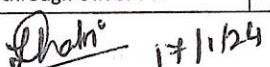
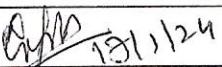
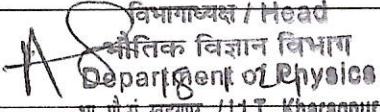
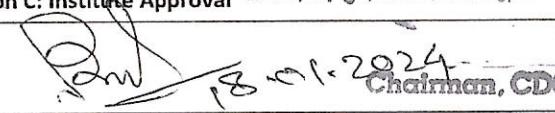
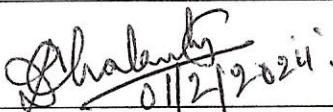




**Office of International Relations**  
**Indian Institute of Technology Kharagpur**

**Student Undertaking to Apply for Foreign Internship**

Section A: Applicant details (to be filled in by student)			
Name :	DHATRI RAGHUNATHAN		
Roll Number:	20PH20007	Degree enrolled in:	INT. MSc.
Department/ School/ Centre:	PHYSICS	Expected date of graduation:	MAY 2025
Proposed Foreign internship details (to be filled in by student)			
Host organization (university/ laboratory) with full address	ARTEMIS, OBSERVATOIRE DE LA COTE D'AZUR, NICE, 06304, FRANCE		
Name, title, contact of supervisor/mentor (if available)	NELSON CHRISTENSEN, DIRECTEUR ARTEMIS, +33-4-92003166 (OFFICE), nelson.christensen@oca.eu		
Title of project/ Name of activity:	RESEARCH INTERNSHIP: BAYESIAN MODEL COMPARISON FOR TRANSIENT GW SOURCES		
Start date of internship:	1 <sup>st</sup> MAY 2024	End date of internship :	27 JUNE 2024
Source of funding & other support (self/ scholarship):	Agency CHARPAK LAB SCHOLARSHIP	Amount awarded -	Amount applied for 1400 EURO
Undertaking by student:	<ul style="list-style-type: none"> <li>My internship does not violate any academic schedule or policy of IIT Kharagpur. I take full responsibility for my conduct during my visit and agree to strictly follow all guidelines laid down by my host university and host country and I understand that I am answerable to the Dean IR and Dean SA in case of any misconduct that may harm the Institute's reputation.</li> <li>Once I accept the offer of an internship, I shall not renege on my acceptance, nor accept any other offer for internship from CDC/ Dept/ Any other source.</li> <li>I shall keep OIR &amp; CDC informed about internship offers I receive/accept/decline.</li> <li>Failure to comply with the above may adversely affect my placement opportunities</li> </ul>		
Post completion requirements (if any):	-		
I am using this form for (tick one):	An application made through OIR or FTP	Requesting NOC from <input checked="" type="checkbox"/> Dean IR	Other (specify):
Signature of student with date:	 17/1/24		
Section B: Departmental Approval (to be filled in by Dept./School/ Centre)			
Faculty Advisor (signature with date):	 17/1/24		
Head of Dept/ School/ Centre (signature with seal and date):	 विभागाध्यक्ष / Head वैतिक विज्ञान विभाग Department of Physics		
Section C: Institute Approval			
Chairperson CDC (signature with seal and date):	 18-01-2024 Chairperson, CDC		
Dean IR (signature with seal and date):	 01/2/2024 Associate Dean, Alumni Affairs and International Relations असोसिएट एडम्युनिटी एंड इंटरनेशनल रिलेइट्स Indian Institute of Technology Kharagpur		

Form updated 11<sup>th</sup> March 2020

Received  
 Dhatri 2/2/24  
 Mohit 2/2/24



Nelson Christensen  
Directeur ARTEMIS UMR 7250  
Observatoire de la Côte d'Azur  
Boulevard de l'Observatoire  
06304 NICE Cedex 4, France  
nelson.christensen@oca.eu  
+33-4-92003166

January 15, 2024

**Re: Acceptance letter for Research internship / research project at the Observatoire de la Côte d'Azur**

To Whom It May Concern:

It is my pleasure to support Ms. Dhatri Raghunathan, a 4th year Master's in Physics student at Indian Institute of Technology, Kharagpur to the gravitational-wave research group at the ARTEMIS Laboratory, Observatoire de la Côte d'Azur, for a summer internship/project from 1 May 2024 to 27 June 2024 under the Charpak Lab scholarship. We will be pleased to welcome Ms. Dhatri Raghunathan in our laboratory in order to develop research in Bayesian model comparison for transient gravitational-wave sources.

So far, LIGO-Virgo-KAGRA have discovered ~90 astrophysical sources emitting gravitational waves corresponding to the merger of two compact objects, black holes or neutron stars. Discovering new types of transient gravitational-wave sources (core collapse supernova, magnetar, cosmic string, ...) is a goal for the next observing run that started in 2023. One needs to be able to test different signal waveform models to assess the nature of the source. The goal of the internship is to build a Bayesian inference pipeline that provides model comparison between different types of sources. If time permits, the study may involve to develop methods based on machine learning to interpolate between waveforms in the case of sources for which the waveforms are available from sparse catalogs of waveforms. The student will use the O3 and O4 LIGO-Virgo-KAGRA observing run data and will work at the ARTEMIS Laboratory, Observatoire de la Côte d'Azur, Nice, France. The requested skills are motivation for academic research, plus python language programming.

During her stay, Ms. Dhatri Raghunathan will be provided all facilities for work.

Sincerely,

A handwritten signature in black ink that reads "Nelson Christensen".

Nelson Christensen  
Directeur Laboratoire ARTEMIS