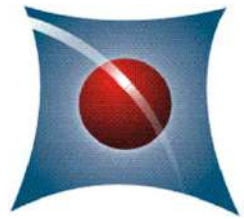


2017 中興大學
多國留學講座「美國」



國立中興大學
National Chung Hsing University



From **NCHU MS** to **UWM PhD** 2017秋季**美國**博士班錄取分享

Speaker: 蔡立志

(graduated from 生醫工程所 on Aug. 2015)

Date: Dec. 6, 2017

@中興大學圖書館

Background

Work experience:

- 中興大學/台灣大學 研究助理 (July ~ Sep. 2017 / Sep. 2016 ~ May 2017)
- **Publication** (both 1st author): Conference Paper*1, Oral Presentation*1

Education:

- 中興大學 生醫工程所 (Jul. 2013 ~ Aug. 2015)
- **GPA**: overall **3.62**/4.0, major 3.67/4.0
 - **Publication** (all 1st author): SCI Journal*1 (*in preparation*), Oral Presentation*1, Conference Poster*1, Master Thesis
- 國立高雄大學 應用物理學系 (Sep. 2009 ~ Jun. 2013)
- **GPA**: overall **2.65**/4.0, major 2.9/4.0, last 60: 3.2/4.0
 - President, NUK Traditional Chinese Medical Science Club

GPA:

成績頂尖(3.5-4.0)

尷尬中間(3.0-3.5)

社團頂尖(2.0-3.0)

Honor and Award:

- Excellent Oral Presentation Award w/ Scholarship (SCAST 2016)
- Best Poster Presentation Award w/ Scholarship (isCEBT 2014)

Test Scores:

- TOEFL: 1st R12/L16/S17/W20, **T65** (Nov. 2016) – GRE: **V141**/Q160/AW2.5 (Mar. 2016)
- 2nd R15/L16/S15/W20, **T66** (Feb. 2017)
- 3rd R18/L14/S18/W21, **T71** (May 2017)
- 4th R16/L16/S19/W20, **T71** (July 2017)

#Outline

Results of 2017 Fall PhD apps.
Mindset/Why study abroad?

Schools/programs selection
Contact the professors
Scholarship/financial aid

Take Home Question
Acknowledgement/Q&A

Results of 2017 Fall semester - PhD application

(1) Stony Brook U – Mechanical Engineering (1/15)

1/15 submit → **5/2 Rejection** via Email

(2) Virginia Tech – School of Biomedical Eng. & Science (1/31→3/31)

1/24 submit → 2/1 re-submit → **4/28 Rejection** via Email

(3) U Illinois, Chicago – Mechanical and Industrial Engineering (2/15)

2/12 submit → **5/9 Rejection** via Email

(4) Texas A&M – Biomedical Engineering (3/1)

2/28 submit → **3/20 Rejection** via both Email & Mail

(5) U Buffalo – Biomedical Engineering (4/1)

3/18 skype → 4/1 submit → **Waitlist**

(6) U Texas, Arlington – Bioengineering (4/1)

3/13 submit → 4/7 invite skype → 4/10(4/9) skype → **Waitlist**

(7) U Wisconsin, Milwaukee – Engineering (ME) (4/1)

3/26 submit → 5/17 Rejection notified → **6/16 transferred to BHI →**

6/20 reviewed by BHI → 8/3 recommend for AD → 8/17 official AD

(8) U Missouri – Bioengineering (6/1)

4/02 submit → **5/31 Rejection** via Email

#Admission



University of Wisconsin-Milwaukee
Biomedical and Health Informatics
PhD program

Mindset

從他人得知你想留學的那天起
最常被問的兩個問題

Why study abroad?
Why USA?



#Why study abroad

- 求學過程的夢想
- 想趁年輕出國闖闖
- 想體驗國外的生活
- 對台灣生醫就業環境擔憂
- 期望能在國外工作、定居

#Why USA?

- 有親戚在美國
- 從小看NBA、好萊塢電影長大
- 文化大熔爐
- 開放自由
- 實力主義

從你開始準備留學的那天起
承載著你前進的力量

Why study PhD abroad?

#Why PhD?

Main reasons:

- 在台已經唸完碩士 (具研究經驗)
- 對做研究相當有熱忱
- 未來有考慮當教授
- 全額「學費 + 生活費」補助 (普遍) -> 但現在有越來越難拿的趨勢

(美國某些州財政出狀況)

ex.加州、伊利諾州

Sub-reasons:

- 起薪會比碩士高
- 找到工作的機會比碩士高，約七八成 -> 碩士約三四成
- 時間較長，能細細品味一個國家
- 能拿到博士學位蠻厲害的

Let's start to apply PhD

However, 你的..

GPA

大學GPA - 2.65/4.0
(社團頂尖)

期刊

無 Journal 發表

英文分數

TOEFL – total 71
(R16/L16/S19/W20)

GRE – total 301
(V141, Q160, AW 2.5)

安西教練…
我好想
出國念書



Hmm. . 有些事情我們還來得及做！

讓我們再回想這個問題 ↓

Why you study abroad?

有哪些事
我們還來得及做？

Schools/Programs selection

#How to select

- 研究所、專題曾做過什麼研究
- 評估自己進度之於Deadline
- TOEFL/GRE門檻 (擔任TA的機會)
- 感興趣的教授在什麼學校什麼系
- 有沒有機會拿到funding (RA)
- 未來想做什麼研究、想學什麼

Contact the professors

共寄給 18個學校、23個program (共 52個教授)

\$1:正回覆fund有 ; #1:正回覆fund未定 ; %1:正回覆fund無 ; -1:負回覆

- UCSF/UC Berkeley – BioE(0/1)
- U Maryland – ME(0/2)
- Texas A&M – BME(-1\$1/5)
- Stony Brook U – BME(\$1/2),ME(\$1/2)
- Virginia Tech –SBES(-1#1/4)
- WashU St. Louis –MEMS(0/2)
- U Illionis-Chicago –ECE(0/1),BioE(1/1),MIE(0/3)
- UNC-Chapel Hill –BME(0/1)
- Tulane U –BME(0/1)
- U Tennessee –MABE(0/1)
- Clemson U –ME(0/2)
- Florida International U –MABE(0/1)
- U Buffalo –BME(\$1/1)
- U Texas-Arlington –BioE(#1\$1/2+1),MAE(%1/1)
- U Missouri –BioE(#1/3)
- U Wisconsin-Milwaukee –EE(0/1),ME(\$1/5),MSE(0/1)
- Stanford U –AA(\$1/1)
- U Utah –BioE(%1/4)

How to choose?

(a school/program)

#How to choose?

- 聯絡教授回信狀況
- TOEFL/GRE的過關機會
- 口袋深度(一間約NT5000)
- 感興趣教授人數多寡
- SOP是否在Deadline前來得及完成
- 考慮條件式入學的學校(英文成績)

Acknowledgement

#Huge thanks

中興大學：

(推薦信)吳靖宙教授、薛富盛校長、韋金龍教授
(邀請演講)興大圖書館、生涯發展中心

長庚大學：

(留學推薦信)孫嘉良教授

特別感謝：

蔡立偉(我弟)、林真豪、李彥陞

UWM

University of Wisconsin-
Milwaukee



Take Home Questions

#Think deeply

1. 「留學」這件事對你而言有多重要？
2. 你的「強項」在哪方面？
3. 你的「弱點」是什麼？
4. 你想花多久完成「這個目標」？
5. 你有「多少時間」能夠追逐這個夢想？
6. 完成這個目標後，「再來呢」？

Thank you for your attention

Questions are welcome!

聯絡 蔡立志

- **Blog:** lichihtsai.blogspot.tw (可用email訂閱)
- **Email:** lichihtsai@alumni.nchu.edu.tw
- **Facebook:** www.facebook.com/LiZuTsai

任何問題，歡迎隨時來信討論
別忘了加入中興大學留學團(FB)

Good luck on your Master/PhD pursuing! **Never give up!**

Supplementary

What You Need For Application

- **Deadline** : 各校、各系、春秋季班，有不同的日期
- **Money** : 申請一間學校約NT5000 (學校申請費+送英文成績)
- Curriculum Vitae (CV) or **Resume** : 申請文件之一、聯絡教授用
- Statement of Purpose (SoP) : 申請文件之一
- **TOEFL** : 申請文件之一、學校篩選門檻
- **GRE** : 申請文件之一、部分學校篩選門檻(ex 德州學校)
- Letter of Recommendation (LoR) : 申請文件之一、通常二到三封
- Transcript(s) : 申請文件之一、GPA為學校篩選門檻

Curriculum Vitae (CV) 僅要求上傳電子檔

- 有些學校也以「Resume」稱呼，即「履歷」
- 篇幅建議「1~2頁」
- 內容建議包括：
 - *Brief Introduction、Work Experience、Education、Publications、Research Experience、Technical Skills、Extracurricular Activities、References
- 多給教授和朋友看，請他們給建議接著修改，會改很多版本
- 除了是「申請必須文件」，在「寫信聯絡教授」時也能派上用場
- 可以在CV中放上相關文件的「超連結」ex. 論文摘要、研討會poster

CV範例

Li-Chih Tsai's Curriculum Vitae

Email: 這邊填上你的 email / Phone: +886-這邊填上你的手機號碼

Brief Research Background

Micro-Fabrication, Glucose Biosensor, Carbon Nano-materials, Dielectrophoresis, **AFM manipulation**, XPS & Raman analysis, **Electrochemical Impedance Spectroscopy (EIS)**, **Cyclic Voltammetry (CV)**, Droplet-based **Microfluidics**, HepG2 Cell Culture, **MTT assay**, Pesticide Screening, **Paper-based platform**.

簡介研究經歷

Education

University of Wisconsin - Milwaukee (UWM), WI, USA.
PhD in Biomedical and Health Informatics (BHI)

Spring 2018 –

National Chung Hsing University (NCHU), Taichung, Taiwan.
Master of Science in Biomedical Engineering

Sep. 2013 – Aug. 2015

- ❖ Supervisor: Prof. Ching-Chou Wu
- ❖ Master thesis: Study of Applying Dielectrophoresis to Immobilize Carbon Nanomaterial/
Glucose Oxide Composite for Construction of Glucose Biosensors [[abstract](#)]
- ❖ Overall GPA: 3.62/4.0; Major GPA: 3.67/4.0; Last 60 credits: 3.62/4.0

National University of Kaohsiung (NUK), Kaohsiung, Taiwan.
Bachelor of Science in Applied Physics

Sep. 2009 – June 2013

就讀學校

就讀系所

就讀時間

指導教授

論文

CV範例

Work Experience

Research Staff at National Chung Hsing University (NCHU), Taichung, Taiwan. July 2017 – Sep. 2017

- ❖ **Core project:** Development of disease detection biosensors for soldiers. We collaborated this project with US Naval Medical Research Center.

Research Staff at National Taiwan University (NTU), Taipei, Taiwan. Sep 2016 – July 2017

- ❖ **Core project:** Mouse-on-a-Chip Establishment and Frontier Biotech Applications – Interactome Analysis, Pesticide Toxicology Research and DNA Anti-cancer Drug Development
- ❖ **Sub project 1:** Using droplet-based microfluidic platform to construct organ-on-a-chip

Publications & Presentations (Corresponding Author*)

Conference poster

- ❖ **Li-Chih Tsai**, Ching-Chou Wu*

Electrochemical Properties of Electrodes Modified by Multi-wall Carbon Nanotube with The Dielectrophoretic Control, The 2014 International Symposium on Chemical-Environmental- Biomedical Technology (isCEBT 2014), Tao-Yuan, Taiwan. [\[poster\]](#)

(Best Poster Presentation Award with scholarship, Sep. 12th, 2014)

Technical Skills

1. Clean room experience (2 years) – Photolithography, Wet/Dry-etching, Sputtering, RIE, Thermal Coater.
2. Mastered in AFM manipulation and AFM, XPS, SEM, Raman spectra data analysis.

工作單位

工作內容

任期

發表類別

文章作者

發表內容

得獎

技能內容

CV範例

[BACK TO...](#)

Extracurricular Activities

Invited Talks (*SA: studyabroad)

Topic: From NUK AP to UWM PhD – my journey to USA for PhD study @NUK Nov. 29th, 2017
Topic: US PhD application experience sharing (3rd NCHU SA Talk) @NCHU Jun. 27th, 2017

President, NUK Traditional Chinese Medical Science Club Sep. 2011 – Sep. 2012
❖ Development in leadership and communication skills.

活動內容

活動日期

Referees (*Master Supervisor, #Master Thesis Defense Committee)

Dr. Fuh-Sheng Shieu fsshieu@dragon.nchu.edu.tw Tel: +886-4-22840500 ext. 414
President and Professor of Dept. of Materials Science & Engineering, National Chung Hsing University
*** Dr. Ching-Chou Wu** ccwu@dragon.nchu.edu.tw Tel: +886-4-22840377 ext. 408
Chair and Professor, Dept. of Bio-industrial Mechatronics Engineering, National Chung Hsing University
Dr. Chia-Liang Sun sunchialiang@gmail.com Tel: +886-3-2118800 ext. 5379
Associate Professor, Dept. of Chemical and Materials Engineering, Chang Gung University
Dr. Chin-Lung Wei clwei@dragon.nchu.edu.tw Tel: +886-4-22840322 ext.408
Professor, Dept. of Foreign Languages and Literatures, National Chung Hsing University

推薦人

頭銜

學校系所

聯絡信箱

連絡電話

與你關係

Statement of Purpose (SoP) 僅要求上傳電子檔

- 有些人會以「讀書計畫」稱呼
- 篇幅建議「1~2頁」約「500~1000字」
- 內容建議包括：背景介紹、申請動機、研究經歷、
經歷中學到什麼、感興趣教授、未來展望
- 多給教授和朋友看，請他們給建議接著修改，會改超多版本
- 建議請母語or英文較好的朋友修改文法，或花錢請人潤稿 再送出
- 針對不同學校客製化內容
- 送出前記得從頭到尾唸過一遍

Li-Chih Tsai's

Statement of Academic Purpose

I seek to become a scientist devoting my profession in biosensors, carbon nanomaterials and microfluidics applications on human health study (especially in diabetes). Furthermore, to be a professor leading the next generation students to construct a better future. To achieve my goals, I intend to pursue a PhD degree in **Engineering** at **University of Wisconsin at Milwaukee**.

背景介紹
申請動機

The following shows my research experiences in engineering and biomedical science, along with the crucial abilities I learned and the inspirations.

First, early on in my Master's degree, I received solid training under Prof. Ching-Chou Wu in sensor electrodes fabrication in order to start my research on glucose biosensors. Through the process, I developed proficiency in micro-fabrication and all the facilities in clean room. My first mission on biosensors was to solve the inefficient transmission of electrons on screen printed carbon electrodes. I introduced (3-Aminopropyl)triethoxysilane (APTES) in the electrodes modification along with pre-

研究經歷
過程所學

Letter of Recommendation (LoR)

上傳電子檔 OR 寄紙本

- 通常推薦信都需要「三封」，少數學校僅需兩封
- 建議推薦信人選需要有「3~4」位
- 部分台灣教授會請申請人擬稿 -> 藉此機會自己強調自己某些優勢
- 請提供「CV與SoP」給教授撰寫時參考
- 「盡早」與教授討論此事，並讓教授知道撰寫時程
- 選擇推薦信人選，以「熟悉你」「與你研究經歷相關」者為優先
- ※ 請勿挑戰「有機會雷你」的推薦人選
- ※ 「條件式交換」的推薦信，不要也罷 ex.要你完成某成果為籌碼交換
- ※ 「慎選」碩士班的指導教授
- 注意是否有要求推薦信需要彌封 (sealed envelop)

LoR範例 (篇幅約A4一頁)

[BACK TO...](#)

To whom it may concern,

→ 介紹彼此關係、陳述學生特色

It is my great pleasure to give my highest recommendation to Mr. Li-Chih Tsai for admission of your graduate program. I have known Li-Chih since he joined my research group as a master's student in 2013. As an advisor, I'm very confident to characterize him as a well-logical, patient,

→ 學生修課表現

Li-Chih's intelligence and ability of critical thinking are also reflected in my courses: Electrochemical Engineering, Fundamental Application of Electrokinetics. In these classes, he

→ 學生學術與研究上表現

Li-Chih's academic ability is paralleled in his research achievements. Several domestic and international conferences recognized his great independent research ability. In his master research project, he developed a facile method to construct glucose biosensors using

→ 總結，再次講述學生優點

Overall, Mr. Li-Chih Tasi's ability in different aspects render him an attractive and competitive student. I have no doubt that he exhibits the exceptional abilities and promising potential, and

Grade Point Average (GPA)

- 提供大學(與研究所)「歷年英文成績單」，須含有「GPA」
- 多數學校會以overall GPA作門檻，部分會請你列上major GPA參考
- 在校期間，盡量把「必修成績」維持在「80分」以上
- 「多數台灣學校」與美國同，以「4.0制」計算GPA，部分則以4.3制
- GPA通常以 4 (= 80↑)、3 (= 70 ~ 79)、2 (= 60 ~ 69)、1 (< 59) 換算
 - > 有些學校很狠還有0的換算，ex. 高大: 0 (< 50)
- 絕對不要被當！絕對不要被當！絕對不要被當！ -> 算GPA時就 慘.jpg
- 「必修課」認真唸，「選修課」慎選 -> 給成績很硬的，考慮避開

GPA範例

[BACK TO...](#)

批踢踢實業坊 > 看板 studyabroad

GPA : Grade Point Average

學業成績平均。

是大多數美國大學計算學生成績表現的制度。

採加權平均。

一般最常見的算法是

A: 80分以上	4點
B: 70~79分	3點
C: 60~69分	2點
D: 59以下	1點

Example:

科目名稱	學分數	成績	GPA
危機分	3	69	2
普通物理	3	88	4
線性代數	3	70	3
普物實驗	1	75	3

但因為各學校制度不同
所以也會有所差異
(有些學校為4.3分制)

Overall GPA 算法:

$2*3+3*4+3*3+1*3$ (GPA換算點數乘學分數)

但一般申請時都用4.0分制

$\frac{3+3+3+1}{4} = 3.0$ (總修習學分數)

美國學校覺得這個不準他們會自己用他們的方式重算。

Transcript(s) 上傳電子檔 OR 寄紙本

- 提供大學(與研究所)「歷年英文成績單」，須含有「GPA」
- 若是「班級排名」維持不錯，可考慮申請附排名的成績單
- 注意是否有要求提供彌封的成績單 (sealed envelop)
- 任何紙本中英文成績單與學位證明，請務必拿去影印店掃描一份
- 有些學校有提供「線上申請」成績單並幫你寄到美國 ex. 興大、交大
- 有些學校「僅」提供「寄回郵」的方式幫你寄成績單到美國 ex. 高大
- 通常申請都只要求上傳「英文成績單(附GPA)」和「英文學位證明」
- 多數學校「錄取後」才會要求寄送彌封的英文成績單與學位證明

Financial Assistantship

台灣: 教育部公費留學、教育部世界百大獎學金

美國: Fellowship、Graduate Assistantship (GA) includes TA/RA/PA

- RA/TA Appointment: (UWM) 25%, **33%**, **50%**, 75%, 100%
- Fringe Benefits: tuition remission + monthly stipend + health insurance
- **There is a deadline for assistantship application!**
- GAs need to be in school earlier than non-GAs (based on your contract)
- Need to fill the **Criminal Background Check** (CBC) form

✗Proof of Funding: should upload your **Award Letter** as proof of funding

- Have **Your Proof of Funding** FIRST -> School will issue you **I-20**

UWM 2018 BEST Midwestern University

- Top-Tier Research University (R1 Carnegie Classification)

Carnegie Classification includes R1,R2,R3 and M1,M2,M3.

R: Doctoral Universities / M: Master's Colleges and Universities

R1: **Highest** research activity (115 institutions, including [Stanford](#), [Harvard](#), [UWM](#))

R2: **Higher** research activity (107 institutions, including [Baylor](#), [Dartmouth](#), [Rutgers](#))

R3: **Moderate** research activity (112 institutions, including [RIT](#), [Clarkson](#), [AFIT](#))

- Growing Alumni Network of 180,000+ including

[Satya Nadella](#) (CEO, Microsoft) '90 MS Computer Science,

[Erika Pliner](#) (Tau Beta Pi Laureate) '14 BS Mechanical Engineering (ME),

[Brent Aussprung](#) (2010 USA World Champion Team Member) '14 BS ME