### List of Potential Hosting Institutions for Professor Charles K. Kao Summer Research Exchange Scholarship Scheme 2018

<table>
<thead>
<tr>
<th>Institution</th>
<th>Department/Professor Concerned</th>
<th>Topics/Areas of the Research Project</th>
<th>Student Place(s) Available</th>
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</table>
| 1 Nanyang Technological University, Singapore | Prof. James 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=nanotechnologynanoscience | Acoustic cavitation induced hydrogel formation from novel biocompatible block co-polymers             | 1                          |
| 2                                          |                                                                                               | Development of bioresorbable ultrasound responsive particles                                        | 1                          |
| 3                                          |                                                                                               | Understanding the effects of biomedical ultrasound on biofilms formed by Pseudomonas aeruginosa    | 1                          |
| 4                                          |                                                                                               | Designing novel methods in capturing Helicobacter pylori                                           | 1                          |
| 5                                          | Prof. DANG Thuy Tram  
Assistant Professor  
School of Chemical and Biomedical Engineering  
College of Engineering  
http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=TDANG | Designing polymeric drug delivery systems for enhanced wound healing                              | 1                          |
| 6                                          |                                                                                               | Designing pancreatic islet micro-tissues for enhanced diabetes therapy                           | 1                          |
| 7                                          | Prof. TAN Meng How  
Assistant Professor  
School of Chemical and Biomedical Engineering  
College of Engineering  
http://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=mh.tan | Development of novel CRISPR-Cas technologies for human genome engineering                         | 1                          |
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| 8. National University of Singapore, Singapore | Dr. Raye Yeow  
Assistant Professor  
Department of Biomedical Engineering  
http://www.bioeng.nus.edu.sg/people/PI/yeow/ | Soft Robots for Fall Protection | 1 |
| 9. Columbia University, U.S.A. | Prof. Edward X. Guo  
Vice Chair and Professor of Biomedical Engineering  
Department of Biomedical Engineering  
| 10. 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  
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| 11. 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 | 1) Microfluidic engineered artificial vesicles  
2) Microfluidic single cell analysis | 1 |
| 12. University of Illinois at Urbana-Champaign, U.S.A. | Prof. Yih-Kuen Jan  
Associate Professor  
Affiliate, Computational Science and Engineering  
Affiliate, Center for Health Analytics  
Director, Rehabilitation Engineering Lab  
University of Illinois at Urbana-Champaign (UIUC)  
http://kch.illinois.edu/jan | rehabilitation engineering and biomechanics | 1-2 |
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| 13. The University of British Columbia, UK | Dr. Frank Ko  
Faculty of Applied Science Materials Engineering  
http://mtrl.ubc.ca/faculty/frank-ko/ | bionic nano fibres | 1 |
| 14. Technika University of Gdańsk, Poland | Prof. Małgorzata Jędrzejewska- Szczerska  
Associate Professor  
Department of Metrology and Optoelectronics  
Technika University of Gdańsk  
https://pg.edu.pl/30c9e61c56_malgorzata.jedrzejewska-szczerska | Biophotonic sensors | 2 |
| 15. University of California, San Diego | Prof. Peter Yingxiao Wang  
Professor of Bioengineering  
Department of Bioengineering  
Institute of Engineering in Medicine  
http://wang.ucsd.edu/people.php | 1. molecular engineering for live cell imaging  
2. reprogramming of cellular functions in immunotherapy | 1-2 |

as at 2018.02.02
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| **16. Monash University** | Dr. Elahe ABDI  
Lecturer Mechanical & Aerospace Engineering  
Department of Mechanical and Aerospace Engineering  
https://www.monash.edu/engineering/elaeabdi | 1. Development of a foot interface to control a robotic assistive arm in medical (surgical) applications with haptic feedbacks. | 1-2                       |
| **17 INRIA, France** | Dr. Konstantin Avrachenkov  
Director of Research, INRIA DR2 level  
INRIA Sophia Antipolis, MAESTRO Team  
http://www-sop.inria.fr/members/Konstantin.Avrachenkov/me.html | Network Sciences, Applied Deep Learning, Subgraph Sampling                                             | 1                         |
| **18 Caltech**     | Prof. Adam Wierman  
Professor  
Department of Computing and Mathematical Sciences  
http://users.cms.caltech.edu/~adamw/ | Performance Evaluation, Convex Optimization                                                           | 1                         |
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  Assistant Professor  
  Electrical and Computer Engineering  
  Carnegie Mellon University  
  [https://www.ece.cmu.edu/directory/department/faculty/G/Pulkit_Grover_7070.html](https://www.ece.cmu.edu/directory/department/faculty/G/Pulkit_Grover_7070.html) | 1. Error-correction and compression for faster, and more resilient large scale distributed machine learning.  
  2. Noninvasive brain-machine interfaces: signal processing and simulations for high resolution neurostimulation and/or neural sensing. Applications to traumatic brain injuries and Parkinson's.  
  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. They will be able to see these systems in action in our lab, collaborate with expert practitioners in these fields, and perform experiments. | 1-2                         |
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| 20. 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 |
| 21. Massachusetts Institute of Technology (MIT) | Prof. Zheng Lizhong  
Professor  
Department of Electrical Engineering and Computer Sciences  
https://www.eecs.mit.edu/people/faculty/lizhong
-zheng | Data analysis/machine learning.  
Comfort with Python/Tensorflow preferred | 1-2 |
| 22. University of California, Berkeley | Prof. Anant Sahai  
Professor  
Electrical Engineering and Computer Sciences  
https://www2.eecs.berkeley.edu/Faculty/Homepages/sahai.html | DARPA Spectrum Collaboration Challenge | 1-2 |

- Applicants are required to indicate your priority choices of preference of potential hosts in the application form by 26 Feb, 2018.
- This compiled list displays all potential hosts as of January 2018. If and when new information is received, this list will be updated on Faculty website.