction, we would strongly encourage you to talk to us about the support we can offer when you come to the University. If you are on licence or have conditions related to a conviction, we can work with you to minimise any impact on the degree programme you intend to study. More information and contact details are available on our website: <a href="https://www.ed.ac.uk/studying/admissions/convictions">https://www.ed.ac.uk/studying/admissions/convictions</a>

Yours sincerely

Lorna Halliday

Head of Recruitment and Admissions College of Science and Engineering

#### Monitoring and academic progress

Please note that if you fail to make adequate academic progress, the University reserves the right either to transfer you to a lower degree or to discontinue your studies.

#### **Funding and Living Costs**

This offer of admission is made on the understanding that you will be responsible for securing funding to cover all your fees and living expenses. Living expenses are in addition to tuition fees and additional programme costs and estimated costs are given on the following website: <a href="http://www.ed.ac.uk/studying/international/finance/cost-of-living">http://www.ed.ac.uk/studying/international/finance/cost-of-living</a>

#### **Fees**

Fees are quoted on the assumption that the start date, mode of study and tuition fee status information shown above is correct. The estimated tuition fee quoted above is the rate for the first year of your programme of study. If you have applied for a programme of study of more than one year, you should be aware that the tuition fees increase every year. However – international students studying full time on undergraduate and postgraduate taught programmes lasting more than one year will have their fee level fixed for the duration of their studies.

The estimated annual fee quoted is the total tuition fee amount that will be payable by either yourself or your sponsor in year 1 of study, prior to the deduction of any deposit you have paid or any discount for which you may be eligible. It does not include additional programme costs or any initial registration fee. If applicable, these are quoted separately above. Please note that students who have been nominated by their home university to apply to the University of Edinburgh as part of a reciprocal exchange programme (eg Erasmus) will not be liable for fee payment, although a fee amount may be shown above.

All amounts are quoted in pounds sterling.

For further information about fees please visit <a href="www.ed.ac.uk/student-funding/fees">www.ed.ac.uk/student-funding/fees</a> or contact Fees and Student Support Team
The University of Edinburgh
Old College
South Bridge
Edinburgh
EH8 9YL
United Kingdom

email: <u>fees@ed.ac.uk</u> tel: +44 (0)131 650 2230

The University welcomes early payment of fees. For more information about early payment and payment methods, please visit http://www.ed.ac.uk/schools-departments/finance/students.

#### Attendance date

The attendance date for your studies is shown in the offer. You must take up your place at the University no later than the attendance date specified. If you do not do so, the University reserves the right to withdraw the offer of a place.

#### Matriculation and payment of fees

You must matriculate at the start of your programme. You will be expected to pay your standard tuition fees and any additional programme costs for the year on first matriculation, and annually thereafter if your programme lasts more than one year.



To: Prabhat .

prabhat.70707@gmail.com
India 110089 New Delhi INDIA
cc. INDIA AMBASCIATA - NEW DELHI

Ref. no.: 63699/2021 Rome, July 9, 2021

Subject: Pre-acceptance to the Master's Degree in Physics (2 years) of Prabhat .

#### **APPLICANT'S DETAILS AND QUALIFICATIONS**

First Name: Prabhat Last Name: . Gender: M

Date of Birth: 19/12/2000

Entry Qualification (original language):

Bachelors in Science

**Entry Qualification (English):** 

Bachelors in Science

Issued by:

ST. STEPHEN'S COLLEGE, University of Delhi

(India)

Dear Prabhat ..

We are pleased to inform you that your application meets the requirements for admission to our Master's Degree in Physics (2 years) starting in academic year 2021-2022.

#### **VISA APPLICATION and PRE-ENROLMENT**

If you need a study visa to enter Italy, please note that, as per the latest Ministry guidelines, **you are** required to register on WWW.UNIVERSITALY.IT and submit a pre-enrolment application within the deadline set by the Italian Ministry of University and Research. After that, you will receive further information from your local Italian Embassy/Consulate on how to finalize your visa application.

This is a mandatory requirement for all non-UE students living outside of Italy.

If you are unsure whether you need a visa to enter Italy, please visit: <a href="https://vistoperitalia.esteri.it/home/en">https://vistoperitalia.esteri.it/home/en</a> For further information, please write to accesso.sapienza@uniroma1.it

#### BY ACCEPTING THIS ADMISSION OFFER YOU ACKNOWLEDGE THAT:

- This pre-acceptance letter is meant to facilitate and support your visa application but **DOES NOT** guarantee you will receive a visa, as visa granting is the sole purview of the competent Italian Diplomatic authorities (Embassy or Consulate) in your country;
- To complete your enrolment, you must follow the instructions contained in the programme's Call for Applications, which will be published in June/July 2021 on the website <a href="https://corsidilaurea.uniroma1.it/en">https://corsidilaurea.uniroma1.it/en</a> ("Apply" section).
- Sapienza University and specifically the Hello-Foreign Students Office have the right to verify that all of the documents you submitted are genuine, as well as request any additional documents deemed necessary to confirm possession/authenticity of entry requirements, as per your chosen programme's regulations;
- You will have to register on the INFOSTUD portal (<a href="https://www.studenti.uniroma1.it/phoenixreg/#/">https://www.studenti.uniroma1.it/phoenixreg/#/</a>) to generate a student number (matricola);
- This letter is valid for enrolment only in the Master's programme in Physics (taught in English) and no programme transfers are allowed during your first year of studies.



#### DOCUMENTS TO BE PROVIDED UPON ARRIVAL (HELLO - FOREIGN STUDENTS OFFICE)

- 1. the original and a copy of your ID (Identity Card) or Passport;
- 2. the original and a copy of your study visa for "university enrolment" (only for non-EU citizens regularly living abroad);
- 3. the original and a copy of your residence permit card (only for Non-EU citizens regularly living in Italy). If you are renewing your residence permit card, you will need a copy of your expired permit together with the post office receipt of your renewal application;
- 4. the original and a copy of your High School Diploma (obtained after at least 12 years of studies) and Bachelor's degree translated into Italian, legalized or with Apostille and accompanied by the Declaration of Value (DoV) issued by the competent Italian Diplomatic authorities (Embassy or Consulate) of the country where you obtained your qualifications and in charge of the High school/University education system OR

the original and a copy of your High School Diploma (obtained after at least 12 years of studies) and Bachelor's degree accompanied by CIMEA Statements of Comparability and Verification, which can be obtained online at <a href="http://www.cimea.it/en/servizi/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-di-verifica-dei-titoli-diplome.aspx;</a>

- 5. The original and a copy of your academic transcript, including all examinations taken, translated into Italian and legalized by the competent Italian Embassy or Consulate OR accompanied by the Statement of Verification issued by CIMEA (<a href="www.cimea.it/en/servizi/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-di-verifica-dei-titoli-diplome.aspx">www.cimea.it/en/servizi/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-di-verifica-dei-titoli-diplome.aspx</a>);
- 6. this pre-acceptance letter.

#### **PLEASE NOTE:**

- If you obtained your qualification in English, translation into Italian is not necessary.
- Make sure your Declaration of Value (DoV) issued by the competent Italian Diplomatic authority states that your degree enables you to access higher education in the country where it was issued and that it also states the number of school years prior to university enrolment.
- The Declaration of Value (DoV) of your High School diploma and Bachelor's degree is issued by the competent Italian Diplomatic authority (Embassy or Consulate) in the country where you achieved the qualification and in charge of the High school/University education system. e.g.: if you achieved a degree in a British High School in India, the DoV must be issued by the Italian Embassy or Consulate in the UK.
- The Diploma Supplement can replace the Declaration of Value (DoV) related to the University degree. Translation into Italian is not necessary, but legalization/Apostille by the competent Italian diplomatic authorities (Embassy or Consulate) OR a CIMEA Statement of Verification remain mandatory;
- If you hold a residence permit for study, we kindly ask you to contact us at studentistranieri@uniroma1.it

For any other inquiry on your admission and foreign qualifications, please visit <a href="https://www.uniroma1.it/en/pagina/international-admissions-0">https://www.uniroma1.it/en/pagina/international-admissions-0</a> or contact us at <a href="mailto:studentistranieri@uniroma1.it">studentistranieri@uniroma1.it</a>

#### **TUITION FEES**

For information on current tuition fees and future updates, please visit this link: <a href="https://www.uniroma1.it/en/pagina/tuition-fees-and-grants">https://www.uniroma1.it/en/pagina/tuition-fees-and-grants</a>.

#### **ARRIVAL IN ROME**

When you arrive in Rome, you should get in touch with the Hello-Foreign Students Office, studentistranieri@uniroma1.it.

Check all the information contained in the Call for Applications to complete your enrolment (<a href="www.corsidilaurea.uniroma1.it/en">www.corsidilaurea.uniroma1.it/en</a>) and please inform your programme coordinator about your expected arrival date by using the contact information below (programme contacts). Further information on planning your stay in Rome is available at <a href="https://www.uniroma1.it/en/pagina/international-admissions-0">https://www.uniroma1.it/en/pagina/international-admissions-0</a> or you can contact our Welcome Office for international students, "Hello", at <a href="https://www.uniroma1.it">https://www.uniroma1.it</a>.

#### **ACCOMMODATION**

Sapienza supports students in finding suitable accommodation through various intermediary services for



the whole duration of their studies. For more information, please visit the following web page: <a href="https://www.uniroma1.it/en/pagina/student-housing">https://www.uniroma1.it/en/pagina/student-housing</a>

#### **PROGRAMME CONTACTS**

Dipartimento di Fisica, Sapienza Università di Roma, P.le A.Moro 5 00185 Roma (Italia) phone +390649914232 fisica-lm17@uniroma1.it

Do not hesitate to contact us should you need any further information.

Yours sincerely,

Rome, 9/7/2021

The director of Physics Prof. Cesare Bini



 $\underline{\mathsf{UHH}} \cdot \mathsf{Ref.\,30} - \underline{\mathsf{Beratung}} \ \mathsf{und} \ \mathsf{Administration} \cdot \mathsf{Alsterterrasse} \ 1 \cdot \mathsf{D-20354} \ \mathsf{Hamburg}$ 

Prabhat . H.No. G-4/112, Sector-15, Rohini, Delhi 110089 Delhi **Beratung und Administration** 

Team Bewerbung, Zulassung und Studierendenangelegenheiten

Alsterterrasse 1 20354 Hamburg

Kontakt- und Öffnungszeiten: www.uni-hamburg.de/studium

19.05.2021

Bewerbungsnummer: 1520356

# Zulassungsbescheid You will find the English Version below

Guten Tag Prabhat.,

herzlich willkommen an der Universität Hamburg! Wir freuen uns, dass Sie sich für unsere Universität entschieden haben, und können Ihnen nun mitteilen, dass Sie zum **Wintersemester 2021/22** für den Studiengang

#### Master of Science / Physics

zugelassen sind.

Im Folgenden möchten wir Ihnen das weitere Verfahren erläutern. **Bitte lesen Sie sich diese Informationen aufmerksam durch!** 

Damit wir Sie immatrikulieren können, müssen Sie den Studienplatz annehmen. Dazu sind gemäß § 25 Abs. 1 Nr. 1 – 3 der Universitäts- Zulassungssatzung (UniZS) folgende Bedingungen zu erfüllen:

- Füllen Sie das folgende Kontaktformular aus und laden Sie die erforderlichen Dokumente im Formular hoch: <u>www.uni-hamburg.de/master-de</u>. Informationen dazu, welche Unterlagen zwingend erforderlich sind, finden Sie in der Checkliste unter www.uni-hamburg.de/checklistemaster.
- Die vollständigen Immatrikulationsunterlagen müssen bei der Universität Hamburg bis 26.05.2021 ausschließlich in digitaler Form eingegangen sein. Es handelt sich um eine Ausschlussfrist, eine Verlängerung dieser Frist ist nicht möglich.

Wird eine dieser Bedingungen nicht erfüllt, wird die Zulassung unwirksam und Sie verlieren Ihren Anspruch auf Immatrikulation.

Alle in der Checkliste angegebenen Nachweise/Belege sind in vorgegebener Form hochzuladen, unabhängig davon, ob Sie diese bereits bei Ihrer Bewerbung eingereicht haben oder bereits an der Universität Hamburg immatrikuliert sind oder waren.

Sollten Sie sich noch in der Abschlussphase Ihres Erststudiums befinden, erfolgt die Zulassung außerdem unter der Bedingung, dass Sie Ihr Abschlusszeugnis bis zum Ende des 1. Fachsemesters Ihres Masterstudienganges nachreichen.

Sofern Ihre Zulassung unter inhaltlicher Auflage erfolgt, wird Ihnen diese gesondert durch die Fakultät mitgeteilt werden.

Wenn Sie bereits an der Universität Hamburg in einem anderen Studiengang eingeschrieben sind, wird durch die Annahme dieses Studienplatzes - außer bei einem Doppelstudium - der bisherige Studiengang ersetzt. Sie behalten Ihre Matrikelnummer und benutzen zur Zahlung des Semesterbeitrages den Ihnen vorliegenden Online-Zahlträger in STiNE.

Solange das Abschlusszeugnis des Erststudiums nicht vorliegt, werden Sie in Ihrem bisherigen Studiengang eingeschrieben bleiben. Gleichzeitig werden Sie für den angestrebten Masterstudiengang registriert. Sobald der Nachweis über den Abschluss des Erststudiums erbracht wurde, erfolgt die endgültige Umschreibung in den Masterstudiengang und Sie erhalten entsprechend neue Online-Dokumente (inkl. BAföG-Bescheinigung) im STiNE-Account zur Verfügung gestellt.

Sofern Sie noch nicht an der Universität Hamburg eingeschrieben sind oder waren, erhalten Sie Ihre Matrikelnummer und die Zahlungsaufforderung für den Semesterbeitrag ca. vier Wochen nach Ablauf Ihrer Immatrikulationsfrist. Zusammen mit der Matrikelnummer und der Zahlungsaufforderung erhalten Sie einen vorläufigen Studierendenausweis und ein vorläufiges SemesterTicket für den Hamburger Verkehrsverbund (HVV). Bitte beachten Sie, dass Ihre Semesterunterlagen nicht ins Ausland geschickt werden. Sollten Sie noch keine Adresse in Deutschland angeben können, erhalten Sie per Mail Zugangsdaten für STiNE und können die Zahlungsaufforderung online abrufen. Ihr SemesterTicket und Ihren Studierendenausweis übersenden wir Ihnen, sobald Sie uns eine Anschrift in Deutschland mitteilen können. Die endgültigen Unterlagen werden Ihnen mit Ablauf der Geltungsdauer der vorläufigen Unterlagen zugeschickt, sofern Ihre Unterlagen vollständig vorliegen und der Semesterbeitrag bei der Universität eingegangen ist. Zeitgleich wird Ihnen eine Semesterbescheinigung (inkl. BaföG-Bescheinigung) in Ihrem STiNE-Account zur Verfügung gestellt.

Bei einer Bewerbung aus dem Ausland dient dieser Bescheid auch zur Vorlage bei den Behörden und zuständigen Stellen im Heimatland zur Beantragung der für die Einreise in die Bundesrepublik Deutschland erforderlichen Aufenthaltserlaubnis (Visum). Bitte beachten Sie, dass jeder Wechsel im Studiengang vorher mit der zuständigen Ausländerbehörde abgeklärt und genehmigt werden muss. Weitere Informationen dazu finden Sie auch auf unserer Homepage unter <a href="https://www.uni-hamburg.de/visum">www.uni-hamburg.de/visum</a>.

Wir wünschen Ihnen einen erfolgreichen Start ins Studium!

Mit freundlichem Gruß

Beratung und Administration - Team Bewerbung, Zulassung und Studierendenangelegenheiten

Dieser Bescheid wurde mittels EDV-Technik erstellt und ist daher ohne Unterschrift und Namenswiedergabe wirksam.

Bitte speichern Sie diesen Bescheid so schnell wie möglich oder drucken Sie ihn aus, weil der Bewerberaccount nicht dauerhaft bestehen bleibt. Die Bescheide sind dann nicht mehr verfügbar und können auch nicht erneut erstellt werden.

**RECHTSBEHELFSBELEHRUNG:** Gegen diesen Bescheid kann innerhalb eines Monats nach Bekanntgabe Widerspruch bei der Universität Hamburg, Referat 30, Beratung und Administration, Team Bewerbung, Zulassung und Studierendenangelegenheiten, Alsterterrasse 1, 20354 Hamburg, erhoben werden. HINWEIS: Ein erfolgloses Widerspruchsverfahren ist gebührenpflichtig. Siehe auch <a href="https://www.uni-hamburg.de/widerspruch">www.uni-hamburg.de/widerspruch</a>

Application number: 1520356

#### **Letter of Acceptance**

Dear Applicant,

Welcome to Universität Hamburg! We are delighted that you have chosen our University, and are pleased to confirm that you have been accepted to the following degree program commencing in **winter semester 2021/22** 

### **Master of Science Physics**

The next steps in the procedure is detailed below. Please read this information carefully!

To enroll, you will first need to accept the university place. Pursuant to Section 25 subsection 1 no. 1–3 of the University Admission Bylaws (UniZS), you must meet the following requirements:

- 1. Carefully complete the following form: <a href="www.uni-hamburg.de/master-en">www.uni-hamburg.de/master-en</a>. Submit this form and attach all of the supporting documents detailed in the checklist www.uni-hamburg.de/checklistmaster.
- 2. Universität Hamburg must receive your complete enrollment application by **May 26, 2021** in digital form exclusively. This deadline is final; no extensions can be granted.

If you fail to meet any of these requirements, your application will become invalid and you will no longer be able to enroll.

All documents detailed in the checklist must be uploaded as required, regardless of whether you have already submitted these as part of your application, or were or are still enrolled at Universität Hamburg.

If you are still completing your first degree, you will be admitted on the condition that you submit your final transcript by the end of the first subject semester of your master's degree program.

If you are granted conditional admission, the faculty will notify you separately.

If you are already enrolled at Universität Hamburg in another degree program, your previous program will be replaced upon acceptance of this university place—except in the case of a double degree. You will retain your student ID number and should use the payment form available in STINE to pay your semester contribution.

You will remain enrolled in your current degree program until you have received the final record of grades from your first degree. At the same time, you will be registered for your desired master's degree program. Once you have submitted proof that you have completed your first degree, your enrollment into the master's degree program will be finalized and new online documents, including a BAföG certificate, will be made available in your STINE account.

If you are not enrolled at Universität Hamburg now or have never been, we will send you your student ID number and payment request for the semester contribution approximately four weeks after we receive your enrollment application. We will send you provisional proof of enrollment and a provisional semester public transport pass for the Hamburg Public Transport Association (HVV) together with your student ID number and the payment request. Please note that your semester documents will not be sent abroad! If you do not have an address in Germany yet, we will email you your STINE access details and you will then be able to view the payment request online. We will send your semester public transport pass and your student ID after you provide an address in Germany. We will send you your final documents before your provisional semester documents expire provided that Universität Hamburg has received your semester contribution, you have submitted proof of sufficient health insurance coverage, and your registration certificate. Proof of enrollment (incl. your BaföG certificate) will be made available in your STINE account at the same time.

When applying from abroad, you may also submit this acceptance letter to the responsible authorities in your home country to apply for a residence permit (visa) to enter Germany, as necessary. Please note that any change in degree program must first be clarified with and approved by the responsible Registration Office for Foreigners. For more information, please also see <a href="https://www.uni-hamburg.de/visum">www.uni-hamburg.de/visum</a>.

We wish you all the best for a successful start at Universität Hamburg!

Sincerely,

Advising and Administration – Team Application, Admission and Student Affairs

This letter is typed and valid without signature or seal.

Please save this letter of notification as soon as possible or print it out! Your application account is only temporary and when





### **PARIS PHYSICS MASTER**

Atef ASNACIOS
Professor,
Head of the Paris Physics Master
Université de Paris

3 1 57 27 62 13

**a** + 33 1 57 27 62 13 Fax: + 33 1 57 27 62 11

atef.asnacios@univ-paris-diderot.fr

Paris, 28 mars 2021

### Letter in support of PRABHAT - To Whom It May Concern

I, Atef Asnacios, professor of physics, Paris Diderot University, head of the international Master program "Paris Physics Master", certify that PRABHAT was accepted to join our master 1 level beginning 06/09/2021, and programmed for one year, with internships and second session exams that may take place until the end of August 2022.

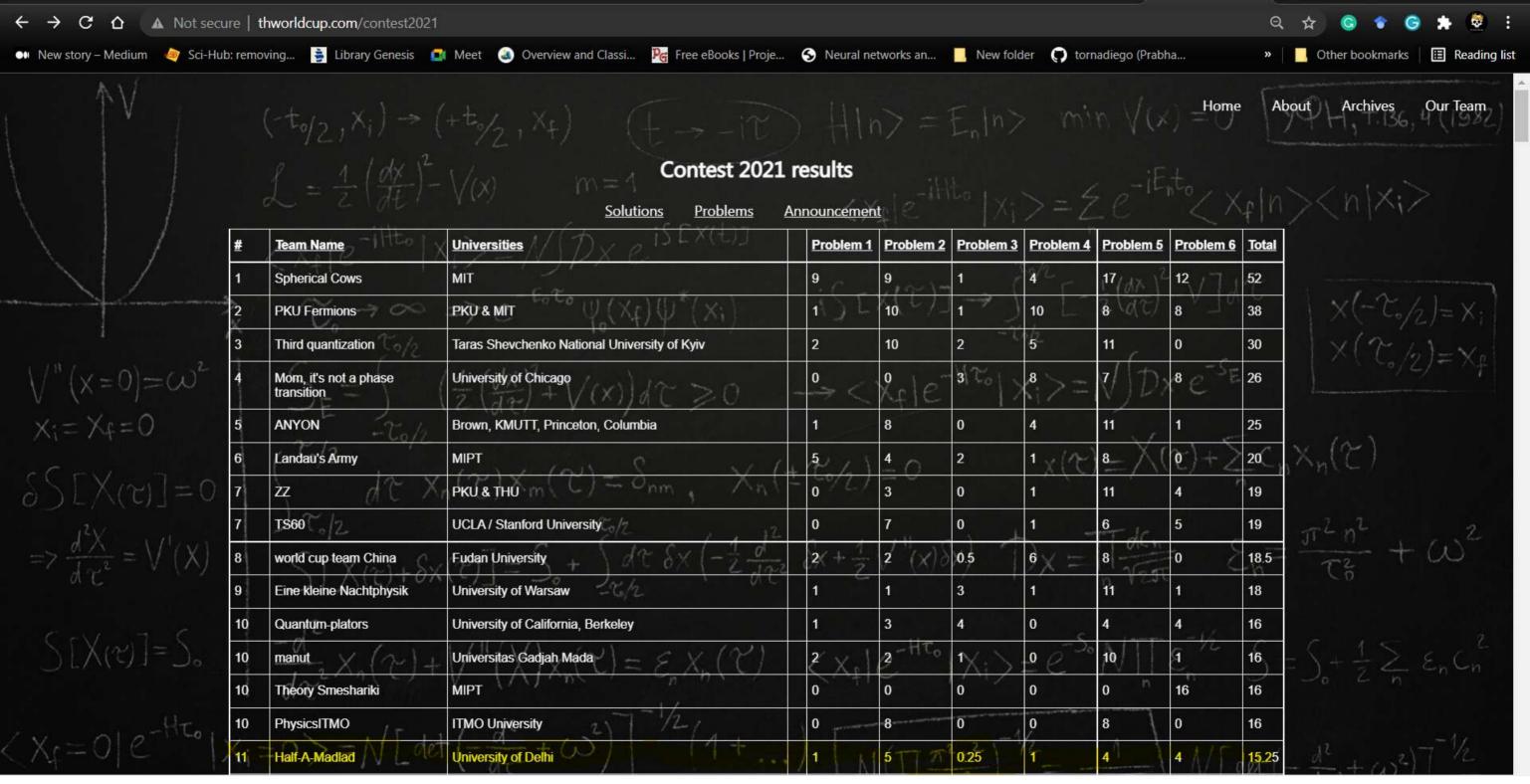
The tuition fees will be 243 €, plus a CEVEC contribution of 92 €. Thus the total costs of the program for the year 2020-2021 will be 335 €.

Beyond the tuition fees, the living expenses for one year in Paris are usually estimated in the range 8,000 to  $10,000 \in$ .

Please contact us if you would like any further details. And please give PRABHAT every consideration for his application.

Atef Asnacios, on behalf of the Paris Physics Master







#### Prabhat Kumar <prabhat.70707@gmail.com>

#### Verification of resume items for Physics Dept Alumnus

Prabhat Kumar prabhat.70707@gmail.com>

13 October 2021 at 00:56

To: Physics Society <physics.society@ststephens.edu>, Neelam Firdous khan <neelamkhan37@gmail.com>

#### Greetings,

To whomsoever it may concern, I am Prabhat from B.Sc. (HONS) Physics '21 batch. I need you to kindly verify the below-mentioned activities' details from my undergrad years (2018-2021).

- I was a member of the Physics Society and Electronics Society, St. Stephens' College, from 2018 to 2021.
- I stood first in the Meera Memorial Paper Presentation Competition, 2021 that experienced the participation of 50 teams from all over India.
- 3. I was 1st Runner-up in the Annual Popli Aptitude Test-2020.
- I worked for college EVMs under Electronics Society, 2019.
- 5. I have worked with Arduino-UNO.

If you find that the information fits with your data, simply send an approval by replying "verified" to this email. I am attaching the required certificates.

Thanking you for the time and consideration

#### Yours Sincerely PRABHAT

Masters in Physics (21-23) Indian Institute of Technology

B.Sc. (Hons) Physics St. Stephen's College Delhi University India

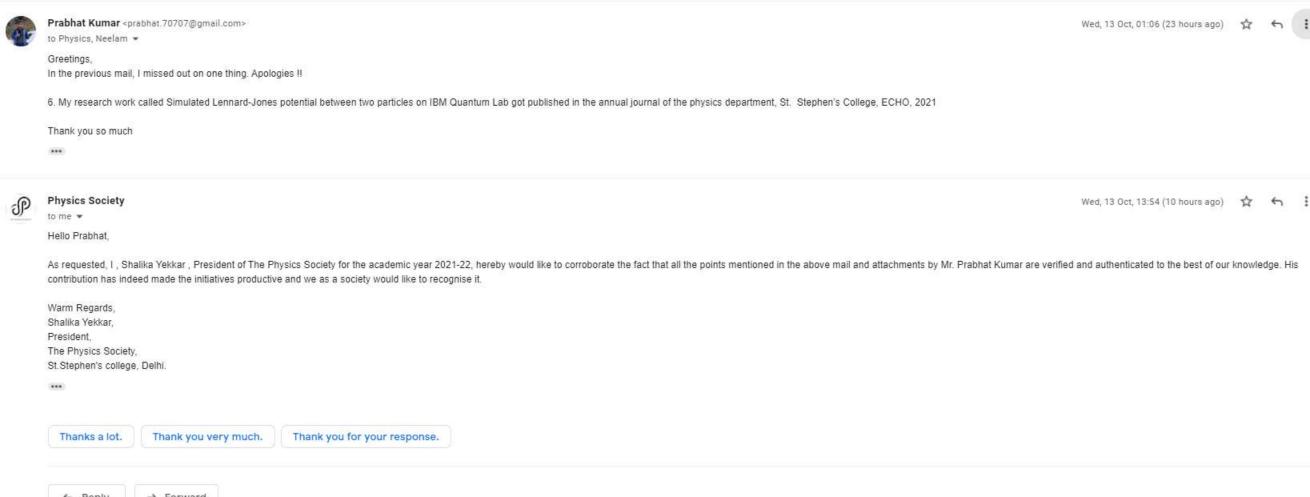
#### 2 attachments



Popli Aptitude Test Result 2020.pdf

12

Gmail - Results of Meera Memorial paper reading competition 2021.pdf 132K



With this Certificate of Achievement, the Judges of The 2020 University Physics Competition do hereby declare that the team of Kriti Baweja, Prabhat Kumar, Panya Jain under the supervision of faculty sponsor Sanjay Kumar of

St. Stephens College, Delhi University has earned the rank of Silver Medal Winner

Dr. Kelly S. Cline, Contest Director

# Physeeks.com awards this

# Certificate of Participation

to

# PRABHAT KUMAR

for competing in the Annual International Astronomy and Physics competition 2020

The participant was challenged with questions from various topics of physics and astronomy and has qualified to participate in Advanced Round

**VARUN SHANKAR** 

Varun Shankar

Founder of physeeks.com





#### certificate of participation

AIAPC Physeeks <aiapcphyseeks@gmail.com> To: prabhat.70707@gmail.com 17 October 2020 at 16:15

Dear Prabhat

Thank you for participating in AIAPC20

Congratulations on qualifying for the Advanced round!

The advanced round will be conducted from 11:59 am to 11:59 pm on 25th October

If you have not made the payment for the Advanced round yet then make sure to do it now because there are even more amazing questions to come! (Link for payment- https://physeeks.com/payment-qr/)

More than half of those who qualified have already paid and you have a very high chance of winning one of the 9 prizes!

New topic added to Advanced round- Black Holes!!!

Your certificate of participation is attached to this email

Regards Varun Shankar



















# **CERTIFICATE OF MERIT**

Awarded to		
Mr/Ms	Prabhat	of
St.	Stephen's College, Delhi U	niversity
for participat	ting and having secured _	position in
Pulsatir	ng Mind Science Quiz	_ event held during 47th annual
South-Asian	medical fest, Pulse 2019 h	eld at All India Institute
of Medical S	ciences, New Delhi by the	Literary Department.

Tukul Mukul Kumar President

Alen Joe Joseph Literary Secretary



COURSE CERTIFICATE

May 9, 2021

# Prabhat

has successfully completed

Problem Solving Using Computational Thinking

an online non-credit course authorized by University of Michigan and offered through Coursera



Pufulanc

Chris Quintana Associate Professor School of Education



#### Prabhat Kumar <prabhat.70707@gmail.com>

### Results of Meera Memorial paper reading competition 2021

1 message

Physics Society <physics.society@ststephens.edu> Bcc: prabhat.70707@gmail.com

3 March 2021 at 14:11

Dear All,

The Meera Memorial paper reading competition presents an exciting opportunity for those looking to present their ideas in front of an audience and willing to improve from the feedback from the ensuing discussion. This year the Physics Society of St. Stephen's College had organised The Annual Meera Memorial Paper Reading Competition, on the 23, 24 and 25th of February, 2021. This year's competition was indeed an enriching one and consisted of the participants presenting a research paper, summer projects or term projects or many more new topics that they found interesting or would study upon in the near future.

The top 3 presentations have been rewarded which are indicated as follows:

Merit	Name of the Student/s	Course	Prize Money (Rs)
1st Prize	Kriti Baweja, Panya Jain and Prabhat	BSc(H) Physics III year	<b>800/- each</b> (2400/- total)
2nd Prize	Binayak B. Roy and Rahul Malllikarjun	BSc(H) Physics III year	<b>600/- each</b> (1200/- total)
3rd Prize	Sarthak Vijay Pranav Maheshwari, Ravish Mehta,	BSc(H) Physics III year  BSMS II year (IISER Pune) BSMS II year (IISER Pune)	<b>400/- each</b> (1600/- total)
	Kaustubh Gupta	BSMS II year (IISER Pune)	

#### Congratulations to all the winners!!

Warm Regards, The Physics Society, St. Stephen's College, Delhi.

### Popli Aptitude Test Result - 2020.

S.	Name	Course and Year	Marks (out of 30)	Prize
No.				
2	Chaitanya Varma	BSc (H) Phy II yr	8.5	III
8	Akash Maurya	BSc (H) Phy III yr	13.5	I
9	Sandra Elsa	BSc (H) Phy I yr	6.5	Special
				Mention
12	Prabhat	BSc (H) Phy II yr	11.5	II
15	Karnpriya Pandey	BSc (H) Phy I yr	6.5	Special
				Mention

(The test was conducted on 28th February 2020 at 12:30 PM in NPLT)

Dr. Harish Kumar Yadav (Staff Advisor, Phy. Soc)

## To Whomsoever It May Concern,

This is to acknowledge that Chaitanya Varma and Prabhat from St. Stephen's College secured Second position in Griphomania, held on 3rd October 2019, organized by The Mathematics Society of St. Stephen's College.

The event witnessed the participation of around 100 people across the DU circuit and across various colleges in and around Delhi.

# Regards

The Mathematics Society St. Stephen's College



# The Mathematics Society

St. Stephen's College

M +91-7065704907 E mathsoc.ssc@gmail.com

W www.mathsoc.ssc.com











