
BERKELEY EDUCATION ALLIANCE FOR RESEARCH IN SINGAPORE (BEARS)

*A University of California Foreign Affiliate – Incorporated and Operated in Singapore
Business Registration No. 201132916D*

Singapore: c/o 1 Create Way, CREATE Tower #11-00, Singapore 138602
Berkeley: c/o CREST, 406 Cory Hall, University of California, Berkeley, CA 94720-1770



17 July 2021

PRIVATE & CONFIDENTIAL

Ajitanshu Vedrtam

358, Moh-Shahabajpur PS-Kotwali
Badaun Pin: 243601
Uttar Pradesh, India

Dear Ajitanshu Vedrtam,

We are pleased to offer you a Contract of Employment (Contract) for your appointment as a Postdoctoral Scholar – Employee with the Berkeley Education Alliance for Research in Singapore (BEARS), located at Create Tower, 1 Create Way #11-01, Singapore 138602 on the following terms and conditions:

1. Period of Contract Employment

- 1.1 This Contract for full-time employment (100 per cent) shall be for a period of one year commencing on 15 October 2021 and ending on 14 October 2022. This Contract will terminate at the end of the contract period, but may be renewed or extended at the sole discretion of BEARS.
- 1.2 Where applicable, any discussion on the renewal or extension of the Contract will commence two (2) months before the termination of the Contract.

2. Remuneration

- 2.1 You will be paid a salary of S\$8,000 per month (S\$96,000 per annum). This salary will be directly deposited to your designated bank account in Singapore on the 28th of each month, or the following work day if the 28th falls on a non-working day.
- 2.2 Should your Contract be extended for a further period of twelve (12) months, your monthly salary will be reviewed and any increase will be at the sole discretion of and determined by BEARS.
- 2.3 You are required to keep your current and any future salary confidential at all times.

3. Central Provident Fund (CPF)

- 3.1 If you are a citizen of Singapore or a Singapore Permanent Resident, BEARS' contribution and your contribution to the Central Provident Fund will be paid in accordance with the prevailing Law and applicable rates governing CPF contributions in Singapore.

4. Income Tax

- 4.1 You shall be personally responsible for all income tax payable to the Inland Revenue Authority of Singapore and in your home country in respect of all your remuneration and taxable benefits earned through your Contract with BEARS.
- 4.2 If you are a foreign national and in the event you leave Singapore at the end of your Contract, BEARS will, in accordance with the Income Tax Act, withhold your final salary payment until the Singapore income tax authority provides clearance for the release of your salary.

5. Pre-Employment Health Declaration / Medical Examination

- 5.1 Upon your arrival in Singapore, you will be required to undergo a medical examination by BEARS's appointed doctor at BEARS's expense to be certified as medically fit to perform the duties required under the terms of the Contract. If you are found to be medically unfit, this offer to you may be revoked without notice.
- 5.2 Should you have any pre-existing illness, BEARS and/or the Insurance company may exclude the pre-existing illness from being covered under your entitlement to medical benefits provided by BEARS under the Group Medical Insurance Plan.
- 5.3 Notwithstanding the above, you may be required to undergo a medical examination conducted by a medical officer designated by the Insurance company in order to qualify for medical and life insurance coverage under the Group Insurance Plan paid by BEARS.

6. Working Hours and Singapore Public Holidays

- 6.1 You will be required to work 40 hours in a calendar week, with a flexible schedule agreed upon between you and your supervisor.
- 6.2 You will be entitled to paid leave on all gazetted Singapore Public Holidays. If the Public Holiday falls on a non-working day, BEARS will designate a substitute paid leave day to replace the Public Holiday.

7. Duties and Responsibilities

- 7.1 As a Postdoctoral Scholar you will report to your mentor and supervisor **Hayden Taylor**, Associate Professor of Mechanical Engineering.
- 7.2 You will perform your duties and responsibilities as determined and assigned by **Hayden Taylor** or any designated authority in connection with the research activities, projects and programs of BEARS. A copy of your job specifications and a brief description of the research project are attached.
- 7.3 You will undertake your responsibilities diligently and will faithfully serve BEARS and devote your full time, attention, abilities and skills to the affairs of BEARS. You shall not, without the prior written consent of BEARS be directly or indirectly engaged or interested in any capacity in any other business, trade or occupation.

8. Other Posting or Assignments

- 8.1 During your employment under this Contract, BEARS may assign you to another position or research project within BEARS if required by BEARS's research activities, projects and programs and availability of research funding.

9. Annual Leave

- 9.1 You will be eligible for Annual Leave of 21 days for each year of contract service or pro-rated for an incomplete year.
- 9.2 A maximum of ten (10) days of unused Annual Leave may be accumulated and carried forward into the next period of entitlement. All carryover Annual Leave must be utilized within six (6) months of the following Contract year. Any carryover Annual Leave unused after six (6) months will be forfeited.
- 9.3 Notwithstanding the above, BEARS may schedule a mass vacation on an organisational or group basis in the interest of efficient management of programs in BEARS. In such an event, employees will be required to utilise their Annual Leave for this purpose.

10. Sick Leave

- 10.1 After completing three months of contract service, you will be eligible for sick leave of fourteen (14) day per year, pro-rated for an incomplete year of service. An application for paid sick leave shall be supported by a medical certificate issued by a certified doctor. Where hospitalisation is required, the period may be extended to sixty (60) calendar days per year, inclusive of any paid sick leave already taken, pro-rated for an incomplete year of service.
- 10.2 Any sick leave taken during the first three months of service will be treated as unpaid leave.
- 10.3 Sick leave not taken during the contract year will not be carried over to the following contract year and unused sick leave will not be en-cashed.

11. Medical and Dental Benefits

- 11.1 You will be eligible for General Practitioner and Specialist consultation and treatment at any medical clinic or medical centre listed in the Medical Insurance Plan provided by BEARS within the limits stipulated in the Plan. All benefits provided will be pro-rated for an incomplete year of service. Only full calendar months of service will be used to compute benefits.
- 11.2 You will be eligible for Specialist medical consultation and treatment, provided you obtain a written referral from an approved panel physician to see a panel specialist.
- 11.3 You will be eligible for Dental consultation and treatment in Singapore within the limits stipulated in Medical Insurance Plan provided by BEARS. Claims for reimbursement on such consultations and treatments shall be accompanied by a valid invoice, and all reimbursements will be made on a co-sharing basis as indicated in the BEARS Employee Handbook for Postdoctoral Scholars.
- 11.4 BEARS will cover your Hospitalisation and Surgical expenses as provided under BEARS's Group Hospitalisation and Surgical Insurance Plan for full-time employees and Postdoctoral Scholars currently in force in BEARS.

12. Other Paid Leave Benefits

- 12.1 While you remain in the employment of BEARS as a full-time contract employee, you will be eligible to apply for various paid leave benefits. Information on these paid leave benefits are contained in the BEARS' Employee Handbook for Postdoctoral Scholars.

13. Grievance Management

- 13.1 You may present or file a formal grievance in accordance with BEARS' Grievance Management procedures if:
 - a) you have a general grievance to raise to the attention of your supervisor; or

- b) you deem that a specific act by BEARS was arbitrary or capricious, or that the act is a violation of BEARS' rules, regulations or policies, or that the act adversely affects your Postdoctoral Scholar's appointment or training program.
- c) there is a layoff resulting from the lack of appropriate funding.

14. Employee Personal File

- 14.1 The Human Resource Department will maintain a record of your employment in BEARS. The personal file will contain copies of your personal documents, Appointment and Re-appointment Letters, pay records, training records, written Performance Appraisals, Singapore employment permit records and disciplinary warning records, if any.
- 14.2 Any request for access to your Personal File shall be made in writing to the Human Resource Manager.
- 14.3 You may view the contents of your Personal File in the presence of the Human Resource Manager or his designate, but will not be permitted to remove any documents from the file.

15. Confidentiality

- 15.1 You shall keep secret and shall treat all Company's official documents, trade secrets, business methods or information acquired in your official capacity as confidential.
- 15.2 You shall not, either during your employment or after termination of your service with BEARS, copy, extract or translate any BEARS documents for unofficial use, or use for your own or another's advantage any BEARS information which you know or ought to reasonably know to be confidential concerning the activities, projects, programs or affairs of BEARS, except in the course of your official duties in BEARS or with the prior written consent of BEARS.
- 15.3 You agree that in recognition of U.S. and non-U.S. export control laws and regulations, you hereby agree that you will not knowingly export or re-export, directly or indirectly, (i) any technical data (as defined in the U.S. Export Administration Regulations), (ii) disclose such technical data for use in or (iii) export or re-export, directly or indirectly, any immediate product, process or service directly produced by the use of such technical data, to any destination to which such export or re-export is restricted or prohibited by U.S. or non-U.S. law, without obtaining the prior authorization of the U.S. Department of Commerce and other competent governmental authorities as required by those laws. This provision shall survive expiration, termination or cancellation of this Agreement.

16. Termination of Service

- 16.1 Either party will be at liberty to terminate the Contract by giving one (1) month notice in writing without providing any reason whatsoever or by payment of one (1) month's salary in lieu of notice.
- 16.2 Notwithstanding the above, if you are found guilty of any serious misconduct or breach of terms of the Contract during your contract service with BEARS, the Contract may be terminated without any notice.
- 16.3 Upon termination of your contract of employment for whatever reason, you shall:
 - a) deliver to BEARS all books, documents, papers, materials, diskettes, tapes, drives or other computer storage materials, credit cards, and other property relating to the business and activities of the Company which may then be in your possession or under your power or control;
 - b) take all necessary action to resign without claim for compensation from all offices held in BEARS and from membership of any organization acquired by reason of or in connection with your Appointment, and if you shall fail to do so BEARS is hereby irrevocably authorized to appoint some person in your name and on your behalf to sign any document or do any act or thing necessary or requisite to give effect to.

17. Intellectual Property and Intellectual Property Rights (IP and IPR)

- 17.1 As a Postdoctoral Scholar, you will be participating in research programs funded by Singapore's National Research Foundation through BEARS. The terms and conditions governing your obligation and responsibilities, and the management of IP and IPR are detailed in Article 9 of the BEARS' Agreement.
- 17.2 In this respect, you shall be required to endorse a copy of the Informed Participation Agreement as a condition for employment in BEARS indicating your agreement to abide by the terms and conditions stated in Article 9, a copy of which is attached.

18. Miscellaneous

- 18.1 The various provisions in this Contract are severable and if any provision is held to be invalid or unenforceable by any court of competent jurisdiction, then such invalidity or unenforceability shall not affect the remaining provisions of this Contract.
- 18.2 You agree that this Contract is personal to you and that you may not assign your rights or delegate your duties under this Contract, in whole or in part, to any other person or entity without BEARS's prior written approval.
- 18.3 This Contract for your employment is governed by, and shall be construed in accordance with the laws of Singapore, and you irrevocably submit to the exclusive jurisdiction of the courts of Singapore

This offer is contingent upon successful completion of receipt of all original/certified true copies of your qualifications and other relevant documents such as your identification card and/or passport, health declaration, medical examination and issue of an Employment Pass by Singapore authorities.

Please confirm your acceptance of this Contract by signing and returning the duplicate copy of this Contract to Mr. Keith Tan, Operations Manager within 7 days of the date of this Contract.

Yours sincerely,

Prof. Costas J. Spanos
Chief Executive Officer & BEARS Director

I, of NRIC/Passport No, having fully understood the terms and conditions stated above, hereby agree and willingly accept the position as a Postdoctoral Scholar Employee with BEARS.

Signature:

Date:

Informed Participation Agreement
Berkeley Education Alliance for Research in Singapore (BEARS)
SinBerBEST Program

Research Program:	SinBerBEST
Research Program Leader:	Prof. Costas J. Spanos
Principal Investigator:	Hayden Taylor
Research Participant Name:	Ajitanshu Vedrtam
Institution:	Berkeley Education Alliance for Research in Singapore
Document Tracking Number:	

I am a Research Program participant in a collaborative research program that is funded by Singapore's NRF through the Berkeley Education Alliance for Research in Singapore (BEARS), a company limited by guarantee that is owned by the U.C. Regents in Singapore. The terms and conditions of the program are described in the BEARS Agreement between the Government of the Republic of Singapore (Represented by its National Research Foundation) and the Regents of University of California, acting on behalf of the University of California, Berkeley and through its Sponsored Projects Office ("UCB") dated August 25, 2011 (hereinafter the "Agreement").

By my signature below:

1. I acknowledge that as a BEARS Researchers as defined by Agreement Article 2.2.f, I have an obligation to disclose promptly and in writing all BEARS Sponsored Intellectual Property (IP) that is a direct product of my participation in the Research Program, whether in Singapore, USA or any other location:
 - a. Disclosure will be to the Singaporean Technology Licensing Office (STLO) and,
 - b. Disclosure will be simultaneously given to the UCB Technology Licensing Office (UCB TLO) as detailed in Agreement Section 9.10, and that
 - c. BEARS Sponsored Intellectual Property is defined in the Agreement Section 2.1.g and
 - d. Intellectual Property is defined in the Agreement Section 2.1.v and
 - e. Disclosure to UCB TLO and the STLO must occur no later than 12 weeks before any public presentation, disclosure or publication of BEARS Sponsored IP.
2. I agree to assign inventions and copyrights resulting from my participation in the BEARS Research Program jointly to the Regents of the University of California and to Singapore Institution(s) concerned in undivided and equal shares as required by Agreement Article 9.1.d.
3. I represent that, as of the date of my participation in the Research Program, I will cooperate with the efforts of the STLO to produce a list of Background IP as defined in Agreement Article 2.1.b of which I am an inventor or author, including invention disclosures, patent applications and issued patents, and copyrightable works. I understand and agree that the licensing of Background IP rights may be delayed due to my receipt of research funding through BEARS.
4. I consent to allow the STLO to grant to a collaborating Academic Institutions a nonexclusive, royalty-free,

perpetual license under copyrights or patents that arise from my participation in the Research Program.

5. I consent to the specific formula for distribution of net licensing revenue from licensing of BEARS Sponsored IP in Article 9.19 of the Agreement that is contained in the full reprint of Article 9.19 attached.
6. I agree to use only BEARS funding from NRF in the performance of the Research Program unless additional sources of funding have been approved in writing by BEARS for the Research Program.
7. I agree my participation in this Research Program prohibits:
 - a. Use of U.S. Federal funding in the performance of the Research Program;
 - b. Use of software in the performance of the Research Program that is subject to rights of a third party (i.e., the rights of another, or the rights of authors funded under the Research Program, or the approved Singaporean collaborators) unless permission is specifically granted under the Research Program;
 - c. Incorporation of U.S. federally funded personnel, programs, or equipment unless explicitly approved in advance and in writing by NRF and the BEARS Director.
8. I have previously read and received by attachment to this Informed Participation Agreement a copy of the Agreement Article 9 that governs the intellectual property of the Research Program.
9. I understand I am under no obligation to participate in this Research Program and I agree to do so voluntarily.
10. I consent to the terms and conditions of the Agreement as they apply to me, including but not limited to, those provisions relating to administration of the BEARS Sponsored IP rights, including enforcement and infringement actions.

Signature:	
Printed Name:	Ajitanshu Vedrtam
Title:	Dr.
Department:	SinBerBEST
Date:	

Attachments: BEARS Agreement Articles 2.1.f, 2.1.g, 2.1.v, 9

ARTICLE 2. DEFINITIONS AND INTERPRETATION

2.1 In this Agreement, the following words, whether used in the singular or plural, shall have the following meanings:

- (f) "BEARS Researcher" means Programme Leader, PIs, PhD students, post-doctoral fellows, professional research and technical staff performing research that is funded by the Grant, whether in Singapore or any other location.
- (g) "BEARS Sponsored IP" means any Intellectual Property that is, a) in the case of inventions, conceived and reduced to practice, and b) in the case of copyrightable software, created by a BEARS Researcher while participating in a Programme that is funded by the Grant, whether in Singapore, USA or any other location.
- (v) "Intellectual Property" or "IP" means:
 - a. For "Inventions" any patentable idea, design, concept, technique, discovery or improvement made (defined as conceived and first actually reduced to practice) solely by one or more employees of a Party hereto or jointly by one or more employees of one Party with one or more employees of the other Party, in the period and under performance of work under this Agreement.
 - b. For "Copyrightable Software" the copyrights owned in whole or in part by one of the Parties created in the performance of work under this Agreement, in the Files Documenting Software where "Files Documenting Software" means copies of computer software source code or object code file contained within, and which as a whole comprise the entire set of software files and related documentation for Copyrightable Software. The discrete components of Files Documenting Software are separately identified for each.

• ARTICLE 9. INTELLECTUAL PROPERTY RIGHTS (IPR)

Ownership

- 9.1 Regardless of where BEARS Sponsored IP is invented or created, all BEARS Sponsored IP invented or created by BEARS Researchers:
- (a) who are solely Personnel of UCB shall be solely owned by the UCB.
 - (b) who are solely Personnel of a single Singapore Institution shall be solely owned by the Singapore Institution concerned.
 - (c) who are Personnel of multiple Singapore Institutions shall be jointly owned by the Singapore Institutions concerned in undivided and equal shares.
 - (d) who are Personnel of UCB and one or more Singapore Institutions shall be jointly owned by UCB and Singapore Institution(s) concerned in undivided and equal shares.

- 9.2 The ownership of any BEARS Sponsored IP invented or created by any person other than BEARS Researchers who are Personnel of UCB or Singapore Institutions shall be determined by UCB, NRF and such person's home institution on a case-by-case basis before BEARS grants permission for the conduct of any research activity at the BEARS facilities by any such person. The commercialization of such BEARS Sponsored IP shall be pursued in a manner which is consistent with the commercialization of other BEARS Sponsored IP.
- 9.3 Assignment of all or part of ownership interest in any BEARS Sponsored IP by any Party to any third party shall be subject to the concurrence of the NRF and the owner or respective co-owners of such BEARS Sponsored IP (and subject to the rights of any sponsor of research to the extent that another sponsor's rights exist); provided that such assigned BEARS Sponsored IP otherwise remains subject to all the provisions of this Article 9.
- 9.4 BEARS Sponsored IP shall be managed and commercialized in accordance with the provisions of this Article 9.

Licenses to UCB and Singapore Institutions

- 9.5 Each Singapore Institution and UCB that own any BEARS Sponsored IP shall grant to each other, a non-exclusive, perpetual, irrevocable, worldwide, royalty-free right and license to use all BEARS Sponsored IP owned by them for research and educational purposes to the extent each license may be lawfully granted.
- 9.6 UCB shall grant to each Singapore institution that employs BEARS Researchers participating in the Programme a non-exclusive, perpetual, irrevocable, worldwide, royalty-free right and licence to use all BEARS Sponsored IP owned by UCB from the Programme for such institution's research and educational purposes to the extent each license may be lawfully granted.

Singapore TLO

- 9.7 NRF will designate a unit within a Singapore Institution to act as the Singapore TLO, which appointment shall be made in consultation with UCB. The Singapore TLO's duties and responsibilities shall be set forth in detail in a separate "Interinstitutional Agreement" between BEARS, UCB, the relevant Singapore Institutions and the Singapore TLO, which agreement shall incorporate all relevant requirements of this Article 9. The Singapore TLO will provide regular status reports describing its activities to BEARS and the UCB TLO.
- 9.8 The UCB TLO shall provide advice and support to the Singapore TLO when reasonably determined by BEARS, UCB and NRF. Such advice and support may include seminars, advice on policy, provision of standard licensing and other agreements, short term visits to the UCB TLO, strategies for licensing, and continuing communication or as otherwise agreed between UCB TLO, NRF and the Singapore TLO.

Requirements of BEARS Researchers

- 9.9 Prior to participating in any Programme, each Singapore Institution shall execute an agreement with UCB agreeing to be bound by the provisions of this Article 9 with respect to all BEARS Sponsored IP.

Each BEARS Researcher shall be required to execute a written acknowledgement as to his or her understanding of his or her obligations with respect to BEARS Sponsored IP set forth herein.

- 9.10 Each BEARS Researcher shall be required to make a written disclosure of all BEARS Sponsored IP that he or she invents or creates, to the Singapore TLO (each, a "BEARS Sponsored IP Disclosure") promptly following invention or creation, but in no event later than 12 weeks before any public presentation, disclosure or publication of such BEARS Sponsored IP. Such BEARS Sponsored IP Disclosure shall be in English and in a form prescribed by the Singapore TLO in consultation with UCB TLO. Each BEARS Sponsored IP Disclosure shall be treated as confidential information of the owner of the disclosed BEARS Sponsored IP in accordance with the provisions of Article 25.
- 9.11 For the avoidance of doubt, the decision whether or not BEARS Sponsored IP has been invented or created shall remain with the BEARS Researcher. If the BEARS Researcher has decided that BEARS Sponsored IP has been invented or created, a BEARS Sponsored IP Disclosure shall be submitted to the Singapore TLO which shall forward a copy to the UCB TLO.
- 9.12 For the avoidance of doubt, all patent filing, prosecution and maintenance costs shall be borne by the BEARS Sponsored IP owner or joint owners, as the case may be, in undivided equal shares, provided that a party may elect not to pay its share of costs for a given patent or patent application for a given country or geography and shall thereafter not be entitled to share in net license revenues from that country or geography.

Responsibility for Performance of IP Management Services

- 9.13 Except as provided in Article 9.14 below, the Singapore TLO will perform all IP Management Services with respect to all BEARS Sponsored IP in accordance with the Interinstitutional Agreement. Such IP Management Services shall be performed in a professional and workmanlike manner and in accordance with best practices in the technology commercialization field and in compliance with all applicable laws (including, without limitation, applicable patent laws in the country where inventions are made and where patent applications are filed. With respect to the licensing and commercial exploitation of BEARS sponsored inventions and technologies, the provisions of Articles 9.16 – 9.18 shall apply. The UCB TLO and the Singapore TLO shall reasonably exchange preferred and best practices in the technology commercialization field. The Singapore TLO shall diligently and thoroughly pursue all reasonable avenues for licensing and commercialization of BEARS Sponsored IP.
- 9.14 (a) If at any time the Singapore TLO elects not to file an initial patent application covering any BEARS Sponsored IP that is disclosed in a BEARS Sponsored IP Disclosure, it shall provide the UCB TLO with written notice of such election no later than (i) 12 weeks following the date of such BEARS Sponsored IP Disclosure or (ii) 6 weeks prior to any public presentation, disclosure or publication of such BEARS Sponsored IP, whichever is earlier.

The UCB TLO may then elect to file an initial patent application protecting the invention, and in such cases, the IP Management Services for the particular BEARS Sponsored IP will be performed by the UCB TLO solely.

(b) If at any time the Singapore TLO wishes to discontinue the provision of IP Management Services for any particular BEARS Sponsored IP, it shall provide the UCB TLO with 60 days prior written notice of such election.

(c) The written notice required by this Article 9.14 shall expressly identify the relevant BEARS Sponsored IP [including a copy of the relevant BEARS Sponsored IP Disclosure(s)], the reason for the Singapore TLO's election not to file an initial patent application or provide IP Management Services, and the jurisdiction(s) in which the Singapore TLO elects not to file an initial patent application or provide IP Management Services, as applicable, so that the UCB TLO, at its election, may thereafter assume the responsibility for performing IP Management Services for such BEARS Sponsored IP.

9.15 Upon UCB TLO's request following its assumption of IP Management Services for any BEARS Sponsored IP, the Singapore TLO shall deliver to UCB TLO all relevant files, prosecution histories, diagrams, disclosures, documents, market analyses, prospective licensees, correspondence, legal opinions and other information relevant to the performance of IP Management Services with respect to such BEARS Sponsored IP.

Licensing and Commercial Exploitation of BEARS Sponsored IP

9.16 The Singapore TLO will have the authority, with respect to the BEARS Sponsored IP for which it is performing IP management Services, to grant exclusive and non-exclusive licenses in any territories in which such BEARS Sponsored IP exists pursuant to the Interinstitutional Agreement. The Singapore TLO shall not have authority to license or grant any right with respect to other IP owned by UCB, or to transfer, sell or assign any ownership interest in or to any BEARS Sponsored IP.

9.17 All license agreements for BEARS Sponsored IP shall at a minimum: (i) contain reasonable performance milestones, (ii) permit termination of the license if the BEARS Sponsored IP is not adequately commercialized within the specified time periods, (iii) prohibit transactions on other than an arm's length basis, (iv) require the licensee to extend a full indemnity to NRF, BEARS, UCB and the Singapore Institutions with respect to any product or service commercialized under such license, (v) require the licensee to release NRF, BEARS, UCB and Singapore Institutions from any and all liability associated with or arising from any use or commercialization of such BEARS Sponsored IP, and (vi) disclaim any warranties by NRF, BEARS, UCB and the Singapore Institutions with respect to any such BEARS Sponsored IP (including without limitation, implied warranties of an express or implied license in any other intellectual property of any of NRF, BEARS, UCB or the sponsoring Singapore Institutions other than the express license in specific BEARS Sponsored IP), (vii) restrict use of the Parties' names and trademarks, (viii) reserve the right of the owners and others in the nonprofit research sector to use the licensed rights for their noncommercial, education and research purposes.

9.18 Prior to execution of any license agreement covering the BEARS Sponsored IP, the relevant TLO shall first provide a copy of such license to the other TLO for information. The TLOs shall inform each other on a continuous basis about any on-going licensing activities. The information to be provided shall at least include:

- (a) Name of potential licensee with whom negotiations are on-going.
- (b) Starting date of negotiations.
- (c) Copy of the executed term sheet (if available)
- (d) Copy of each fully executed license agreement covering BEARS Sponsored IP within thirty (30) days after execution.

Revenue Sharing for BEARS Sponsored IP

9.19 All BEARS IP Revenue collected by the respective TLO for a specific license (gross revenues) shall be distributed on an annual basis in the order of priority as follows:

- (a) Deduction of actual out-of-pocket IP expenses (patent filing, prosecution, and maintenance) to be reimbursed to the BEARS Sponsored IP owner and joint owners as the case may be;
- (b) Deduction of actual out-of-pocket costs (including legal and other professional fees exclusive of any salaries, administrative, or other indirect costs) incurred by the TLO, in relation to the licensing of the BEARS Sponsored IP;
- (c) 15 % of the IP revenue [less Articles 9.19 (a) and (b)] as IP management and incentive fee to the TLO that has performed the relevant IP Management Services, divided into two parts as follows.
 - 5% for managing the IP (administrative charge)
 - 10% for finding a licensee (if the same TLO also secures the license)
- (e) The remaining net IP revenue [less Articles 9.19 (a), (b) and (c)] shall be distributed in accordance with the following rule:
 - 1/3 to the inventors (in equal shares),
 - 1/3 to the BEARS Sponsored IP owner or joint owners, in equal shares;
 - 1/3 to BEARS.

The distribution is outlined for clarity in the table below:

	Singapore TLO finds licensees	UCB TLO finds licensees
Singapore TLO files the patents Patenting costs and out-of-pocket expenses (e.g. legal fees) deducted from IP revenue and reimbursed to BEARS Sponsored IP owner or joint owners	STLO gets 15% management fees. Net IP revenue shared between inventors (1/3); BEARS Sponsored IP owners (1/3) and BEARS (1/3).	STLO gets 5% management fees. Net IP revenue shared between inventors (1/3), BEARS Sponsored IP owners (1/3) and BEARS (1/3).
UCB TLO files the patents. Patenting costs and out-of-pocket expenses (e.g. legal fees) deducted from IP revenue and reimbursed to Sponsored IP owner or joint owners	UCB TLO gets 5% management fees. Net IP revenue shared between inventors (1/3); BEARS Sponsored IP owners (1/3); and BEARS (1/3).	UCB TLO gets 15% management fees. Net IP revenue shared between inventors (1/3), BEARS Sponsored IP owners (1/3); and BEARS (1/3).

- 9.20 Each IP filing and expenses must be agreed upon by the BEARS Sponsored IP joint owners. Where there are BEARS Sponsored IP joint owners and one of the joint owners elects not to share in the IP (patenting, prosecution and maintenance) expenses for a particular country, such joint IP owner shall also not share in any net IP revenue that arises from the commercialization of the particular BEARS Sponsored IP in such country; and shall assign all its rights in the particular BEARS Sponsored IP in such country to the other paying BEARS Sponsored IP joint owners, unless otherwise agreed by the Parties. For the avoidance of doubt, all inventors of a particular BEARS Sponsored IP, that is commercialised, shall be entitled to receive their respective share of the net IP revenues.
- 9.21 The party performing the IP Management Services shall prepare and distribute to owners of the BEARS Sponsored IP that has been licensed, an annual accounting of all BEARS IP Revenue that it receives and all out-of-pocket expenses it incurs in the performance of IP Management Services. Such annual accounting shall also report the licensee's name and any products that have been sold, leased, or otherwise transferred to third parties.
- 9.22 Upon termination of the BEARS Agreement or dissolution of BEARS, any future revenues due to BEARS under Article 9.19 will instead be payable to NRF, and any future revenues due to the relevant TLO, BEARS Researchers or BEARS Sponsored IP owner or joint owners, shall continue to be distributed in accordance with Article 9.19, as applicable. The Parties' rights and obligations under Article 9 shall continue, but only in respect of:

- (a) All BEARS Sponsored IP existing as of the date of termination of the BEARS Agreement or dissolution of BEARS; and
- (b) Such BEARS Sponsored IP created after the date of termination of the BEARS Agreement as may be designated and agreed by the Parties in writing.

Background Intellectual Property

- 9.23 Prior to the start of each research project, the Singapore TLO or UCB TLO, as the case may be, (the "Background IP Owner TLO"), will use reasonable efforts to produce a list of preexisting IP naming the Principal Investigator or other personnel funded by the project as an inventor, that is managed by the Background IP Owner TLO.
- 9.24 The Background IP owner will also inform the Singapore TLO or the UCB TLO as the case may be, of any license rights that may be available with respect to such Background IP. If the Singapore TLO or the respective UCB TLO, as the case may be, so requests in writing, such Background IP Owner shall, to the extent not prevented by then-existing agreements or on-going negotiations or obligations to the contrary, for six (6) months following such request, refrain from granting any exclusive license under such Background IP that would prevent the grant of a non-exclusive license to a licensee of the relevant BEARS Sponsored IP.
- 9.25 The Singapore TLO or UCB TLO as the case may be, shall have no authority to grant licenses or otherwise to perform IP Management Services with respect to Background IP or any other intellectual property of NRF, BEARS, UCB or the sponsoring Singapore Institutions. All such licenses must be negotiated directly by the respective Background IP Owner. The Background IP Owner reserves the sole and exclusive right to perform IP Management Services with respect to Background IP, at its sole expense. Licenses of Background IP shall not be subject to revenue sharing under this Article 9.

Non-Performance by Singapore TLO

- 9.26 In the event that the Singapore TLO fails, in the reasonable opinion of a Party, to fulfill its duties and obligations described herein, the Parties shall consider in good faith the replacement of the then current Singapore TLO with another organization in Singapore. Nothing in this Article 9 shall limit any remedy that a Party may have against the Singapore TLO under any separate agreement between such Party and the Singapore TLO.

Collaboration with other third parties

- 9.27 BEARS and participating Institutions shall have the freedom to conclude research and service agreements with third parties according to rules and certain delegated authorities to be established by BEARS. Such agreements may include transfer of rights to such third parties on IP generated within the projects financed solely by such third parties through the said agreements. The rules concerning research and services of BEARS shall be as close as possible to applicable rules within the participating UCB institution, including overheads and IP clauses. Such agreements and transfer of rights must be approved by the BEARS Governing Board and the respective institution(s) involved in the collaboration. The BEARS Governing Board and UCB shall establish a set of rules that allows delegating the decision for

such collaborations to authorized persons or bodies within BEARS as needed. The BEARS Director shall provide a copy of such agreements to NRF for information, prior to the execution of such agreements.

DRAFT

Ajitanshu Vedrtam Job Specifications



1. Scope of Work

The candidate will be involved in developing SinBerBEST's work on multi-material, high-performance facades, investigating the optimal integration of phase-change materials such as paraffin waxes into composite structures of this kind, to enable the heat transport characteristics of building facades to be tailored and thus reduce the peak and total energy consumption of air conditioning systems inside those buildings. The candidate's work is primarily experimental, although there is considerable scope to participate in the numerical modeling of composite structures with a view to optimizing their topologies for both mechanical and thermal performance.

The role will involve extensive collaboration with a research team based at UC Berkeley, led by Professors Claudia Ostertag and Hayden Taylor.

The candidate will also be provided with the opportunity to contribute to the efforts of developing designs for a "breathing façade", an approach to distributing low-face-velocity heat exchangers throughout the building envelope to enable effective ventilation and low-cost cooling in a wide range of building types.

2. Key Duties and Responsibilities

- Design of novel cellular structures for façade systems
- Conduct durability performance, and analyse mechanical and thermal behaviour of multi-functional façade systems
- Perform experiments on façade systems in the SinBerBEST testbed
- Conduct analysis of research results
- Write and publish research articles
- Present the research results at conferences

SinBerBEST Programme

SinBerBEST aims to deliver energy efficient building technologies for the tropical built environment, while optimising human comfort, safety, security, and productivity within the building.

The theme of SinBerBEST is use-inspired basic research for novel demand-side energy and carbon footprint reduction in buildings. This area addresses demand-side solutions for the world's growing energy needs to reduce the per capita carbon footprint of consumers. It was determined that this research area is the most promising as an Interdisciplinary Research Program (IRP) within BEARS due to shared expertise between UCB and Singapore, revolutionary potential, leverage of ongoing and new research support, and, most of all, impact in the form of creating new industry sectors in Singapore and California.

SinBerBEST initial collaborators include Nanyang Technological University (NTU), the National University of Singapore (NUS), and other agencies and groups in Singapore. The vision of the SinBerBEST program is to generate societal scale impact in the area of efficient and sustainable tropical buildings.

The success of SinBerBEST will be judged on its impact in the form of creation of new industry sectors, the development of societal scale systems, and the creation of new knowledge.