[Note: One application form is required for each postdoctoral talent.]

Ref. No. : Date/Time of Receipt :   (for official use)

Innovation and Technology Fund (ITF)
Postdoctoral Hub
for Incubatees and Innovation and Technology Tenants of the
Hong Kong Science & Technology Parks Corporation (HKSTPC) and
Hong Kong Cyberport Management Company Limited (Cyberport) ("PH-SPC")
Application Form

I. Applicant Company (Employer)

1. Name of company : (English) Bitquant Technology Services

   (Chinese) 比特量化科技服務

2. Type of incubation / tenancy :

   ☐ Incubatee of HKSTPC Incubation Programme, please specify:

   ☐ Incu-Tech ☐ Incu-Bio

   ☐ Incu-App ☐ LEAP

   ☐ Others (please specify:)

   ☐ Incubatee of Cyberport Incubation Programme

   ☐ On-site ☐ Off-site

   ☐ Tenant [Note 1] of HKSTPC (No. of employees:)

   ☐ I&T ☐ HDIH

   ☐ BSC ☐ Others (please specify:)

[1] The core business activities of the applicant company should be technology-intensive and innovation-based. The applicant company's operations should not be primarily in mass production, although small scale pilot production or high value-added production in support of product and market development and innovation may be permitted. Please refer to the definition of R&D activities as stipulated in the PH-SPC Application Guide.
This programme is also applicable to tenants of the Healthcare Devices Innovation Hub (HDIH), Biomedical Technology Support Center (BSC) and ICT Co-working Center of HKSTPC and Smart-Space of Cyberport. However, those tenants must fulfill the following additional conditions to be eligible for this programme:
(a) the applicant company must have a remaining lease term/tenancy period of at least 9 months with HKSTPC/Cyberport at the time of application which should cover the engagement period;
(b) the applicant company must have a fixed office room/space with dedicated workstation(s) for the postdoctoral talent. Floating seats, including the Flexi-Space of Cyberport, will not be accepted;
(c) detailed checking will be carried out by HKSTPC/Cyberport at the beginning and at the end of the engagement period, with one or two pre-arranged visits in between; and,
(d) the applicant company must provide their postdoctoral talent training plan, and progress evaluation form for HKSTPC/Cyberport and ITC to understand better how the postdoctoral talent has been doing the tasks assigned and whether the job is R&D-related.

☑ Tenant [Note 1] of Cyberport (No. of employees: 1)

☐ I&T ☐ Smart-Space

☑ Others (please specify: rental pending)

3. Incubation / tenancy period : From 15/02/2020 (dd/mm/yyyy)
To 01/03/2023 (dd/mm/yyyy)

4. Business Registration No. (first 8 digits): | 5 | 6 | 6 | 3 | 0 | 8 | 4 | 5 | (Expiry date: 09/09/2020)

5. Company address: Unit 2202, 22/F Kaiser Centre, 18 Centre Street, Sai Ying Pun, Hong Kong

6. Contact Tel.: 852-63529195 7. Fax.: -

8. Any research and development (R&D) project of your company currently or previously funded by the ITF?

☐ Yes, please specify: ☑ No.

(Add more records if necessary)

Programme Coordinator (Supervisor of the postdoctoral talent) [Note 2]

9. Name of coordinator: Suchen LIAO

10. Position: Proprietor

11. Direct tel.: 852-6352 9861 12. Email address: grants-admin@bitquant.com.hk

[2] The programme coordinator is responsible for direct supervision of the postdoctoral talent under application, overseeing the management and reporting of the engagement of the talent generally; ensuring the proper usage of approved funds in accordance with ITC guidelines and instructions; liaising with and answering all enquiries/requests raised by ITC for information and clarification on all aspects of the engagement of the talent.

II. The Postdoctoral Talent

13. Name of postdoctoral talent:
English: Joseph Chen-yu WANG
Chinese (if applicable): 王承宇

14. Tel. no. of postdoctoral talent:
59647428 (mobile) 59647428 (Home)

15. Email address:
joequant@gmail.com

16. Academic Qualification:
Doctoral Degree obtained in the following STEM-related programme (please specify): Astronomy
Institution: University of Texas at Austin
Year of graduation: 1998

[For overseas academic qualification only]
Is the qualification awarding institution among the top 100 universities/institutions for STEM-related subjects *in the latest publication* of the world university ranking tables of QS, Shanghai Jiao Tong University and Times Higher Education?

Yes ☑

Ranking table	STEM-related fields	Ranking
QS World University Rankings	by "Natural Sciences"	35
Times Higher Education World University Rankings	by "Physical Sciences"	38

No ☐ please provide other document(s) (such as the qualification assessment report issued by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications) supporting that the specific skills possessed by the candidate or the equivalence of the qualification concerned being assessed is on the doctoral level.

17. Residency in Hong Kong:
☑ Hong Kong permanent resident
☐ Hong Kong non-permanent resident

18. Has the postdoctoral talent participated in the Postdoctoral Hub or Researcher Programme (formerly known as Internship Programme) before?
☐ Yes. ☑ No.

(Add more records if necessary)

19. Is this postdoctoral talent a replacement for a previous postdoctoral talent?
☐ Yes. Postdoctoral Hub Project ref. of previous postdoctoral talent:

☑ No.

III. Engagement Details

20. Position: Research Assistant

21. Engagement period: From 01/03/2020 (dd/mm/yyyy)
    To 28/02/2023 (dd/mm/yyyy)

22. Actual monthly salary to be offered to the postdoctoral talent: HK$ 32,000.00

23. Employer's monthly contribution to the Mandatory Provident Fund (MPF): HK$ 1,500.00

24. Location of workplace (if different from the company address):

25. Details of the R&D activities engaged in or plans to conduct in Hong Kong and the R&D duties to be assigned to the postdoctoral talent:: Note3

Integration of cross-domain algorithmic platforms

Recent advances in computational technology such as blockchain, artificial intelligence have great potential to create advances in science and finance. However, these advances are limited by the fact that although different fields use common algorithms, they use incompatible and conflicting software, and hence advances and software development in one field cannot easily be used in other fields. This is a big barrier in computational technology as not only prevents integration between scientific and business worlds, but the lack of common platforms also creates barriers between different business domains such as insurance, shipping, and finance.

The focus of this project is to develop common platforms that will allow resources between different domains. In particular, our project will develop tools and platforms intended to address the fields of particle physics and financial technology, such as blockchain technologies and machine learning. Our project will take an open

source computational platform that we have developed for financial technology, and integrate algorithmic systems which are common to particle physics as well as attempt to interface our system to blockchain and machine learning systems.

The particle physics component of our project will be performed in cooperation with an international team of software developers working on systems to support next generation of particle accelerators such as the China's Circular Electron Position Collider. Our initial efforts will be to integrate software the ROOT@CERN package and the Xeus-cling C++ compilation with our existing fintech algorthm platform. This will then attempt to use the Monte Carlo system for ROOT@CERN to perform financial technology computations.

The fintech component of our project consists of an open source existing platform for quantitative finance based on the Jupyter python notebook technology. In the first phase of our project, we will incorporate ROOT@CERN into our system, and work with particle physicists to use fintech machine learning systems for particle physics purposes.

Once we have developed a tool for high performance computing in particle physics and fintech in year one, we will add in additional functionality to your system. In particularly we will explore the use of blockchain technology

26. Guidance to be provided to the postdoctoral talent to gain R&D experience

The postdoctoral candidate will be supervised by an advisory committee consisting of between three to five advisers. The advisers will include the following people

1) a senior particle physicist working at CERN or with the CEPC project

2) a local Hong Kong business adviser who will advise on marketing and business aspects

3) a professional software developer with experience in quantitative finance

[3] The applicant company should assign to the postdoctoral talent relevant R&D duties (not secretarial or administrative duties) and with appropriate level of workload which warrants a full-time employment. The postdoctoral talent should be suitably guided by a supervisor. Please refer to the definition of R&D activities as stipulated in the PH-SPC Application Guide.

IV. Task Plan for the Postdoctoral Talent

(Please set out the timetable of the tasks to be assigned to the postdoctoral talent.)

Date	Task details
01/03/2020 - 31/08/2020 dd/mm/yyyy - dd/mm/yyyy (for 1st 6-month interval)	Incorporate root@CERN.ch into fintech platform, particularly the using of XEUS Cling. Research machine learning and blockchain technologies and prepare plan to incorporate machine learning and blockchain into platform. Work with particle physicists to have fintech platform in use in one place.
01/09/2020 - 28/02/2021 dd/mm/yyyy - dd/mm/yyyy (for 2nd 6-month interval)	Incorporate blockchain system into fintech platform. Use root@CERN.ch technology to perform financial calculations using Monte Carlo, and incorporate serialization technology for financial calculations. Use blockchain/machine learning for particle physics calculation.
01/03/2021 - 31/08/2021 dd/mm/yyyy - dd/mm/yyyy (for 3rd 6-month interval)	Expand use of common tools. Create incorporate existing tools into high performance computing framework. Meet at conferences in order to find uses for technology beyond particle physics and finance.
01/09/2021 - 28/02/2022 dd/mm/yyyy - dd/mm/yyyy (for 4th 6-month interval)	Complete integration of common tool format at particle physics laborotory

01/03/2022 - 31/08/2022 dd/mm/yyyy - dd/mm/yyyy (for 5th 6-month interval)	Expand platform to other domains. Main interest would be in biological sciences and ecology. Add features to existing system
01/09/2022 - 28/02/2023 dd/mm/yyyy - dd/mm/yyyy (for 6th 6-month interval)	Complete expansion of platform for alternative domains

V. Admission/Employment of the Postdoctoral Talent under the Technology Talent Admission Scheme (TechTAS)

27. Is the admission/employment of the postdoctoral talent related to TechTAS?

☐ Yes

- ☐ Non-local technology talent admitted using a quota under TechTAS
- ☐ Application for the non-local technology talent submitted under TechTAS
- ☐ Local talent employed to fulfill the employment requirement under TechTAS

☑ No

VI. Information for Fund Disbursement

Name of payee (If different from the company name):

Bitquant Technology Services

Declaration

I hereby declare and confirm that:

☑ (a) the selected postdoctoral talent meets all the eligibility criteria for the Postdoctoral Hub and is legally permitted to work in Hong Kong;

☑ (b) the selected postdoctoral talent is not the proprietor, partner, shareholder or management of the applicant company or their relatives. The postdoctoral talent will be allocated with a fixed office room/space with dedicated workstation(s);

☑ (c) the postdoctoral talent selection process was open, fair and without prejudice to

any candidates. My company or any person/staff authorised by my company to handle or be in any way involved in the selection process had no actual or potential conflict of interest;

☑ (d) the funding conditions and requirements set out in the ITF Postdoctoral Hub for Incubatees and Innovation and Technology Tenants of the Hong Kong Science & Technology Parks Corporation and Hong Kong Cyberport Management Company Limited Application Guide have been/will be complied with;

☑ (e) my company and the postdoctoral talent are not receiving and will not receive other employment subsidies provided by any other local public funding for the subject engagement under application;

☑ (f) my company is not currently participating in any other incubation programme operated by HKSTPC or Cyberport other than the programme specified in Part I. 2 of this form;

☑ (g) all information provided in this application as well as the accompanying information reflects the status of affairs as at the date of application. I shall inform the Secretariat of the ITF immediately if there are any subsequent changes to the above information; and

☑ (h) in the event that any information is found untrue, incomplete or inaccurate, ITC reserves the right to revoke the approval of any application, request for refund of any reimbursement to the Government, and subject the case to legal proceedings.

☑ I understand and agree that the information provided in this form will be used and/or disclosed by the Government to the recommending organisation (i.e. HKSTPC or Cyberport) and relevant parties to process the application, to conduct research and survey, and if the application is successful, to monitor the engagement, to exercise its rights and power in relation to the engagement, and for other related purposes. I also understand and agree that the ITC and the recommending organisation (i.e. HKSTPC or Cyberport) at all times have the right to seek or collect additional information (e.g. postdoctoral talent's attendance records) from my company and the postdoctoral talent to substantiate and process the application, and monitor the approved application where necessary. Note

☑ I understand and agree that HKSTPC and Cyberport may visit and interview my company and the postdoctoral talent from time to time during the engagement period for monitoring purposes.

Note: Information of the applicant company will be published at ITF website once the application has been approved.

Authorised Signature with Company Chop*:
Name of authorised signatory:
Position:

Tel No.:
Fax No.:
Name of applicant company:
Signature date:

* Please also submit a hard copy of the application form duly signed by the company's authorised officer by post to the following address:

Innovation and Technology Commission,
10/F, Rykadan Capital Tower, 135 Hoi Bun Road, Kwun Tong, Kowloon, Hong Kong
(PH-SPC Application)

Attachment of supporting documents:

(a) Incubation/tenancy contract of the applicant company;
(b) Business registration certificate of the applicant company;
(c) Qualification document of the postdoctoral talent;
(d) Recruitment advertisement for the postdoctoral talent; and
(e) Employment contract of the postdoctoral talent (where applicable).