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科技部 函

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受文者：國立暨南國際大學

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密等及解密條件或保密期限：

附件：作業要點 1件，龍門_關鍵與國外研習機構2015 1件

(103D2031997.PDF, 103D2031986.XLS) (103D2031997.PDF、
103D2031986.XLS, 共2個電子檔案)

主旨：本部徵求104年「科技部補助任務導向型團隊赴國外研習計畫」，請轉知所屬有意者提出申請，請 查照。

說明：

- 一、本(104)年度關鍵性之科技及人文社會研究項目計有15項；國外研習機構有56所，相較103年度增加7所，可合作之實驗室超過百所。
- 二、本年度之作業時程如下：
 - ✓(一)計畫申請：104年1月5日起至104年4月27日止(以系統送出為憑)；申請機構請於104年4月30日前函送申請名冊到部(以公文發文日為憑)。
 - (二)公告結果日期：104年7月31日前。
 - (三)計畫執行日期：104年9月1日至105年8月31日(第二年期計畫順延一年)。
 - ✓(四)國外研習機構參考意見：申請人(計畫主持人)應提醒擬前往之國外研習機構指導人直接(非透過申請人)將意見於104年5月11日前寄達本部業務承辦人。
- 三、有關本項計畫作業要點、年度關鍵領域及國外研習機構請參閱附檔，或至本部科教國合司網頁





(<http://www.most.gov.tw/int/ct.asp?xItem=18969&ctNode=4522>) 參考。

正本：國立臺灣大學等294個機構

副本：駐美國代表處科技組、駐加拿大代表處科技組、駐休士頓辦事處科技組、駐舊金山辦事處科技組、駐洛杉磯辦事處科技組、駐日本代表處科技組、駐澳大利亞代表處科技組、駐歐盟兼駐比利時代表處科技組、駐英國代表處科技組、駐法國代表處科技組、駐德國代表處科技組、駐俄羅斯代表處科技組、駐捷克代表處科技組、駐越南代表處科技組、駐印度代表處科技組、本部自然司、工程司、生科司、人文司(以上均含附件)、科教國合同

103/12/31
16:53:56

代理部長林一平



- 擬：
一、文影送四院轉參所參事，有異申請者，請限期於104年4月23日前完成線上申請送出，俾本處於4月30日前完成申請名冊寄送。
二、國外研習機構意見，請指導人於104年5月11日前將意見書寄達科技部承辦人。
三、文上傳公告周知。
四、文錄案續辦。

專員 王淑娟

林佑昇

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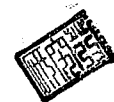
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林佑昇

4/43

2015年度龍門計畫國外研習機構一覽表(含國別分布)

洲別	國家	公告機構數	研習大學或國家級研究中心	(詳細內容如後附14頁)
亞洲 (9)	澳大利亞	3	Monash University	
			The University of Queensland	
			The University of Sydney	(新增之單位)
	韓國	1	Korea University	
	日本	5	University of Tokyo	
			Tohoku University	
			Kyoto University	
			National Institute for Materials Science (NIMS)	(新增實驗室)
			Institute of Physical and Chemical Research (RIKEN)	(新增之單位)
歐洲 (23)	奧地利	1	Universität Wien	
	比利時	1	Interuniversity MicroElectronics Center (IMEC)	
	丹麥	1	Aarhus University	
	法國	4	國家衛生及醫學研究院 INSERM	
			法國國家科學研究中心 CNRS	
			巴斯德研究院 Institut Pasteur	
			European Synchrotron Radiation Facility (ESRF)	
	德國	5	達姆施塔特高等資訊安全研究中心 (CASED)	
			癌症研究中心 (DKFZ)	
			Juelich研究中心	
			Max Delbrück Center for Molecular Medicine (MDC)	
			University Medical Center Freiburg	
	荷蘭	1	Erasmus University Rotterdam	
	俄羅斯	1	Kurchatov Insitute	
	瑞士	2	Ecole Polytechnique Fédérale de Lausanne (EPFL)	
			蘇黎世聯邦理工學院 Eidgenössische Technische Hochschule Zürich (ETH)	
	英國	7	The Imperial College London	

2015年度龍門計畫國外研習機構一覽表(含國別分布)



			University of Cambridge	
			University College London (UCL)	
			University of Edinburgh	
			University of Southampton	
			University of Oxford	(新增之單位)
			National Institute for Medical Research (NIMR)	(新增之單位)
美洲 (24)	加拿大	5	Canadian Light Source	
			The University of British Columbia	
			University of Ottawa	
			University of Toronto (incl. UHN)	
			University of Waterloo (UW)	(新增之單位)
	美國	19	Argonne National Laboratory	
			National Institutes of Health (NIH)	(新增及刪減部分實驗室)
			Columbia University	
			Harvard University	
			Johns Hopkins University	
			MIT	(刪除實驗室)
			Baylor College of Medicine	(新增實驗室)
			National Center for Atmospheric Research (NCAR)	
			National Renewable Energy Laboratory (NREL)	(新增/恢復之單位)
			Rice University	(刪除之單位)
			The University of Texas Austin	
			University of Texas MD Cancer Center	
			The University of Texas Southwestern Medical Center	(新增實驗室)
			California Institute of Technology	(刪除實驗室)
			University of Southern California	
			University of California (UCLA, UC San Diego, UC Berkeley and UC San Francisco)	(新增實驗室)
			Lawrence Berkeley National Laboratory	

2015年度龍門計畫國外研習機構一覽表(含國別分布)

	Stanford University	(新增實驗室)
	Rockefeller University	(新增之單位)
	National Institute of Standards and Technology (NIST)	(新增之單位)
總計	56	

備註: 綠色字列出者, 表示為2015年新增之機構(計8所, 但另刪除1所)

紫色字標出者, 表示2015年度或者有新增或是刪除實驗室之機構(達15項)

2015年 科技部"補助任務導向型團隊赴國外研習" (龍門計畫)
外國研習機構一覽表



亞洲

項次	國別	研習機構	研習單位	研習領域	研習單位介紹	國外研習機構 指導或聯絡人姓名/職稱	聯絡資訊	科國司窗口 (負責科技組)
1	澳大利亞	蒙納許大學 Monash University	Faculty of Information Technology	1. 資訊處理科技及智慧運算 Information Technology and Intelligent Computing 2. 材料科技 Materials Science & Technology	http://www.inforech.monash.edu.au/	David Green, Associate Dean&Research	Tel: +61 3 990 53912 Fax: +61 3 990 55159 Email: David.Green@monash.edu	施孟君博士 02 2737 7150 (AU)
2	澳大利亞	昆士蘭大學 The University of Queensland	Australian Institute for Bioengineering and Nanotechnology(AIBN)	1. 生醫科學與工程Biomedical Science and Engineering 2. 材料科技 Materials Technology	http://www.aibn.uq.edu.au/about-aibn	Janice Besch, Deputy Director (Operations)	Email: j.besch@uq.edu.au Telephone: +61 7 33463800 Facsimile: +61 7 33463973	施孟君博士 02 2737 7150 (AU)
新增	澳大利亞	雪梨大學 The University of Sydney	衛生學院 Faculty of Health Sciences	Medical imaging Rehabilitation Communication Disorders Healthy Ageing Musculoskeletal Disorders and Breast Cancer	http://sydney.edu.au/health-sciences/	a. Prof. Patrick Brennan, Medical Radiation Sciences, Associate Dean b. Ms Adriana Sammartano, Executive Support Project Officer at the Faculty of Health Science	a. Email:patrick.brennan@sydney.edu.au Tel: +61 2 9036 7402 Fax: +61 2 9351 9146 b. Email:Adriana.sammartano@sydney.edu.au Tel: +61 (0)2 9036 7466 Mobile: +61 (0)423 171 639	施孟君博士 02 2737 7150 (AU)
4	韓國	高麗大學Korea University	民族文化研究院	理論東亞	http://www.korea.edu/	(雙崖溶徹院長同意)	Tel: +02-3290-1610 Email: choe0419@korea.ac.kr	鄭慧娟研究員 02 2737 7472 (JP)
5	日本	東京大學 The University of Tokyo	1. 地震研究所	1. 地震研究	1. http://www.eri.u-tokyo.ac.jp/en/	1. 平田直 (東京大學地震研究所所長)	1. Tel: 03-5841-5677 Fax: 03-5689-4467 E-mail:k-kenkyu@eri.u-tokyo.ac.jp	鄭慧娟研究員 02 2737 7472 (JP)
			2. 比較文學比較文化研究室	2. 東亞研究	2. http://fusehime.c.u-tokyo.ac.jp/dept/index.html	2. 齋藤希史教授 (Mareshi SAITO) 教授	2. Tel: +81-29-860-4769 Email: FUKATA.Naoki@nims.go.jp	
			1. Center for Frontier Medicine of Department of Pharmacology	1. 炎症及免疫疾病相關之藥物研發	1. http://www.med.kyoto-u.ac.jp/GCOE/member/individual/narumiya.html	1. 成宮周 (Shuh Narumiya)教授	1. TEL:+81-75-753-4392 e-mail: snaru@nour.med.kyoto-u.ac.jp	鄭慧娟研究員

2015年 科技部"補助任務導向型團隊赴國外研習"(龍門計畫)

外國研習機構一覽表

6	日本	University 独立行政法人 物質・材料研究機構 National Institute for Materials Science (NIMS), Japan.	2.アジア研究教育ユニット (Asian Studies Unit)・应用哲学倫理学教育研究センター	2.分析的亞洲哲學 Analytic Asian Philosophy	2. http://www.kuas.cpi.kyoto-u.ac.jp/	2.出口康夫教授 Yasuo DEGUCHI	2. email: yasudeguchi@aol.com	02 2737 7472 (JP)
7	日本	東北大學 Tohoku University	Laboratory for Nanoelectronics and Spintronics Research Institute of Electrical Communication	自旋電子學Spintronics	http://www.ohno.riec.tohoku.ac.jp	Prof. Hideo Ohno(大野 英男) Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication, Tohoku University	Tel: +81-22-217-5553; Fax: +81-22-217-5555 or 5553 (direct) E-mail: ohno@riec.tohoku.ac.jp	鄭慧娟研究員 02 2737 7472 (JP)
8	日本	獨立行政法人物質・材料研究機構 National Institute for Materials Science (NIMS), Japan.	1. 太陽電池領域. 2. Porous Materials. 3. Bioceramics. 4. Organic Optoelectronic Materials. 5. Biomaterials (NEW) 6. Advanced Materials Processing		http://www.nims.go.jp/eng/index.html	1. FUKATA Naoki. 2. Yusuke Yamauchi. 3. Yoshio Sakka. 4. Masayoshi Higuchi. 5. Guoping Chen. 6. Akitsu Shigetou	1. FUKATA.Naoki@nims.go.jp 2. YAMAUCHI.Yusuke@nims.go.jp 3. SAKKA.Yoshio@nims.go.jp 4. HIGUCHI.Masayoshi@nims.go.jp 5. Guoping.CHEN@nims.go.jp 6. shigetou.akitsu@nims.go.jp	鄭慧娟研究員 02 2737 7472 (JP)
新增	日本	獨立行政法人理化學研究所 Institute of Physical and Chemical Research(RIKEN)	「申請者需事與理化學研究所所屬計畫主持人PI聯繫，並取得同意(同意書形式下拘)」	物理學、工學、化學、生物學、醫學等自然科學全領域	http://www.riken.jp/en/research/labs/	外務・研究調整部 研究協力課	groexternal@riken.jp	鄭慧娟研究員 02 2737 7472 (JP)

歐洲



2015 年 科技部"補助任務導向型團隊赴國外研習" (龍門計畫)
外國研習機構一覽表

項次	國別	研習機構	研習單位	研習領域	研習單位介紹	國外研習機構 指導或聯絡人姓名/職稱	聯絡資訊	科國司窗口 (負責科技組)
10	奧地利	維也納大學 Universität Wien	Institute for Ethics and Law in Medicine; Institute for Systematic Theology and religious Studies	科技發展的倫理與法律意涵	http://efst.univie.ac.at/home/ ; www.iern.at	Ulrich Körtner 教授	T +43(1) 4277-22201 F +43 (1) 4277-9222 ulrich.koertner@univie.ac.at	高亞厓秘書 02 2737 7559 (DE)
11	比利時	跨校際微電子研 究中心 Interuniversity MicroElectronics Center (IMEC)	(IMEC)	1. Bio-micro-electromechanical System or Bio-electronics, 2. Nanoelectronics, 3. Design & Production Technology for System-on-Chip, 4. Smart Systems, 5. Wireless Autonomous Transducers, 6. Bio-electronics, 7. Heterogeneous Integration, etc.	www2.imec.be/be_en/home.html	Prof. Jo De Boeck Senior Vice President Smart System and Energy Technology Jo.DeBoeck@imec-nl	Tel: +32 16 28 12 11 Fax: +32 16 22 94 00	陳禹銘博士 02 2737 7959 (BE)
12	丹麥	Aarhus University	Religion, Cognition and Culture Research Unit (RCC), Dept. of Culture and Society	Religion and Cognition	http://www.au.dk/	Prof. Armin W. Geertz	Tel: 871-62473 Email: awg@teo.au.dk	傅顯達研究員 02 27377810 (BE)
13	法國	國家衛生及醫學 研究院 INSERM	Unité de Neuroimagerie Cognitive CEA/SAC/DRM/Neuro spin Center	認知科學跨領域研究-心智、大 腦與教育 Cognitive Science, Mind, Brain, and Education	INSERM-CEA Cognitive Neuroimaging Research Unit - INSERM 562是Neurospin研究 中心四個研究組之一，神經顯 像Neuroimaging研習領域為該 中心專長	Dr. Denis Leblanc Director	Tel: +33 01 69 08 82 05 Fax: +33 01 69 08 79 80 E-mail: denislb@aol.com	陶正統副研究 員 02 2737 7431 (FR)
14	法國	法國國家科學研 究中心 (CNRS)	分子及細胞生物與基因 研究所 Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGMBC)	細胞生物與發育 癌症生物學 神經生物與基因 功能基因組學 結構生物	法國國家科學研究中心所屬分 子及細胞生物與基因研究所 1994年成立，研究所2001年成為 CNRS/Inserm及史特拉斯堡大 學聯合實驗室。IGMBC是歐洲 最早成立專事研究生物醫學的 研究單位。主要研究高等真核 生物基因組及基因表達的控制 與分析的功能基因與蛋白質。 這些知識應用於人類疾病如癌 症、單基因疾病、代謝性疾病 等。該中心具有最新穎的老鼠 醫院實驗室，以基因方法從老 鼠身上作出病變研究。	Dr. Françoise Schubel/ Assistant to Director	To the attention of Françoise Schubel CNRS UMR 7104/INSERM U964/UDS 1 Rue Laurent Fries BP 10142 67404 Illkirch CEDEX France Tel +33 (0)3 88 65 32 16 Fax +33 (0)3 88 65 32 03 Email: directeur.igbmc@igbmc.fr	陶正統副研究 員 02 2737 7431 (FR)

15	法國	巴斯德研究院 Institut Pasteur	(Institut Pasteur)	Infectious diseases	世界知名研究機構	Mr Marc Jouan Director of International Network	Tel: +33 01 45 68 81 48 Fax: +33 01 45 68 89 52	陶正統副研究 員 02 2737 7431 (FR)
16	法國	歐洲同步輻射中 心 European Synchrotron Radiation Facility (ESRF)	(ESRF)	光速線 奈米科技 生物科技	http://www.esrf.eu/	Prof. Francesco SETTE, Director General	E-mail: sette@esrf.fr	陶正統副研究 員 02 2737 7431 (FR)
17	德國	施密特特爾特高等資 訊安全研究中心 (CASED)	(CASED)	1.理論及計算科學 Theoretical Science and Computational Science, 2. 電子電信科技 Electronics and Telecommunication Technology, 3.資訊安全	http://www.cased.de/en.html	Dr.-Ing. Michael Kreutzer Managing Director CASED Center for Advanced Security Research	Tel: +49 (0) 6151 16-6165 Fax: +49 (0) 61 51 16-4825 E-Mail: kreutzer@cased.de URL: www.cased.de	高亞眉秘書 02 2737 7559 (DE)
18	德國	德國Helmholtz國 家研究院	德國癌症研究中心 (DKFZ)	1. 生醫科學與工程Biomedical Science and Engineering, 2. 分子 及細胞生物 Molecular and Cellular Biology, 3. 癌症醫學 Oncology	www.dkfz.de	Jana Grünewald, PhD Coordinator, International Affairs	Tel: +49 062 21. 42-2651 Email: j.gruenewald@dkfz-heidelberg.de	高亞眉秘書 02 2737 7559 (DE)
19	德國	德國Helmholtz國 家研究院	Juelich研究中心	1. 材料科學 Materials Science, 2. 能源科技 Energy Technology, 3. section Ethics in the Neurosciences	http://www.fz-juelich.de/portal/index.php?index=1096	Guenter Lincks, Head of International Relations	Tel: +49 02461 61-6232 Email: g.lincks@fz-juelich.de	高亞眉秘書 02 2737 7559 (DE)
20	德國	德國Helmholtz國 家研究院	德國分子醫學中心 Max Delbrück Center for Molecular Medicine (MDC)		http://mdc-berlin.de/en/	Prof. Walter Rosenthal	(Ms) Dr. Oksana Seumenicht Tel: +49 30 9406 3734 oksana.seumenicht@mdc-berlin.de	高亞眉秘書 02 2737 7559 (DE)
21	德國	弗萊堡大學醫學 中心 University Medical Center Freiburg	Medical Physics Department of Radiology	核磁共振	http://www.uniklinik-freiburg.de/mr/live/mitarbeiter/aktuelle/hennig_en.html	Prof. Jürgen Hennig	phone: +49 761 270 38360 fax: +49 761 270 38310 email: juergen.hennig@uniklinik-freiburg.de	高亞眉秘書 02 2737 7559 (DE)
22	荷蘭	鹿特丹伊拉斯姆 斯大學 Erasmus University Rotterdam	Erasmus Happiness Economics Research Organization	生活品質與福祉	http://www.narcis.nl/organisation/RecordID/ORG1243849/Language/en	Ruut Veenhoven	Tel: +31 10 4082102 E-mail: veenhoven@ese.eur.nl	施孟君博士 02 2737 7150 (BE)

2015年 科技部"補助任務導向型團隊赴國外研習" (龍門計畫)
外國研習機構一覽表

23	俄羅斯 庫恰托夫研究院 Kurchatov Institute	1. Nuclear Lab. 2. Synchrotrone	1. liquid salt fluorides 2. X-ray	http://www.kiae.ru/index4.html	Dr. Evgeniy Ugrinovich (Deputy Director, International S&T Cooperation) Dr. Sergey Virgilev	Tel: +7-499-196-7696 E-mail: polis@kiae.ru	陶正統副研究員 02 2737 7431 (RU)
24	瑞士 洛桑聯邦理工學院 Ecole Polytechnique Fédérale de Lausanne (EPFL)	Photovoltaic Laboratory (PV Lab), Institute of Micro Technique (IMT)	太陽能電池領域	http://www.epfl.ch/index.en.html	Professor Michel Graetzel	Michael Graetzel <michael.graetzel@epfl.ch> Tel: +41 44 632 8101 Fax: +41 44 632 1508 Email: maio.chen-su@sl.ethz.ch	高亞眉秘書 02 2737 7559 (DE)
25	瑞士 蘇黎世聯邦理工學院 Eidgenössische Technische Hochschule Zurich		engineering natural sciences	www.global.ethz.ch	Maio Su Chen, Ph.D. (contact)	Tel: +41 44 632 8101 Fax: +41 44 632 1508 Email: maio.chen-su@sl.ethz.ch	高亞眉秘書 02 2737 7559 (DE)
26	英國 倫敦帝國學院 Imperial College London	1. 生醫工程研究所 (Institute of Biomedical Engineering)	1. 生醫工程 Biomedical Engineering	1. http://www3.imperial.ac.uk/biomedeng	1. Professor Christofor Tounmazou (contact)	1. E-mail: c.tounmazou@imperial.ac.uk Tel: +44 (0)207 594 6255	陶正統副研究員 02 2737 7431 (UK)
27	英國 劍橋大學 University of Cambridge	1. Department of Experimental Psychology, 2. Institute of Behavioral and Clinical Neuroscience 3. Centre for Neuroscience in Education 4. Department of Psychiatry	認知科學跨領域研究-心智、大腦與教育 Cognitive Science, Mind, Brain, and Education	1. http://www.psychol.cam.ac.uk/ 2. http://www.educ.cam.ac.uk/centres/neuroscience/ 3. http://www.psychiatry.cam.ac.uk/	1./2. Professor Trevor W. Robbins, FRS 3. Professor Usha Goswami	1./2. E-mail: t.robbs@psychol.cam.ac.uk 3. E-mail: ucg10@cam.ac.uk Tel: +44 (0)122 376 7635 4. E-mail: etb23@cam.ac.uk Tel: +44(0)1223 336583	陶正統副研究員 02 2737 7431 (UK)
28	英國 倫敦大學學院 University College London	婦女研究所 (Institute for Women's Health)	1. 生醫工程 Biomedical sciences and engineering, 2. 分子及細胞生物學 Molecular and cellular biology	www.instituteforwomenshealth.ucl.ac.uk ; http://www.ucl.ac.uk/ich/homepage	a. Dr. Peter Brocklehurst, Director of Institute for Women's Health b. Dr. Rosalind Smyth, Director of Institute of Child Health	a. E-mail: p.brocklehurst@ucl.ac.uk Tel: +44 20 7679 6060 ; b. E-mail: rosaind.smyth@ucl.ac.uk Tel: +44 20 7905 235	陶正統副研究員 02 2737 7431 (UK)



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外國研習機構一覽表

29	英國	愛丁堡大學 University of Edinburgh	1. 能源系統研究所 Institute for Energy Systems 2. 極端條件科學研究中心 Center for Science at Extreme Condition	1. 海洋能源 Marine Energy 2. 材料科技 Materials Science	1. http://www.see.ed.ac.uk/research/IES/ 2. http://www.csec.ed.ac.uk/	1. Prof. A Robin Wallace 2. Professor J. Paul Attfield	1. Robin.Wallace@ed.ac.uk Tel: +44 (0)131 650 5587 2. j.p.attfield@ed.ac.uk Tel: +44 (0)131 631 7229	陶正統副研究員 02 2737 7431 (UK)
30	英國	南安普敦大學 University of Southampton	Optoelectronics Research Centre	Nanophotonics and Metamaterials Materials Science & Technology Energy Technology & Electronics Telecommunications Technologies	www.southampton.ac.uk/orc	Prof. N.I. Zheludev	email: zheludev@soton.ac.uk tel: +44 23 8059 3566	陶正統副研究員 02 2737 7431 (UK)
新增	英國	牛津大學 University of Oxford	甘迺迪風濕病學研究所 Kennedy Institute of Rheumatology	1. 分子及細胞生物Molecular and Cell Biology 2. 生醫科學與工程Biomedical Science and Technology	Research groups: (1) Immunology; (2) Inflammation; (3) Tissue Biology and Repair; (4) Translational Medicine; 網址: http://www.kennedy.ox.ac.uk/research	Prof. Richard Williams	email: richard.williams@kennedy.ox.ac.uk Tel: +44 1865 612635	陶正統副研究員 02 2737 7431 (UK)
新增	英國	醫學研究委員會 之國家醫學研究院 National Institute for Medical Research MRC	國家醫學研究院 National Institute for Medical Research (NIMR)	1. 分子及細胞生物Molecular and Cell Biology 2. 生醫科學與工程Biomedical Science and Technology	Research groups: (1) Genetics and Development; (2) Neurosciences; (3) Infection and Immunity; (4) Structural Biology; 網址: http://www.nimr.mrc.ac.uk/research/a-z/	Prof. Jim Smith Director, NIMR Deputy Chief Executive and Chief of Strategy, MRC	email: jim.smith@headoffice.mrc.ac.uk Tel: +44 208 816 2048	陶正統副研究員 02 2737 7431 (UK)

美洲							
項次	國別	研習機構	研習單位	研習領域	研習單位介紹	國外研習機構 指導或聯絡人姓名/職稱	聯絡資訊
33	加拿大	加拿大同步光源 中心 Canadian Light Source		Synchrotron Radiation-related Sciences	http://www.lightsource.ca/	Prof. T. K. Sham	E-mail: tsham@uwo.ca
34	英屬哥倫比亞大	英屬哥倫比亞大	1. Michael Smith Laboratories	1. 生物科技Biotechnology	1. http://www.msl.ubc.ca/	1. Dr. Jim Kronstad, Director, MSL	1. Tel: +1 604 822-4732 E-mail: kronstad@msl.ubc.ca
							科國司窗口 (負責科技組) 胡秀娟研究員 02 2737 7560 (CA)

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34	The University of British Columbia	2. Clean Energy Research Centre (CERC)	2. 能源科技Energy Technology	2. http://www.cerc.ubc.ca/	2. Dr. David Wilkinson, Director, CERC	2. Tel: +1 604 827-4342 E-mail: dwilkinson@chbe.ubc.ca	UZ L13 / J200 (CA)
35	加拿大渥太華大學 University of Ottawa	光子學研究中心 Centre for Research in Photonics	1. 飛秒科學實驗室 Attosecond Science Lab	1. http://www.jaslab.ca	1. Prof. Paul Corkum, Canada Research Chair Tier 1 in Attosecond Photonics	Pierre Berini, Director, Centre for Research in Photonics / Chair in Surface Plasmon Photonics, Tel: (613) 562-5800 ext. 6316, http://www.cecs.uottawa.ca/~berini/	胡秀娟研究員 Jennifer Hu 02 2737 7561 (CA)
			2. 量子光子學 Quantum photonics	2. http://www.quantumphotonics.uottawa.ca/	2. Prof. Robert Boyd, Canada Excellence Research Chair in Quantum Nonlinear Optics		
			3. 表面電漿光子學 Surface Plasmon Photonics	3. http://www.site.uottawa.ca/~berini/research.html	3. Prof. Pierre Berini, Chair in Surface Plasmon Photonics		
			4. 分子光子學 Molecular Photonics	4. http://www.chem.queensu.ca/people/faculty/Stolow/Home.html	4. Prof. Albert Stolow, Adjunct Professor and NRC Program leader of the Molecular Photonics Group		
			5. 高速光子學 Ultra-fast Photonics	5. http://mysite.science.uottawa.ca/brabec/index.html	5. Prof. Thomas Brabec, Canada Research Chair Tier 1 in Ultra-fast Photonics		
36-1	加拿大 多倫多大學 University of Toronto	Terrence Donnelly Centre for Cellular and Biomolecular Research Center	生醫科學與工程 Biomedical Science and Engineering	http://tdccbr.med.utoronto.ca/research/platforms.html http://tdccbr.med.utoronto.ca/faculty/directors_welcome.html	Dr. Brenda J. Andrews, Director	Tel: 416-978-8562 Fax: 416-978-8287 E-mail: brenda.andrews@utoronto.ca	胡秀娟研究員 02 2737 7560 (CA)
36-2	加拿大 University Health Network, Toronto	Advanced Medical Discovery Institute & The Campbell Family for Breast Cancer Research Institute, Princess Margaret Hospital	癌細胞代謝重新編程研究 (Metabolic reprogramming research in cancer cells)	http://www.thepinicesmargaret.ca/en/FindaPerson/Pages/ScientistProfile.aspx?personid=254	Prof. Tak Wah Mak, Director	Tel: 416 946-4501 E-mail: tmak@uhnres.utoronto.ca	
新增	加拿大 滑鐵盧大學 University of Waterloo(UW)	滑鐵盧奈米技術研究所 Waterloo Institute for Nanotechnology	UW-WIN	https://uwaterloo.ca/institute-nanotechnology/	Associate Professor Frank Gu, Canada Research Chair in Nanotechnology Engineering	Tel: +1 519 888 4567 ext. 38605 Email: frank.gu@uwaterloo.ca	胡秀娟研究員 02 2737 7560 (CA)

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38	美國	阿岡國家實驗室 Argonne National Laboratory	1. <u>Materials and Molecular Design and Discovery</u> 2. <u>Hard X-Ray Sciences</u> 3. <u>Structural Biology</u> 4. <u>Molecular imaging</u>	http://www.anl.gov/	1~4: Mr. Norman D. Peterson, Assistant to the Director 4: Sharon Feng, Ph.D. Executive Director, Institute for Molecular Engineering University of Chicago	Tel: +1 630 252 7229 Fax: +1 630 252 7923 npeterson@anl.gov Email: sfeng@uchicago.edu Phone: 773-702-9957	胡秀娟研究員 02 2737 7560 (DC)
39	美國	美國國家衛生研究院 National Institutes of Health (NIH)	The Intramural Research Program (IRP), National Institute on Drug Abuse (NIDA)	http://www.irp.drugabuse.gov	(1a) Dr. Antonello Bonci, Professor and Institute Scientific Director; and (1b) Dr. Brandon Harvey, Director, Optogenetics and Transgenetics Core Facility.	Dr. Bonci: Tel: 443-740-2463; Dr. Harvey: 443-740-2590	胡秀娟研究員 02 2737 7560 (DC)
			2. National Institute of Neurological Disorders and Stroke (NINDS)	(NIH-NINDS)			
			3. National Cancer Institute (NCI)	(NIH-NCI)			
			4. National Institute of Alcohol Abuse and Alcoholism (NIAAA)	Genetics and Imaging in Addiction Research	http://www.niaaa.nih.gov/research/division-intramural-clinical-and-biological-research	Gene-Jack Wang, MD, Senior Clinician, LNI, NIAAA. Tel: 301-496-5012; gene-jack.wang@nih.gov	
40	美國	哥倫比亞大學 Columbia University	1. Lamont-Doherty Earth Observatory	1. http://www.ldeo.columbia.edu/	1a. Dr. Colin Stark; 1b. Prof Adam Sobel; 1c. Dr. Suzana Camargo; 4. Prof. Goran Ekstrom	(如分頁)	胡秀娟研究員 02 2737 7560 (DC)
			2. Columbia Energy Frontier Research Center	2. www.cise.columbia.edu/efrc	2. Dr. James Yardley	(如分頁)	
			3. Columbia Integrated Systems Laboratory	3. http://www.ee.columbia.edu/~kinget	3. Prof. Peter Kinget	3. kinget@ee.columbia.edu	
			4. DVMM Lab	4. http://www.ee.columbia.edu/ln/dvmm/	4. 主任張世富教授 Dr. Shih-Fu Chang	4. Tel: +1 212-854-6894 Fax: +1 212-932-9421 E-mail: sfchang@ee.columbia.edu	



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		5. Columbia Nanoscale Science and Engineering Center	5. www.cise.columbia.edu/nsec	5. Dr. James Yardley	(知分頁)	
41	美國	哈佛大學 Harvard University 東亞語言與文明系	http://harvardalc.org/home.php	王德威教授(David Der-wei Wang)	dwang@fas.harvard.edu (617) 496-0925	胡秀娟研究員 02 2737 7560 (DC)
42	美國	約翰霍普金斯大學 Johns Hopkins University Energy Frontier Research Center	http://medusa.pha.jhu.edu/	Prof. Chia-Ling Chien 錢嘉陵教授	Tel: 410-516-8092 Fax: 410-516-7239 E-mail: clc@pha.jhu.edu	胡秀娟研究員 02 2737 7560 (DC)
43	美國	麻省理工學院 MIT 1. Computer Science and Artificial Intelligence Laboratory	1. http://www.sls.csail.mit.edu 2. http://www.csail.mit.edu/user/1522	1. Prof. Victor Zue	1. Tel: +1 617-253-8513 E-mail: zue@csail.mit.edu	胡秀娟研究員 02 2737 7560 (DC)
		2. Picower Institute for Learning and Memory	2. http://bcs.mit.edu/people/isaai.html 3. http://web.mit.edu/picower/faculty/isaai.html	2. 蔡立慧院士 Prof. Li-Huei Tsai	2. Tel: +1 617-324-1660 Email: lhtsai@mit.edu	
		3. Dept. of Nuclear Science and Engineering	3. http://web.mit.edu/nse/people/faculty/chen.html	3. 陳守信教授 Prof. Sow-Hsin Chen	3. Email: sowhsin@mit.edu Phone: +1 (617) 253-3810 Fax: +1 (617) 258-8863	
44	美國	貝勒醫學院 Baylor College of Medicine 1. Department of Pathology & Immunology & Department of Molecular & Cellular Biology,	1. http://www.bcm.edu/pathimmunology/index.cfm?PMID=14409	1. Assistant Professor Laising Yen (嚴來興) http://www.bcm.edu/pathimmunology/en/?pmid=21095	1. Tel: +1 713-798-1180; e-mail: yen@bcm.edu	胡秀娟研究員 02 2737 7560 (HU)
		2. Departments of Molecular and Cellular Biology and Medicine and Program of Development	2. https://www.bcm.edu/education/programs/developmental-biology/db_fac-tsai.html	2. C.C. Bell Distinguished Service Professor Ming-Ter Tsai (蔡明哲院士) https://www.bcm.edu/departments/molecular-and-cellular-biology/?pmid=7576	2. Tel: +1 713-798-6253; e-mail: mtsai@bcm.edu	

45	美國	美國國家大氣研究中心, National Center for Atmospheric Research (NCAR)	3. The Verna and Marrs McLean Department of Biochemistry	1. Bioinformatics 2. Nano Medicine and Drug Design 3. Cryo-Electron Microscopy and Tomography 4. Biophysics and Computational Biology	https://www.bcm.edu/people/view/b279d3f6-ffed-11e2-b668-080027880ca6	趙華 院士 Dr. Wah Chiu	(713) 798-6985 wah@bcm.edu	胡秀娟研究員 02 2737 7560 (HU)
新增	美國	美國國家大氣研究中心, National Center for Atmospheric Research (NCAR)	Mesoscale & Microscale Meteorology, Climate and global dynamics, etc.	大氣科學研究、氣候變遷及氣象相關研究	http://www.ncar.ucar.edu	Ying-Hwa Kuo Head Mesoscale prediction group	email: kuo@ncar.ucar.edu, Tel: 303-497-8910	胡秀娟研究員 02 2737 7560 (HU)
47	美國	美國國家再生能源實驗室, National Renewable Energy Laboratory (NREL)	Biosciences	1. Physiology 2. biochemistry 3. Molecular biology of microbes with applications in bioremediation and the production of H2 and high-value bio-based products	https://www.nrel.gov/energy/sciences/biosciences/staff/pin_ching_maness	陳品菁 教授 Dr. Pin-Ching Maness	(303) 384-6114 pinching.maness@nrel.gov	胡秀娟研究員 02 2737 7560 (HU)
48	美國	德州大學-奧斯汀分校, The University of Texas at Austin	Department of Electrical and Computer Engineering	1. Bio-sensor for cancer detection and Environmental sensors 2. Energy harvest through energy collection, or 3. Electronics and Telecommunication Technology	http://muri.engr.utexas.edu/ ; http://www.mrc.utexas.edu/index.php/people/main/106	Prof. Ray Chen (陳瑞曾), Cullen Trust Endowed Professor & Director of MURI center for Silicon Nanomembranes	Tel: +1 512 471-7035 Fax: +1 512 471-8575 Email: chen@ece.utexas.edu	胡秀娟研究員 02 2737 7560 (HU)
49	美國	德州大學-安德森癌症中心, The University of Texas MD Anderson Cancer Center at the Texas Medical Center	Dept. of Molecular and Cellular Oncology, Dept. of Cardiology, etc.	癌症醫療與研究 健康照護 醫院管理	http://www.mdanderson.org/ http://www.texasmedicalcenter.org	洪明奇 院士 Mien-Chie Hung	email: mhung@mdanderson.org, TEL: 713-792-3668	胡秀娟研究員 02 2737 7560 (HU)
40	美國	德州大學-西南醫學中心, The University of Texas at San Antonio	1. Department of Urology	1. 生醫科學與工程 Biomedical Science and Engineering	1. http://www.utsouthwestern.edu/faculty/13361/jer-tsong-hsieh.html	I. Jer-Tsong Hsieh (謝哲宗)	1. Tel: +1 214 648-3988 Email: JT.Hsieh@UTSouthwestern.edu	胡秀娟研究員 02 2737 7560 (HU)

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7	美國	University of Texas Southwestern Medical Center	(NEW) 2. Department of Bioengineering	1. Stem cells, tissue engineering, nanotechnology, biocompatibility, biomaterials, inflammation, infection and fibrosis	2. http://www.utsouthwestern.edu/education/graduate-school/programs/phd-degrees/biomedical-engineering/index.html	2. 唐力平 教授 Dr. Liping Tang (UTA 暨 西南 醫學中心教授)	2. Tel: 8172726075 Email: ltang@uta.edu	(HU)
50	美國	加州理工學院 California Institute of Technology		1. "Beyond Si-CMOS" nano- electronic research 2. Biophysics & Nano- biotechnology 3. Energy Research (難以計畫機構和實驗室後 始可提出)	1. http://www/its.caltech.edu/~yehgroup/ , http://kni.caltech.edu 2. http://mems.caltech.edu , http://www/its.caltech.edu/~nano/ , http://kni.caltech.edu 3. http://resnick.caltech.edu , http://www/lini.caltech.edu , http://solarfuelshub.org , http://daedalus.caltech.edu	1. Prof. Nai-Ciang Yeh 2. Prof. Yu-Chong Tai 3. Prof. Harry Atwater	1. ncyeh@caltech.edu 2. tai@mems.caltech.edu, roukes@caltech.edu 3. haa@caltech.edu	胡秀娟研究員 02 2737 7560 (LA)
51	美國	南加州大學 University of Southern California	1. USC-Taiwan center for Translational Research 2. Laboratory of Tissue Development and Regeneration	1. Development of novel therapeutics for targeted drug development 2. 生醫科學與工程Biomedical Science and Engineering	1. http://pharmacysresearch.usc.edu/centers/translational-research 2. http://www-hsc.usc.edu/~cmchuong/research/interests.html	1. Jean Chen Shih Ph.D.(陳景 虹院士), Bogdan Olenik Ph.D., Kevin Chen Ph.D., Clay CC Wang Ph.D., Mitchell E Gross M.D., Ph.D., Leland Cheung Ph.D., Florence Hofman Ph.D., Thomas Chen M.D. Ph.D. 2. 鍾正明(Cheng-Ming Chuong)	1. Tel:323 442 1441 Fax:323 224 7473 e-mail: jeshih@usc.edu 2. cmchuong@usc.edu	胡秀娟研究員 02 2737 7560 (LA)

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52-1	美國	加州大學-洛杉磯分校 University of California-Los Angeles(UCLA)	1. Device Research Laboratory 2.Material Science & Engineering 3. Optoelectronic Biofluidics Laboratory; 4. Electrical Engineering Department 5.Molecular & Medical Pharmacology 6. Bioengineering 7.Mechanical & Aerospace Engineering	1. Nanoelectronics and nanospintronics beyond CMOS; 2. 材料科技; 3. biophotonics, nanophotonics, and lab-on-a-chip systems; 4. Nonlinear Optics, Ultrafast Optics, Semiconductor Lasers, Photonic Devices, Nonlinear Laser Dynamics, Chaotic Communications, Optical Imaging, High speed electronics; 5.Department of Molecular and Medical Pharmacology; 6.http://www.bioeng.ucla.edu/ 7.http://www.mae.ucla.edu/	1.http://www.ee.ucla.edu/research h. 2.http://www.mse.ucla.edu/ 3. http://oeb.seas.ucla.edu/OEB.htm 1 4. http://www.ee.ucla.edu/people/faculty/faculty-directory/jia-ming-liu 5.http://www.pharmacology.ucla.edu/ 6.http://www.bioeng.ucla.edu/ 7.http://www.mae.ucla.edu/people/faculty/tsu-chin-tsao	1. Prof.Kang L Wang; 2. Prof. King-Ning Tu; Prof. Yang Yang; Prof. J.-M. Yang, etc.; 3. Prof. Eric Pei-Yu Chiou (邱培鈺); 4. Prof. Jia-Ming Liu (劉佳明); 5. Prof. Hsian-Rang Tseng (曾憲榮); 6. Prof. Wentai Liu (劉文泰); 7.Tsu-Chin Tsao (曹祖瑋)	1. Tel: 310-825-1609 Fax: 310-206-7154 E-mail: wang@ee.ucla.edu (NanoSystems Institute); 2. www.fena.org; www.win-nano.org; www.drl.ee.ucla.edu; 3. Tel: +1 310-825-8620 E-mail: pychiou@seas.ucla.edu; 4. Tel: +1 310 206-2097 E-mail: liu@ee.ucla.edu; 5. Tel: +1 310-206-8975 E-mail hsteng@mednet.ucla.edu 6. Tel: +1 310-825-9129 E-mail wentai@ucla.edu; 7. Tel:+1 310-206-2819 E-mail:tsao@ucla.edu	胡秀娟研究員 02 2737 7560 (LA)
52-2	美國	加州大學-聖地牙哥分校 University of California-San Diego (含The Scripps Research Institute)	1. School of Engineering 2. Swartz Center for Computational Neuroscience, etc. 3.Department of Medicine/Division of Cardiology	Bioengineering; Electrical and Computer Engineering; Mechanical and Aerospace Engineering; Mobile Systems Design Lab http://sean.ucsd.edu/~jung/Site/Home.html http://www.ien.ucsd.edu	http://be.ucsd.edu/ http://www.cse.ucsd.edu/ http://maeweb.ucsd.edu/http://mesdat.ucsd.edu/ 2. http://scen.ucsd.edu/index.html ; 3. http://www.ien.ucsd.edu/people/john-shyy	1a. Prof. Lanping Amy Sung; 1b. Prof. Robert Sah; 1c. Prof. Gert Cauwenberghs; 1d. Prof. Yuhwa Lo; 1e. Prof. Juan Lasheras; 1f. Prof. Sujit Dey 2. Prof. Tzyy-Ping Jung(鍾子平) 3. John Y.-J. Shyy, Ph.D.(史允中)	1a. Tel: +1 858-534-0821 E-mail: lasung@ucsd.edu; 1b. Tel: +1 858-534-0821 E-mail: rsah@ucsd.edu 1c. Tel: +1 858-534-6938 E-mail: gert@ucsd.edu; 1d. Tel: +1 858-822-3429 E-mail: ylo@ucsd.edu; 1e. Tel: +1 858-534-5437 Fax: 858-534-7599 1f. Tel: +1 858-534-0750 E-mail:dey@ece.ucsd.edu Tel: +1 858 366-8914 E-mail: tpjung@ucsd.edu Tel: +1 858 534-3736 Fax: 858-822-3027 E-mail: jshyy@ucsd.edu	胡秀娟研究員 02 2737 7560 (LA)
52-3	美國	加州大學-柏克萊分校 University of California-Berkeley	the Center for Energy Efficient Electronics Science (E3S)	Nanoelectronics, Nanomechanics, Nanophotonics, and Nanomagnetics http://www.eecs.berkeley.edu/Faculty/Homepages/wu.html	1. M. Josephine Yuen, Ph.D., Executive Director of Center for Energy Efficient Electronics Science 2. Prof. Ming C. Wu (吳明強教授), http://www.eecs.berkeley.edu/Faculty/Homepages/wu.html	1. M. Josephine Yuen, Ph.D., Executive Director of Center for Energy Efficient Electronics Science 2. Prof. Ming C. Wu (吳明強教授), http://www.eecs.berkeley.edu/Faculty/Homepages/wu.html	胡秀娟研究員 02 2737 7560 (SF)	

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52-4	美國 加州大學-舊金山分校 University of California-San Francisco	Department of Bioengineering and Therapeutic Sciences	pharmacogenomics of membrane transporters and in pharmacogenomics of metformin.	http://bis.ucsf.edu http://bis.ucsf.edu/people/faculty/profiles/?counter=12	Kathleen M. Giacomini, Ph.D. Professor & Co-Chair	Tel: +1 415 476-1936 E-mail: kathy.giacomini@ucsf.edu	胡秀娟研究員 02 2737 7560 (SF)
53	美國 勞倫斯伯克利國家實驗室 Lawrence Berkeley National Laboratory	Advanced Light Source	Synchrotron Radiation-related Sciences	http://www.lbl.gov/	Dr. Haimei Zheng		胡秀娟研究員 02 2737 7560 (SF)
		1. Structures and Composites Laboratory	1. a. Structural Health Monitoring; b. Design of Integrated Structures; c. Smart Structures; d. Design & Damage Tolerance of Composites Structures; e. Multi-Functional Materials	1. http://structure.stanford.edu/	1. 張福國教授 Fu-Kuo Chang	1. Tel: +1 650 723-3466 E-mail: fchang@stanford.edu	
		2. SLAC National Accelerator Laboratory	2. a. Accelerator physics; b. Astrophysics and Cosmology; c. Elementary Part	2. https://www6.slac.stanford.edu/	2. 趙午院士 Alexander Chao	2. Tel: +1 650 926-2985 E-mail: aecho@slac.stanford.edu	
		3. Computational Biology Laboratory	3. a. Computational Biology; b. Machine Learning; c. Big Data	3. www.stanford.edu/group/wonglab/	3. 王永雄院士 Wing Hung Wong	3. Tel: +1 650 725-2915 E-mail: whwong@stanford.edu	

2015年 科技部"補助任務導向型團隊赴國外研習"(龍門計畫)
外國研習機構一覽表

54	美國	史丹佛大學 Stanford University	4. To develop an improved infrastructure for measuring and explaining trends in poverty, inequality, and other distributive outcomes. Research addressing such issues of measurement in the fields of (a) poverty, (b) income inequality, (c) social mobility, (d) educational access, (e) the safety net, (f) the recent recession, (g) racial inequality, (h) residential segregation and poverty, and (i) poverty and discrimination (for details go http://www.stanford.edu/group/scs/pi/research_home.html).	4. http://www.stanford.edu/group/scs/pi/	4. David B. Grusky Professor, Dept. of Sociology Director, Stanford Center on Poverty & Inequality	4. Website: www.grusky.org Email: grusky@stanford.edu Tel: +1 650 724-6912	胡秀娟研究員 02 2737 7560 (SF)
			5.Center for Integrated Systems	5. http://cis.stanford.edu/	5.黃漢聲教授(H.S.Philip Wong)	Paul G. Allen Building 420 Via Palou Mail MS 4070 Stanford, CA 94305-4070 (650)-725-3626	
新增	美國	洛克斐勒大學 Rockefeller University	Laboratory of Biochemistry and Molecular Biology	http://www.rockefeller.edu/research/faculty/labheads/RobertRoeder/	Dr. Robert G. Roeder	Email: Robert.Roeder@rockefeller.edu The Rockefeller University 1230 York Avenue New York, NY 10065 (212) 327-8000	胡秀娟研究員 02 2737 7560 (DC)
新增	美國	國家標準暨技術院 National Institute of Standards and Technology (NIST)	1.Sensor Science Division 2.Materials for Energy Storage Program, Material Measurement Laboratory	http://www.nist.gov/pml/div685/grp03/ssl.cfm http://www.nist.gov	Dr. Yoshi Ohno NIST Fellow Dr. Leonid (Leo) Bendersky, Leader	email: ohno@nist.gov Tel: 301-975-2321 email: leoben@nist.gov tel: 301-975-6167	胡秀娟研究員 02 2737 7560 (DC)

備註：

1. 綠色字列出者，表示該機構或實驗室在2015年有所新增或刪除等修改
2. 有加底色者，表是為新增之機構



2015年 科技部"補助任務導向型團隊赴國外研習" (龍門計畫)
新增外國研習機構一覽表

亞洲

項次	國別	研習機構	研習單位	研習領域	研習單位介紹	國外研習機構 指導或聯絡人姓名/職稱	聯絡資訊	國台處窗口
3	澳大利亞	雪梨大學 The University of Sydney	衛生學院 Faculty of Health Sciences	Medical imaging Rehabilitation Communication Disorders Healthy Ageing Musculoskeletal Disorders and Breast Cancer	http://sydney.edu.au/health-sciences/	a. Prof. Patrick Brennan, Medical Radiation Sciences, Associate Dean b. Ms Adriana Sanmarrano, Executive Support Project Officer at the faculty of Health Science	a. Email:patrick.brennan@sydney.edu.au Tel: +61 2 9036 7402 Fax: +61 2 9351 9146 b. Email:Adriana.sanmarrano@sydney.edu.au Tel: +61 (0)2 9036 7466 Mobile: +61 (0)423 171 639	施孟君博士 02 2737 7150 (AU)
9	日本	獨立行政法人理化學研究所 Institute of Physical and Chemical Research(RIKEN)	中核研究機構化學研究所 中核研究機構物理研究所 中核研究機構材料研究所 中核研究機構生命科學研究所 中核研究機構環境科學研究所	物理學、工學、化學、生物學、醫學等自然科學全領域	http://www.riken.jp/en/research/abs/	外務・研究調整部 研究協力課	groexternal@riken.jp	鄭慧娟研究員 02 2737 7472 (JP)

歐洲

項次	國別	研習機構	研習單位	研習領域	研習單位介紹	國外研習機構 指導或聯絡人姓名/職稱	聯絡資訊	國台處窗口
31	英國	牛津大學 University of Oxford	甘迺迪風濕病學研究院 Kennedy Institute of Rheumatology	1. 分子及細胞生物Molecular and Cell Biology 2. 生物科學與工程Biomedical Science and Technology	Research groups: (1) Immunology; (2) Inflammation; (3) Tissue Biology and Repair; (4) Translational Medicine; 網址: http://www.kennedy.ox.ac.uk/research	Prof. Richard Williams	email:richard.williams@kennedy.ox.ac.uk Tel: +44 1865 612635	陶正統副研究員 02 2737 7431 (UK)
32	英國	醫學研究委員會 之國家醫學研究院 National Institute for Medical Research (NIMR)	國家醫學研究院 National Institute for Medical Research (NIMR)	1. 分子及細胞生物Molecular and Cell Biology 2. 生物科學與工程Biomedical Science and Technology	Research groups: (1) Genetics and Development; (2) Neurosciences; (3) Infection and Immunity; (4) Structural Biology; 網址: http://www.nimr.mrc.ac.uk/research/a-z/	Prof. Jim Smith Director, NIMR Deputy Chief Executive and Chief of Strategy, MRC	email:jim.smith@headoffice.mrc.ac.uk Tel: +44 208 816 2048	陶正統副研究員 02 2737 7431 (UK)

2015年 科技部"補助任務導向型團隊赴國外研習" (龍門計畫)
新增外國研習機構一覽表

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項次	國別	研習機構	研習單位	研習領域	研習單位介紹	國外研習機構 指導或聯絡人姓名/職稱	聯絡資訊	國合處窗口
37	加拿大	滑鐵盧大學 University of Waterloo(UW)	滑鐵盧奈米技術研究所 Waterloo Institute for Nanotechnology	UW-WIN	https://uwaterloo.ca/institute-nanotechnology/	Associate Professor Frank Gu., Canada Research Chair in Nanotechnology Engineering	Tel: +1 519 888 4567 ext. 38605 Email: frank.gu@uwaterloo.ca	胡秀娟研究員 02 2737 7560 (CA)
46	美國	美國國家再生能源實驗室 Renewable Energy Laboratory (NREL)	Biosciences	1. Physiology 2. biochemistry 3. Molecular biology of microbes with applications in bioremediation and the production of H2 and high-value bio-based products	https://www.nrel.gov/energy/sciences/biosciences/staff/pin_ching_maness	陳品菁 教授 Dr. Pin-Ching Maness	(303) 384-6114 pinching.maness@nrel.gov	胡秀娟研究員 02 2737 7560 (HU)
55	美國	洛克斐勒大學 Rockefeller University	Laboratory of Biochemistry and Molecular Biology	Biochemical, molecular biological and genetic analyses of the regulation of gene expression, through transcription (co)factors and epigenetic modifications, during development, cell differentiation, homeostasis and cell transformation	http://www.rockefeller.edu/research/faculty/labheads/RobertRoeder/	Dr. Robert G. Roeder	Email: Robert.Roeder@rockefeller.edu The Rockefeller University 1230 York Avenue New York, NY 10065 (212) 327-8000	胡秀娟研究員 02 2737 7560 (DC)
56	美國	國家標準暨技術院 National Institute of Standards and Technology (NIST)	1. Sensor Science Division 2. Materials for Energy Storage Program, Material Measurement Laboratory	Energy Technology Solid state lighting Materials for Energy Storage	http://www.nist.gov/pml/div685/gmp03/ssl.cfm http://www.nist.gov	Dr. Yoshi Ohno NIST Fellow Dr. Leonid (Leo) Bendersky, Leader	email: ohno@nist.gov Tel: 301-975-2321 email: leoben@nist.gov tel: 301-975-6167	胡秀娟研究員 02 2737 7560 (DC)

關鍵性科技與人文社會領域

序號	104年度領域別
1	地球科技 Earth Science & Technology
2	理論及先進量子相關科學 Theoretical and Advanced Quantum-related Science
3	同步輻射相關研究 Synchrotron Radiation-related Sciences
4	生醫科學與工程 Biomedical Science and Engineering
5	分子及細胞生物 Molecular and Cellular Biology
6	生物多樣性與生態 Biodiversity and Ecology
7	材料科技 Materials Science & Technology
8	能源科技 Energy Technology [內含有機太陽能電池 Organic Photovoltaics included]
9	電子電信科技 Electronics and Telecommunication Technology
10	高齡社會與健康照護 Ageing Society and Health Care
11	認知科學跨領域研究--心智、大腦與教育 Cognitive Science, Mind, Brain, and Education
12	資訊處理科技及智慧運算 Information Technology and Intelligent Computing
13	社會發展與福祉 (Social development and well-being): (1)生活品質與福祉(Quality of life and well-being) (2)社會資本 (Social capital) (3)社會階層與分配 (Social stratification and distribution)
14	亞洲研究(Asian Studies) (1)東亞研究 East Asia Studies (2)分析的亞洲哲學 Analytic Asian Philosophy
15	科技發展的倫理、法律與宗教意涵 Ethical, Legal, Religious & Social Issues

美洲

項次	國別	研習機構	研習單位	研習領域	研習單位介紹	國外研習機構 指導或聯絡人姓名/職稱	聯絡資訊	國合處窗口
	美國	National Institutes of Health (NIH)	The Intramural Research Program (IRP), National Institute on Drug Abuse (NIDA)	<u>Optogenetics in the Understanding of Brain Functions</u>	http://www.irp.drugabuse.gov	(1a) Dr. Antonello Bonci, Professor and Institute Scientific Director; and (1b) Dr. Brandon Harvey, Director, Optogenetics and Transgenetics Core Facility.	Dr. Bonci: Tel: 443-740-2463; Dr. Harvey: 443-740-2590	胡秀娟研究員 02 2737 7560
	美國	National Institutes of Health (NIH)	Laboratory of Neuroimaging (LNI), National Institute of Alcohol Abuse and Alcoholism (NIAAA)	<u>Genetics and Imaging in Addiction Research</u>	http://www.niaaa.nih.gov/research/division-intramural-clinical-and-biological-research	Gene-Jack Wang, MD. Senior Clinician, LNI, NIAAA.	Tel: 301-496-5012; Email: gene-jack.wang@nih.gov	胡秀娟研究員 02 2737 7560
	美國	National Institutes of Health (NIH)	(1) National Institute of Neurological Disorders and Stroke (NINDS)-項次1~4 (2) National Cancer Institute (NCI)-項次5~30					胡秀娟研究員 02 2737 7560
1	美國	National Institutes of Health (NIH)	Division of Intramural Research (DIR), National Institute of Neurological Disorders and Stroke (NINDS)	<u>Biomedical Informatics Research in Neuroscience</u>	http://intra.ninds.nih.gov	Dr. Yang C. Fann, Director, Intramural IT and Bioinformatics Program.	Dr. Fann: Tel: 301-451-5153; Email: fann@ninds.nih.gov	胡秀娟研究員 02 2737 7560
2	美國	National Institutes of Health (NIH)	Division of Intramural Research (DIR), National Institute of Neurological Disorders and Stroke (NINDS)	<u>Mechanisms of Mitochondria Transport and Quality Control in Healthy and Diseased Neurons</u>	http://intra.ninds.nih.gov	Zu-Hang Sheng, PhD, Senior Principal Investigator, Chief of Synaptic Functions Section	NINDS, NIH Building 35 (PNRC), Room 2B-215 35 Convent Drive, MSC 3706 Bethesda, Maryland 20892-3706 Tel: 301-435-4596 Fax: 301-480-5763 Email: shengz@ninds.nih.gov Lab webpage: http://intra.ninds.nih.gov/La Dr. Afonso C. Silva NIH/NINDS/LFMI/CMS 10 Center Drive, MSC 1065 Building 10, Room BID106 Bethesda, MD 20892-1065 (301) 402-9703	胡秀娟研究員 02 2737 7560
3	美國	National Institutes of Health (NIH)	Division of Intramural Research (DIR), National Institute of Neurological Disorders and Stroke (NINDS)	<u>Study cortical processes of complex sensory stimuli in common marmosets using multi-modality approaches: electrophysiology, 2-photon imaging, and functional MRI</u>	http://intra.ninds.nih.gov	Dr. Afonso C. Silva Senior investigator CMS/LFMI/NINDS		胡秀娟研究員 02 2737 7560
4	美國	National Institutes of Health (NIH)	Division of Intramural Research (DIR), National Institute of Neurological Disorders and Stroke (NINDS)	<u>Molecular mechanisms underlying synapse development and the regulation of synaptic transmission</u>	http://intra.ninds.nih.gov	Wei Lu, Investigator	Luw4@mail.nih.gov	胡秀娟研究員 02 2737 7560



5	美國	National Institutes of Health (NIH)	National Cancer Institute, Division of Cancer Epidemiology and Genetics	Nutritional Epidemiology Branch	http://dceg.cancer.gov/about/dceg-mission	Christian Abnet	abnetc@mail.nih.gov	胡秀娟研究員 02 2737 7560
6	美國	National Institutes of Health (NIH)	National Cancer Institute, Division of Cancer Epidemiology and Genetics	Infectious and Immunoepidemiology Branch	http://dceg.cancer.gov/about/dceg-mission	Anil Chaturvedi	chaturva@mail.nih.gov	胡秀娟研究員 02 2737 7560
7	美國	National Institutes of Health (NIH)	National Cancer Institute, Division of Cancer Epidemiology and Genetics	Nutritional Epidemiology Branch	http://dceg.cancer.gov/about/dceg-mission	Neal Freedman	freedmanne@mail.nih.gov	胡秀娟研究員 02 2737 7560
8	美國	National Institutes of Health (NIH)	National Cancer Institute, Division of Cancer Epidemiology and Genetics	Infectious and Immunoepidemiology Branch	http://dceg.cancer.gov/about/dceg-mission	Allan Hildesheim	hildesha@mail.nih.gov	胡秀娟研究員 02 2737 7560
9	美國	National Institutes of Health (NIH)	National Cancer Institute, Division of Cancer Epidemiology and Genetics	Genetic Epidemiology Branch	http://dceg.cancer.gov/about/dceg-mission	Philip Taylor	ptaylor@mail.nih.gov	胡秀娟研究員 02 2737 7560
10	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Developmental Therapeutic Branch	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5813	Aladjem, Miri	aladjem@mail.nih.gov	胡秀娟研究員 02 2737 7560
11	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Cell Biology	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5714	Ambudkar, Suresh	ambudkar@mail.nih.gov	胡秀娟研究員 02 2737 7560
12	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Genetics Branch	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5671	Aplan, Peter	aplamp@mail.nih.gov	胡秀娟研究員 02 2737 7560
13	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Molecular Biology	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5784	Cheng, Sineu-yann	chengs@mail.nih.gov	胡秀娟研究員 02 2737 7560
14	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Radiation Oncology Branch	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5550	Coleman, Norman	ccoleman@mail.nih.gov	胡秀娟研究員 02 2737 7560
15	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Receptor Biology and Gene Expression	http://ccr.cancer.gov/staff/staff-as-p2?profileid=14116	Dalal, Yamini	dalaly@mail.nih.gov	胡秀娟研究員 02 2737 7560
16	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Molecular Targets Laboratory	http://ccr.cancer.gov/staff/staff-as-p2?profileid=7125	Gustafson, Kirk	gustafki@mail.nih.gov	胡秀娟研究員 02 2737 7560
17	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Human Carcinogenesis	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5761	Harris, Curtis	harris@mail.nih.gov	胡秀娟研究員 02 2737 7560
18	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Experimental Immunology	http://ccr.cancer.gov/staff/staff-as-p2?profileid=14291	Hu, Yunting	huy2@mail.nih.gov	胡秀娟研究員 02 2737 7560
19	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Gene Regulation and Chromosome Biology Laboratory	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5787	Jin, Ding	jind@mail.nih.gov	胡秀娟研究員 02 2737 7560
20	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Basic Research Laboratory	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5549	KewalRamani, Vineet	vineet.kewalramani@mail.nih.gov	胡秀娟研究員 02 2737 7560
21	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Metabolism	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5806	Lee, Kyung	KyungLee@mail.nih.gov	胡秀娟研究員 02 2737 7560
22	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Biochemistry and Molecular Biology	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5611	Lichten, Michael	mlichten@helix.nih.gov	胡秀娟研究員 02 2737 7560
23	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Molecular Immunoregulation	http://ccr.cancer.gov/staff/staff-as-p2?profileid=5621	Oppenheim, Iosif	oppenhe@mail.nih.gov	胡秀娟研究員 02 2737 7560

24	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Cell and Developmental Signaling	http://ccr.cancer.gov/staff/staff.asp?profileid=5589	Sterneck, Esta	sternecg@mail.nih.gov	胡秀娟研究員 02 2737 7560
25	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Basic Research Laboratory	http://ccr.cancer.gov/staff/staff.asp?profileid=13350	van Dyke, Terry	vandyket@mail.nih.gov	胡秀娟研究員 02 2737 7560
26	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Cell and Developmental Signaling	http://ccr.cancer.gov/staff/staff.asp?profileid=18269	Westlake, Christopher	chris.westlake@nih.gov	胡秀娟研究員 02 2737 7560
27	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Macromolecular Crystallography Laboratory	http://ccr.cancer.gov/staff/staff.asp?profileid=5858	Wlodawer, Alexander	wlodawer@nih.gov	胡秀娟研究員 02 2737 7560
28	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Experimental Immunology	http://ccr.cancer.gov/staff/staff.asp?profileid=5711	Young, Howard	YoungHow@mail.nih.gov	胡秀娟研究員 02 2737 7560
29	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Laboratory of Cellular and Molecular Biology	http://ccr.cancer.gov/staff/staff.asp?profileid=5634	Zhang, Ying	ZhangYin@mail.nih.gov	胡秀娟研究員 02 2737 7560
30	美國	National Institutes of Health (NIH)	National Cancer Institute, Center for Cancer Research	Gene Regulation and Chromosome Biology Laboratory	http://ccr.cancer.gov/staff/staff.asp?profileid=5572	Zheng, Zhi-Ming (Thomas)	zhengt@exchange.nih.gov	胡秀娟研究員 02 2737 7560

回研習機構主頁

NIST Dragon Gate Targeted Program

1. Sensor Science Division

Solid state lighting is increasingly introduced into the market. SSL has much freedom for spectral and spatial design of light source and has potential of various new type of lighting and applications. The characteristics of the LED sources, however, are versatile, often dissimilar to the traditional light sources, and the possibilities of new designs or new problems have not been well characterized by the existing metrics and standards available, especially for visual characteristics. Research opportunities exist for updating the metrics or develop new metrics to allow accurate evaluation of visual characteristics of LED light sources and products.



NIST Sensor Science Division:

The Division has recently developed Spectrally Tunable Lighting Facility, only one of this kind in the world, which allows for various vision experiments related to color and color quality of lighting in precisely controlled conditions in a real room-size spaces. The visiting scientists can use this facility to conduct various vision experiments to answer many questions related to the spectral design (benefits and problems) of SSL sources. The research topics includes 1) most preferred white chromaticity points for lighting, 2) metric for color rendering preference of light sources, 3) redefinition of correlated color temperature, 4) redefinition of Duv (chromaticity shift across Plankian locus).

Point of Contact

Dr. Yoshi Ohno

NIST Fellow, Sensor Science Division

National Institute of Standards and Technology

100 Bureau Drive, Gaithersburg, MD 20899

Tel: 1 301 975-2321

The LIGO Laboratory on the Caltech campus operates the LIGO (Laser Interferometer Gravity Wave Observatory) facility. Future projects that are actively being developed at Caltech include the NUSTAR X-ray observatory and the CCAT submillimeter telescope.

2. Material for Energy Storage



Imminent changes in the world energy portfolio have amplified need in advanced energy storage technologies, primarily for the grid, automotive and consumer electronics sectors. Rechargeable batteries of high capacity, power, longevity and low cost are in great need. To achieve technological success, understanding of fundamental mechanisms governing performance of battery's components is essential.

NIST intramural Materials for Energy Storage program provides expertise and resources in studying and synthesizing advanced materials for energy storage; the resources include state-of-the-art analytical and high-resolution microscopy, capability for in situ electrochemical experiments, and variety of thin film deposition instruments, including combinatorial set up. The program is focused on utilizing thin films as model single crystal systems for studying fundamental mechanisms in advanced cathodes, solid electrolytes and full all-solid batteries; the goal is to achieve in situ atomic resolution observations of processes while the electrochemical characteristics are measured.

Point of contact:

Leonid A. Bendersky, Ph. D.

Leader, Materials for Energy Storage Program

Functional Nanostructured Materials Group,

Materials Science and Engineering Division 642,

Material Measurement Laboratory,

National Institute of Standards and Technology (NIST)

MS 8551, 100 Bureau Drive

Gaithersburg, MD 20899

Ph: (301) 975-6167

[回研習機構主頁](#)

Targeted Research Areas for 2015/2016 Internship at Caltech



Caltech faculty members generally welcome opportunities for international collaborations based on mutual research interest. There are some targeted research areas specified as following:

[1] Astronomy/Astrophysics/Space Studies

Astronomy, astrophysics and space studies at Caltech encompass a wide range of topics. Examples of studies range from theoretical modeling and observational verifications of cosmology to studying the Kuiper Belt in our solar system, instrumentation developments include energy sensitive single-photon counting detectors to large optical and submillimeter telescopes, and major involvement in space missions for astrophysics and planetary exploration. Facilities that Caltech researchers have access to include the Palomar Observatory (Hale 5m telescope, 1.5m Mayer telescope, 1.2m Oschin Schmidt telescope), the 10m telescopes of the W. M. Keck Observatory, the CARMA millimeter interferometer array, the 10m Caltech Submillimeter Observatory, and the telescopes of the Owens Valley Radio Observatory. Caltech researchers are involved in CMB experiments using facilities at the South Pole and on balloons. Space Astrophysics missions with major Caltech involvement include the GALEX UV imaging satellite, the Spitzer Space Telescope, the WISE all-sky survey explorer, the Herschel Space Observatory, the Planck Satellite and the Advanced Composition Explorer (ACE).

The LIGO Laboratory on the Caltech campus operates the LIGO (Laser Interferometer Gravity Wave Observatory) facility. Future projects that are actively being developed at Caltech include the NUSTAR X-ray observatory and the CCAT submillimeter telescope.

Faculty contact: Professor B. Thomas Soifer (also Chairman of the Division of Physics, Mathematics and Astronomy at Caltech), bts@iraastro.caltech.edu.

Related website: <http://www.astro.caltech.edu/>

[1] “Beyond Si-CMOS” nano-electronic research

Current challenges in developing the technology that can go beyond the scaling limit of Si-CMOS (Complementary Metal Oxide Semiconductors) involve finding effective means of increasing the areal density of electronic devices on a chip while maintaining or even improving the performance. New materials and device concepts are necessary to facilitate such advances. Among various intensely explored paradigms, nano-electronic devices based on graphene and graphene-related materials, spintronics (spin-dependent electronics) and topological insulators have demonstrated both rich phenomena for scientific research and promising properties for beyond Si-CMOS applications. The condensed matter physics lab led by Professor Nai-Chang Yeh at Caltech has active research programs in the investigation of fundamental scientific issues associated with graphene, graphene-based electronics, spintronics and topological insulators.

Additionally, the lab has forged close collaborations with other research groups (at Caltech, UCLA and UC Riverside) specializing in theoretical simulations, materials development and fabrication of nano-electronic devices. The affiliation of Professor Yeh with the Kavli Nanoscience Institute at Caltech further also makes available state-of-the-art fabrication facilities for beyond Si-CMOS nano-electronic research.

Faculty contact: Professor Nai-Chang Yeh, ncyeh@caltech.edu.

Related websites: <http://www.its.caltech.edu/~yehgroup/> and <http://kni.caltech.edu/>.

[2] Biophysics & Nano-biotechnology

Microelectronics and nanoscience are ushering in a new generation of tools for modern biological research. These new approaches are beginning to provide unprecedented resolution of processes that open up new perspectives for understanding biological complexity. At the heart of these exciting recent advances are technologies that enable research at the level of single molecules and individual cells, but with sufficiently high throughput to survey complex interactions that occur only in higher hierarchies in biological organisms and populations. This research is highly interdisciplinary in nature and is closely linked to Caltech's nanoscience and nanotechnology efforts. Active areas of research at Caltech in nano-biotechnology include: systems biology, systems neuroscience, single-molecule biophysics, and nano-biotechnology for research and clinical applications.

For example, the Caltech Micromachining Laboratory led by Professor Tai exercises various MEMS and micro/nano technologies to physically fabricate integrated devices, and the research emphases include high-level system integration and hands-on fabrication of biochips, microfluidic chips, neural implants and biomedical devices. Similarly, the research lab led by Professor Roukes develops advanced nano-devices systematically for biomedical and life science applications.

Faculty Contacts: Professor Yu-Chong Tai, tai@mems.caltech.edu;

Professor Michael Roukes (also Co-Director, Kavli Nanoscience Institute), roukes@caltech.edu.

Related websites: <http://mems.caltech.edu/>; <http://www.its.caltech.edu/~nano/>, and <http://kni.caltech.edu/>

[3] Energy Research

While much progress has been made in developing renewable energy technologies, one major goal remains elusive: bringing these efforts to the terawatt scale necessary for sustainable energy to become a viable replacement for carbon-based energy sources such as oil, coal and gas, which are limited in supply, and contribute to carbon dioxide emissions. The ability to meet the global growing demand for energy while protecting the planet's resources will require profound creativity, cutting-edge science, and new technologies that arise from a number of different fields. At Caltech, a crucible for new ideas, leaders in the fields of chemistry, applied physics, materials science, bioengineering, aeronautics, mechanical engineering and genetics are working together on innovative approaches to capturing, amplifying, storing and converting the planet's renewable energy supplies.

The Resnick Institute at Caltech strives to identify and address the most important outstanding challenges and issues in the generation, storage, transmission, conversion and conservation of energy. The Resnick Institute provides a unique opportunity to leverage core competences in the areas of electrochemistry, biochemistry and materials, as developments in these areas converge to enable groundbreaking energy technologies. There are also opportunities for collaboration with newly-established research centers at Caltech, including energy-related micro- and nano-photonics research in the Light Material Interactions Energy Frontier Research Center, and research on semiconductor materials, heterogeneous catalysis, and photoelectrochemistry in the Joint Center for Artificial Photosynthesis.

Faculty contact: Professor Harry Atwater (also Director of the Resnick Institute)

hua@caltech.edu.

Related websites: <http://resnick.caltech.edu/> ; <http://www.lmi.caltech.edu/> ;
<http://solarfuelshub.org/> and <http://daedalus.caltech.edu/>.



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Argonne National Laboratory
2014/2015 for Dragon Gate Program

Materials and Molecular Design and Discovery: 1. Design, synthesis and control of material for energy: storage, low-power electronics, alkane oxidation, electrocatalysis; 2. In situ synthesis and characterization of bulk, film and interfacial architectures; 3. materials prediction through genetic algorithms and multiscale modeling of nucleation and growth; 4. spectro-microscopy; 5. Crystal growth and crystal growth technology; 6. Nano-photonics research

Point of Contact:

Norman D. Peterson, Assistant to the Director
Argonne National Laboratory
9700 South Cass Avenue
Argonne, IL 60439-4832
Tel: 1-630-252-7229 office
Fax: 1-630-252-7923

Hard X-Ray Sciences: High energy x-rays have high impact in materials, biology, energy, engineering, and technology through advancing hard x-ray science using in situ techniques to explore real materials under real conditions in real time.

Point of Contact:

Norman D. Peterson, Assistant to the Director
Argonne National Laboratory
9700 South Cass Avenue
Argonne, IL 60439-4832
Tel: 1-630-252-7229 office
Fax: 1-630-252-7923

Structural biology: Structural biology contributes to the exploration of new opportunities in biology, proteomics and genomics research with a major focus on medicine, bio-nanomachines, and biocatalysis.

Point of Contact:

Norman D. Peterson, Assistant to the Director
Argonne National Laboratory
9700 South Cass Avenue
Argonne, IL 60439-4832
Tel: 1-630-252-7229 office
Fax: 1-630-252-7923
nnpeterson@anl.gov



The field of molecular imaging emerged in the early 1990's as scientists from multiple disciplines began working toward the development of imaging instruments, imaging probes, and quantification techniques to understand molecular mechanisms in biology and medicine. Since then, the field of molecular imaging developed an impressive number of technologies widely used today for biomedical and materials research and clinical analysis. While the fundamental scaling limits of these technologies have not been reached, each imaging modality has characteristic disadvantages related to their limited spatial resolution, sensitivity and/or temporal response. Continuing quest for novel molecular imaging technologies demands extensive cross-disciplinary collaboration.

An international collaboration among the Molecular Imaging Center at National Taiwan University (NTU), Argonne National Laboratory (ANL) and the Institute of Molecular Engineering (IME) of the University of Chicago was launched to focus on the theme of "Molecular Imaging Systems" with a goal to build a platform to investigate and develop new technologies for imaging molecules and their activity. It will require the collaboration of scientists from a range of disciplines who are able to design and fabricate nanomaterials-based imaging agents, are knowledgeable about imaging techniques, and have an in-depth understanding of biochemistry, soft matter physics, and nano-patterning.

Nanoparticles in Enhancing Cell and Tissue Imaging: Investigate the use of nanoparticles to achieve high spatial and temporal resolution of imaging of cell processes as well as tissue perturbation and manipulation.

Novel Imaging Techniques and Analysis Methodologies for Non-invasive Early Diagnostics of Diseases: To develop new tools for 4D/5D imaging to observe the changes in cell and tissue in situ and in vivo.

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(1) Earth Sciences

The Lamont-Doherty Earth Observatory is a world-renowned center for research into a wide range of topics in ocean, atmosphere and earth sciences. As part of the Columbia Earth Institute our basic research activities have become integrated into broader disciplinary efforts towards their application to societal applications such as natural hazard and risk assessment, poverty reduction, the mitigation of global warming, and the coupling of climate change to disease propagation. Several groups at Lamont-Doherty have deep expertise in areas with particular relevance to Taiwan, including: earthquake seismology; tropical meteorology and typhoons; landslides, debris flows and floods; chemical, biological and physical oceanography.

(2) Energy Frontier Research Center

The Columbia Energy Frontier Research Center was established through a grant from the Department of Energy in September of 2009 under the leadership of Prof. Tony Heinz (EE and Physics) and Prof. Louis Brus (Chemistry). The Columbia EFRC is creating enabling technology to redefine photovoltaic efficiency through fundamental understanding and molecule-scale control of the key steps in the photovoltaic process in organic and hybrid materials. The EFRC is systematically developing the fundamental understanding of the primary photovoltaic processes in organic and hybrid materials and it is quantitatively investigating new nanostructured materials with potential for extracting multiple electrical charges from a single absorption event. In order to understand "Charge Generation: Excitation, Separation and Extraction of Charge Carriers in Tailored Nanostructures"

Prof. Colin Nuckolls and Prof. Louis Brus are developing a set of new, chemically well-characterized nanoscale materials. These include new quantum dots and a set of novel chemical compounds: "molecular clusters." Together with Prof. Tony Heinz they are exploring the dynamics and effectiveness of fundamental processes, using modern nanoscience tools. Prof. Latha Venkataraman and Prof. Richard Osgood are exploring the effectiveness of charge transport across interfaces through direct transport measurement, as well as through photoemission studies.

In collaboration with Brookhaven National Labs, Prof. Ioannis Kymissis and others are building new materials suitable for studying the fundamental physics in heterojunction solar cell devices including new chemically tailored semiconductor materials and ordered interfaces. In particular Prof. Philip Kim is actively exploring the use of graphene and other carbon-based conductors in solar applications. Prof. Tony Heinz and Prof. Louis Brus are exploring experimentally new concepts in carrier multiplication in quantum dot and one-dimensional systems, while Prof. David Reichman is seeking to establish quantitative and predictive theory for novel carrier multiplication concepts.



(3) Integrated Circuit Design for Nanoscale Technologies	The Columbia Integrated Systems Laboratory conducts research in the development of novel design principles and architectures for integrated circuits and systems. To realize the unprecedented integration and performance opportunities of highly scaled nanometer CMOS technologies, important challenges like reduced supply voltage and higher device variability need to be mitigated using an interdisciplinary approach reaching from devices and circuits, to architectures, signal processing and applications. Researchers in the Kinget group conceive, design, lay out, send for fabrication, and experimentally verify innovative concepts to integrate analog, RF and mixed signal interfaces in standard CMOS technologies. These interfaces are the crucial link between the digital cores of system-on-chip devices and the physical world. Active areas of research are ultra-low voltage and ultra-low power RF interfaces and A/D converters; leveraging highly scaled CMOS devices in switched mode analog and digital signal processing; ultra-low power electronics for "Energy Harvesting Active Networked Tags" including energy harvesting, conditioning and storage and ultra-low power pulsed wireless communications and sensing; cognitive radio electronics including multi-antenna RF systems, highly linear RF front ends, switched capacitor RF circuits, and spectrum scanning. The group currently has strong ties to several academic research groups, companies and foundries in Taiwan.
(4) Multimedia Computing and Information	The multimedia research groups at Columbia University are leading the frontiers of research of next-generation search engines for multimedia (including video, music, and speech), media content understanding, security, forensics, and communication. The Digital Video and Multimedia Lab led by Chang conducts research on image retrieval, object recognition, video event analysis, and media forensics, targeting at applications of broad impact such as Internet, surveillance, biomedicine, and consumer. Many large-scale research testbeds and corpora have been developed and disseminated worldwide. The group also plays a major role in developing international multimedia standards such as MPEG-7. The Laboratory for the Recognition and Organization of Speech and Audio (LabROSA) led by Ellis conducts research into automatic means of extracting information from various types of sound, including speech, music, and environmental sound. The groups have led major research forums and maintain close collaboration with a large number of industrial and academic institutions, including many from Taiwan. They have also established close ties with partners from other disciplines, such as Journalism, Music, Medicine, and Education.
(5) Nanoscience and	The Columbia Nanoscale Science and Engineering Center (NSEC) has been developing primary understanding of charge transport in nanoscale systems since 2001. This Center has demonstrated an extremely effective program of interdisciplinary research across the fields of chemistry, physics, electrical engineering, mechanical engineering, and applied physics and beyond. The research program is built upon exploration of transport phenomena in single molecules, in carbon nanotubes and in two dimensional systems. Through the scientific contributions of Profs. Philip Kim, Louis Brus, George Flynn, Tony Heinz, Jim Hone, Richard Osgood, Aron Pinczuk, Ken Shepard, Horst Stormer and others, it has established a leadership position internationally in the development and characterization of the fundamental properties of an exciting new material: graphene. This research includes exploration of quantum interference phenomena in graphene-based devices.

Through collaborations amongst Prof. Tony Heinz, Prof. Louis Brus, Prof. Philip Kim, and Prof. James Hone the Columbia NSEC has developed new spectroscopic techniques for characterizing carbon nanotubes and graphene and for understanding the electronic structure and dynamics for these systems. The center is currently extensively exploring the properties and opportunities for graphene including high frequency electronics, mechanics, and biological sensors. The Columbia Nanocenter through Prof. Colin Nuckolls, Prof. Latha Venkataraman, Prof. Philip Kim, Prof. Ronald Breslow and others has pioneered understanding of electron conductance phenomena in single molecules – work which is changing our understanding of the role of molecules in transport and which is opening new opportunities for single molecule biological sensing and detection.







NIH/NIAAA/LNI Dragon Gate Targeted Program

With recent advance in medical imaging techniques, molecular imaging plays a key role to better understanding of neurochemistry, genetics and behavioral aspects of addiction, which is essential to the success of translational biomedical research. NIAAA intramural neuroimaging laboratory provides expertise and resources in brain imaging, genetics, behavioral and clinical research working with investigators on many exciting area of addiction research at NIH.

NIAAA Laboratory of Neuroimaging:

Genetic Research: The first part of training program will be focused on the core technology, tools and applications of human genetics for addiction research. The visiting scientist/student would learn: 1) bioinformatics tools and databases used in human genetic studies; 2) hands-on benchmark techniques of the genotyping, including PCR and sequencing; 3) inference and assignment of the individual genotypes

Integrated Genetic and Imaging Research: The second part of the training program will be directed towards analyzing and integrating genetic, behavioral and brain imaging data to understand the following: 1) how individual genetic variances can confer or increase a susceptibility to addictive disorders, 2) a link between brain inflammation and functional alterations in alcoholism, 3) biological mechanisms controlling individual variability in circadian rhythmicity in human brain and their alterations associated with addiction, 4) functional changes in the human brain facilitating during sleep and wakefulness states and 5) neurological and genetic determinants of obesity.

Point of contact:

Gene-Jack Wang, MD
Senior Clinician and Clinical Director
Laboratory of Neuroimaging
National Institute of Alcohol Abuse and Alcoholism
National Institutes of Health
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Bethesda, MD 20892
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Phone: 301-496-5012
Fax: 301-496-5568

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Dragon Gate Program

GENERAL EXAMINATION FIELDS

Modern Chinese Literature

The modern Chinese literature field includes literary works, genres, and authors from the late Qing to the present. Candidates are expected to have broad knowledge of the historical, intellectual, and cultural issues of the modern period, as well as a good command of the theoretical and methodological issues involved in the study of this field. The exam could be tailored to include a special emphasis on colonial and modern Taiwanese literature, or Asian American and diasporic literatures.

Primary Research Language

Fluency in modern Chinese, ability to read classical. Candidates who choose to focus on Taiwanese literature as part of their field need to also demonstrate a high level of reading proficiency in Japanese.

Point of Contact:

David Der-wei Wang

Edward C. Henderson Professor of Chinese Literature

Department of East Asian Languages and Civilizations

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Waterloo Institut

Nanomaterials
Science and
Engineering for:
Energy

Nanomaterials
for: **Health & A
Clean
Sustainable
Environment**

Nanoelectronics
and
Nanophotonics:
**Materials &
Devices: Design,
Fabrication and
Simulation**



te for Nanotechnology

The vision of WIN is to be a global centre of Excellence for nanotechnology research, development and application. Crucial to this goal is leading edge research to discover, design and tailor new materials and to exploit their unique properties at the nanoscale. "Nanosizing" provides new approaches to energy harvesting (solar cells), generation (fuel cells), storage (lithium batteries, supercapacitors) and conversion (thermoelectric materials, next generation lighting technologies).

Within the QNC and the Giga to Nano (G2N) laboratory, WIN has an arsenal of fabrication techniques such as e-beam lithography, ALD, CVD, sputtering, molecular beam epitaxy and thin film deposition, available to users. For metrology, and characterization, WIN has a suite of electron microscopes (STEM & SEM) and a Helium ion microscope as well as x-ray (SAXS), PES and other tools. WIN has a strong team of 8 PhDs in the group headed by Prof. Linda Nazar. A major thrust in WIN is the synthesis of novel nano-particles specifically engineered to deliver therapeutic agents for the treatment of disease states e.g. cancer of the prostate and glaucoma of the eye; controlled release of fertilizers and nutrients for plant growth in agriculture; magnetic, recyclable photocatalysts for the removal of toxic contaminants from groundwater or tailings ponds from oil or mineral extraction.

Critical to all of these applications is a fundamental understanding of the nature, structure and properties of functional nanomaterials. Leadership in this technology development through innovative applications of nanomaterials is provided by Professor F.X. Gu, a Canada Research Chairholder.

A second program on the theme of sustainable nanomaterials is to explore the development of **new nanobiomaterials** from natural, renewable resources. Examples here are the replacement of petroleum based latexes by biol latex derived from natural starch (a \$6 billion marketplace) and exploiting the unique properties of **cellulose nanocrystals**, a natural nanomaterial from forest biomass, in nanocomposites, tissue engineering and organic electronics. Key players here are: Professor Michael Tam (University Chair) and Professor Luowen Liu, a rising star in WIN.

This is an area of great depth and excellence in WIN. Activities cover: organic electronic and optoelectronic devices (OLEDs), flexible and printable electronics, sensors; large area electronics and detectors. Quantum cascade lasers; III/V compound semiconductors for quantum computing applications. Molecular engineering of polymers for organic electronics. Single photon detection and devices; spintronics and magnetic resonance based information processing. Professors H. Aziz, W. Wong, D. Ban, K. Karim, J. Baugh, J. Kycia and Z. Wasilewski are major players.

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科技部補助任務導向型團隊赴國外研習作業要點

103 年 08 月 14 日本部第 9 次主管會報修正通過

一、目的：

科技部(以下簡稱本部)為補助國內優秀人才赴本部指定之國外世界級公私立研究機構，研習關鍵性科技與人文社會研究項目，以培育我國未來發展所需之研發人才，並掌握自主研發能力，進而促成我國科研創新水準之躍升，特訂定本要點。

二、關鍵性科技與人文社會研究項目及國外世界級公私立研究機構：

- (一) 關鍵性科技與人文社會研究項目：由本部指定研習關鍵性之科技與人文社會研究項目；每年公布五項至十五項為原則。
- (二) 國外世界級公私立研究機構(以下簡稱國外研習機構)：由本部各學術司及駐外科技組推薦，並經本部審定後對外公布。

三、申請機構：

- (一) 公私立大專院校及公立研究機構。
- (二) 經本部認可之行政法人學術研究機構、財團法人學術研究機構及醫療社團法人學術研究機構。

四、計畫主持人及研習人員資格：

- (一) 計畫主持人及共同主持人(以二位為限)資格：符合本部補助專題研究計畫作業要點第三點規定，且不得為已依相關法令辦理退休之人員。
- (二) 研習人員資格：由計畫主持人選定赴指定國外研習機構研習之博士生、博士後研究人員，且須設有戶籍之中華民國國民。

五、補助對象及額度：

- (一) 補助對象包括計畫主持人、共同主持人及由計畫主持人選定赴指定國外研習機構研習之研習人員(計畫主持人須於申請時一併提出研習人員人選，每一計畫應包含至少一位，至多三位研習人員)。
- (二) 補助額度以每一計畫每年新臺幣四百萬元為限。但國外研習機構提出特殊需求，經本部審查同意者，不在此限。

六、補助項目：

計畫主持人得在補助額度內，依規劃性質及實際需要，申請下列項目補助經費：

- (一) 計畫主持人及共同主持人之國外差旅費：包括生活費、交通費、出國手續費及綜合補助費，並依行政院訂頒之「中央各機關(含事業機構)派赴國外進修、研究、實習人員補助項目及數額表」規定報支。
- (二) 實驗費：包括研究計畫之耗材費及其他經核定之必要項目(如研習機構要求之管理費或儀器使用費等)。
- (三) 研習人員之公費：博士生每人每年補助上限新臺幣九十萬元，博士後



研究人員每人每年補助上限新臺幣一百三十萬元。

依前項規定受補助之研習人員，不得同時支領我國政府其他赴國外研習公費、獎學金或本部補助博士後研究人員之薪資。

依本要點補助之計畫不核給管理費及研究主持費。

七、補助期限及停留期間：

- (一) 補助期限得為一年或二年；屬二年期計畫者，應分年填列研究內容及需求經費。
- (二) 每一計畫每年補助計畫主持人與共同主持人往返國外研習機構二次為限，且合計停留至少二個月；每位研習人員每年停留國外研習機構至少十個月。
- (三) 計畫核定補助採全程執行期間各年核給計畫編號，且除第一年為經費核定清單外，其餘年度經費為預核清單。
- (四) 屬二年期計畫者，其第一年期有未達第二款停留期間規定時，不再核給第二年期計畫。

八、申請方式：

- ✓(一) 計畫主持人應至本部網站線上製作下列文件後，將申請案送至申請機構；新增計畫時，請填具各項申請資訊欄位，同時將中、英文研究計畫書、參與人員中、英文履歷及近五年著作目錄等各項文件以 PDF 檔上傳至系統。
- ✓(二) 申請機構應於審核後送出，並造具申請名冊函送本部申請。
- ✓(三) 計畫主持人應於完成本部線上作業申請後，另將英文申請資料（包括計畫書、所有研究人員履歷及其著作目錄等）併同「國外研習機構參考意見表」寄予擬前往之國外研習機構指導人，由該位指導人填具「國外研習機構參考意見表」並簽署後，將該表逕寄本部。
申請文件不全、不符合規定或逾期申請者，不予受理。
國外研習機構指導人未能於截止日期前將「國外研習機構參考意見表」送達本部者，視同申請文件不全。

九、作業時程：

- (一) 計畫補助以一年度一期對外公告徵求，並得視與國外研習機構洽談情況酌增公告次數。
- (二) 每年一月公告徵求計畫，並自申請案截止收件之次日起四個月內完成審查後核定公布；必要時，得予延長。實際作業時程以本部當年度對外公告資訊為準。

十、計畫審查：

- (一) 審查方式：採初審與複審二階段審查。初審由相關領域之專家書面審查；複審由本部參考初審意見及「國外研習機構參考意見表」二項，



進行評比後擇優錄取。

(二) 審查項目：

- 1.計畫主持人研究表現。
- 2.執行計畫能力與國際合作經驗。
- 3.研習人員研究專長、能力及赴國外研習對其未來研究之助益。
- 4.計畫主題之重要性與創新性。
- 5.研究內容與方法之可行性及與本要點所訂宗旨相符程度。
- 6.預期完成之項目、成果明確性、對臺灣科技發展之必要性及可能貢獻。
- 7.與國外研究團隊之合作或指導關係之必要性、適切性及未來性等。

十一、簽約及撥款：

- (一) 補助之簽約撥款事宜，依本部核定通知函規定辦理。
- (二) 配合計畫核定時程，一年分二次辦理計畫撥款。

十二、經費結報：

- (一) 申請機構於補助期間內，得每半年或俟計畫內人員交流活動全部完成辦理經費結報。惟至遲應於計畫執行日期截止後三個月內，檢附已支用經費原始憑證辦理。如有結餘者，應如數繳回。
- (二) 申請機構應將經費支用原始憑證按補助項目分類整理裝訂成冊後，併同下列各件函送本部辦理經費結報：
 - 1.計畫申請書與核定清單影本。
 - 2.計畫收支明細報告表一份。
- (三) 申請機構對計畫款項之支付，應依支出憑證處理要點規定辦理。

十三、報告繳交：

- (一) 申請機構應督促計畫主持人於研究計畫執行期滿後三個月內至本部網站線上繳交期中進度報告或期末報告。
- (二) 經本部核定執行二年期計畫者，應按核定執行期限執行，並於第一年期計畫執行期滿前二個月或至遲期滿後三個月內，至本部網站線上繳交期中進度報告及第一年期經費支用明細表，經本部審查通過後，始得核定第二年期計畫經費。
- (三) 計畫期末報告，除敏感科技研究計畫或涉及專利、其他智慧財產權者外，得供立即公開查詢。

十四、計畫變更：

- (一) 計畫經核定補助，應依計畫內容確實執行。如配合計畫研究實際執行情況，有需要延長計畫執行期限、變更訪問內容或期限、變更研習人員資格、經費用途變更為原未核定之補助項目或經費超過規定之流用比例者(流入數額以百分之二十為限，流出數額以百分之三十為限)，計畫主持人應於事前至本部線上作業系統填具「補

助經費延期及變更申請表」，由申請機構提送本部辦理，經本部審查同意者，始得據以執行。

- (二) 執行期間變更，每年期以一次為原則，除特殊情形者外，每件計畫總延長期間以六個月為限；延長期間內所需費用，不另予補助。
- (三) 計畫經核定，不得要求變更研習人員。
- (四) 計畫開始執行三個月後，不得提出於該執行年度新增共同主持人。
- (五) 經本部核定執行之二年期計畫，如預核經費須辦理變更者，應於繳交期中進度報告時，一併至本部網站線上製作經費變更申請表，以憑核定經費。

十五、注意事項：

- (一) 申請機構應切實審查計畫主持人、共同主持人及研習人員之資格要件。
- (二) 未經本部同意逕自變更研習國家、國外研習機構或研究主題者，喪失原受補助資格，並應返還已領取之補助費。
- (三) 受補助人於領受補助公費期間所涉與其他機構之權利義務應自行負責。
- (四) 受補助之博士生研習人員（役男除外）於國外研究期間是否辦理休學，由其在學機構自行規定；研習人員若為在職生或博士後研究人員，國外研究期間是否留職留薪，由給薪單位自行規定。
- (五) 受補助人員於單一年度期間執行本要點計畫以一件為限。
- (六) 未經本部一次核定執行二年期計畫者，後續年度計畫須依規定提出申請；申請時，應檢附上年度研究進度報告及當年度工作重點。
- (七) 申請機構執行本要點補助之計畫須依第十二點及第十三點規定完成經費結報及繳交研究成果報告後，該計畫始為結案。計畫主持人未依規定辦理經費結報或繳交研究成果報告、經費結報或研究成果報告不合規定，經本部限期改正，屆期未改正者，本部得視情形通知該申請機構及計畫主持人追回該項計畫全部或部分補助款，結案前不再核給計畫主持人依本要點申請之其他計畫。

十六、本要點未盡事宜，應依經費使用與結報說明、本要點補助合約書與執行同意書及其他有關規定辦理。