


List of Potential Hosting Institutions for Professor Charles K. Kao Summer Research Exchange Scholarship Scheme 2017

	Institution	Department/Professor Concerned	Topics/Areas of the Research Project	Student Place(s) Available
1.	University of Toronto, Canada	Prof. Tom Chau Vice President of Research, and Director Bloorview Research Institute Holland Bloorview Kids Rehabilitation Hospital http://research.hollandbloorview.ca/scientists/Tom-Chau	1. Hybrid brain-computer interfaces – partake in the development and testing of brain-machine interfaces that combine multiple brain modalities (e.g., EEG and NIRS) and signal types (e.g., evoked potentials and affective responses) 2. Advanced access technologies – contribute to investigations of textile and vision-based sensing of functional intent as alternative access pathways for individuals with severe motor impairments	1-2
2.	Korea Institute of Science and Technology, Korea	Prof. Hyung Min Kim Senior Research Scientist Prof. Inchan Youn Principal Research Scientist Center for Bionics Korea Institute of Science and Technology http://eng.kist.re.kr/kist_eng/?sub_num=473	Ultrasonic neuromodulation in CNS and PNS	1-2



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3.	Nanyang Technological University, Singapore	Prof Chan Bee Eng, Mary Associate Chair (Faculty) School of Chemical and Biomedical Engineering College of Engineering http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=MBECHAN	Design and characterization of antibacterial polymers interaction with bacteria using the ITC.	1
4.			Design and characterization of hydrogel properties for antibacterial effect for wound dressing.	1
5.			Light Scattering studies of polymer nanoparticles.	1
6.	Nanyang Technological University, Singapore	Prof. James Jing Kwan Assistant Professor School of Chemical and Biomedical Engineering College of Engineering http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=JAMESKWAN&CategoryDescription=BiomedicalSciencesLifeSciences	Acoustically Induced Gelation from Ultrasound-responsive Materials	1
7.			Novel Cavitation Micro/nano-particles	1



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8.	Nanyang Technological University, Singapore	Prof. Wai Man Lau Associate Professor School of Chemical & Biomedical Engineering Nanyang Technological University http://research.ntu.edu.sg/expertise/academicprofile/pages/StaffProfile.aspx?ST_EMAILID=WMLAU	Dry powder inhalation	1
9.	Nanyang Technological University, Singapore	Prof. Wang Dongan Associate Professor School of Chemical and Biomedical Engineering College of Engineering http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=dawang	Cartilage tissue engineering	1
10.	National University of Singapore	Prof. Ben M. Chen Professor Temasek Laboratories & Department of Electrical and Computer Engineering National University of Singapore http://uav.ece.nus.edu.sg/people.html	Vision and control systems for micro UAVS, integrated unmanned systems, navigation technologies for unmanned aerial vehicles in indoor and foliage environments, modeling and control of flapping wing micro air vehicles	1-2



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11.	National University of Singapore, Singapore	Dr. Slaven Garaj Assistant Professor Department of Biomedical Engineering Department of Physics http://www.bioeng.nus.edu.sg/people/PI/Slaven/	Graphene-silk composite	1
12.	National University of Singapore, Singapore	Prof. James Goh Professor and Head Department of Biomedical Engineering http://www.bioeng.nus.edu.sg/people/pi/james/default.html	3D bioprinting of constructs for bone tissue engineering.	1
13.	National University of Singapore, Singapore	Dr. Raye Yeow Assistant Professor Department of Biomedical Engineering http://www.bioeng.nus.edu.sg/people/PI/yeow/	Soft Wearable Robots for Fall Protection	2
14.	California Institute of Technology, U.S.A.	Prof. Babak Hassibi Gordon M. Binder/Amgen Professor Department of Electrical Engineering http://ee.caltech.edu/Babak/	Information theory, inference, estimation # Remarks: Strong mathematical background required	1
15.	Carnegie Mellon University, U.S.A.	Prof. Pulkit Grover Assistant Professor Electrical and Computer Engineering Carnegie Mellon University https://www.ece.cmu.edu/directory/department/faculty/G/Pulkit_Grover_7070.html	1. Error-correcting codes for speeding up distributed computing 2. Graph signal processing. # Remarks: Strong mathematical background required Students will work with PhD students who are working on theory of these problems. The students will work on implementations of these in s/w (so they need to be good in programming) and contribute towards error-correction coding and signal processing theory.	1-2



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16.	Columbia University, U.S.A.	Prof. Edward X. Guo Vice Chair and Professor of Biomedical Engineering Department of Biomedical Engineering Columbia University http://bme.columbia.edu/x-edward-guo	Bone mechanics, mechanobiology of bone, imaging analysis of bone microstructure, biomechanics of bone cells, micro-patterning of cells	1-2
17.	Columbia University, U.S.A.	Prof. Helen H. Lu Professor of Biomedical Engineering Director, Biomaterials and Interface Tissue Engineering Laboratory Department of Biomedical Engineering Columbia University http://bme.columbia.edu/helen-h-lu	1. Orthopaedic and Dental Biomaterials 2. Interface tissue engineering and mechanisms of soft tissue to bone integration 3. Mechanism of cell-biomaterial interactions	1
18.	Georgia Institute of Technology, U.S.A.	Prof. Matthieu Bloch Assistant Professor School of Electrical and Computer Engineering Georgia Institute of Technology http://users.ece.gatech.edu/mbloch/	1. Information-theoretic security, hacking software defined radios 2. Applications of machine learning to spectrum sensing # Remarks: Strong mathematical background required	1-2
19.	Northwestern University, U.S.A.	Prof. William Z. Rymer Center Director, Research Rehabilitation Institute of Chicago John G. Searle Chair in Rehabilitation Research Professor, BME, McCormick School of Engineering, NU Professor, Physiology, Feinberg School of Medicine, NU http://www.ric.org/about/people/doctors/detail/w-zev-rymer-md-phd/	Study of musculoskeletal, neuromuscular and sensory disorders that are associated with abnormal control of posture and movement.	1-2



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20.	Stanford University, U.S.A.	Prof. Ayfer Özgür Assistant Professor Department of Electrical Engineering Stanford University http://stanford.edu/~aozgur/	Information theory, wireless communication, internet of things # Remarks: Strong mathematical background required	1-2
21.	The Pennsylvania State University, U.S.A.	Prof. Tak-Sing Wong Assistant Professor Department of Mechanical and Nuclear Engineering Materials Research Institute Huck Institutes of the Life Sciences The Pennsylvania State University http://www.mne.psu.edu/wong/biography.html	Biologically Inspired Materials Design Potential Research Projects: Self-healing membranes, smart adhesives, and super liquid-repellent coatings	1-2
22.	University of California, Irvine, U.S.A.	Prof Abraham Lee Chair and William J. Link Professor Biomedical Engineering Professor (Joint Appointment) Mechanical and Aerospace Engineering Director Micro/Nano Fluidics Fundamentals Focus Center Director Center for Advanced Design and Manufacturing of Integrated Microfluidics UCI Samueli School of Engineering University of California, Irvine http://engineering.uci.edu/users/abraham-lee	Microfluidic engineered artificial vesicles	1
23.			Microfluidic single cell analysis	1
24.			Low cost portable microfluidics	2
25.			High throughput cell enrichment	1



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26.	University of Illinois at Urbana-Champaign, U.S.A.	<p>Dr. Avhishek Chatterjee Postdoctoral Research Associate Coordinated Science Laboratory University of Illinois at Urbana-Champaign https://sites.google.com/site/avhishek1984/.</p> <p>Prof. Lav Varshney Assistant Professor Department of Electrical and Computer Engineering University of Illinois at Urbana-Champaign https://www.ece.illinois.edu/directory/profile/varshney</p>	<p>Coordination in social networks # Remarks: Strong mathematical background required</p>	1

- Applicants are required to indicate your priority choices of preference of potential hosts in the application form by January 27, 2017.
- This compiled list displays all potential hosts as of January 2017. If and when new information is received, this list will be updated on Faculty website.