

Yun William Yu

CONTACT INFORMATION

WWW: yunwilliamyu.net

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EDUCATION

Imperial College, London, UK (Marshall Scholar)

Master of Philosophy, **Mathematics** (expected graduation: May 2012)

- Thesis Topic: *Local, multi-resolution detection of network communities by Markovian dynamics*
- Advisors: Prof. Mauricio Barahona & Dr. Sophia Yaliraki
- Area of Study: Biomathematical Sciences Group

Master of Research (Distinction), **Biomedical Physical Chemistry**, September 2010

- Thesis Topic: *Protein Dynamics: Applications of Graph Theory and Community Detection*
- Advisors: Dr. Sophia Yaliraki & Prof. Mauricio Barahona
- Lord Porter Prize for best thesis

Indiana University, Bloomington, IN USA

Bachelor of Science, **Mathematics**, May 2009

Bachelor of Arts, **Chemistry & Germanic Studies**, May 2009

- Phi Beta Kappa, With Highest Distinction, General Honors Notation, Departmental Honors in Mathematics
- GPA: 3.99/4.0
- Minor in **Biology**
- Semester-long study abroad at University of Freiburg, Germany

AWARDS & HONORS

NSF Graduate Research Fellowship Honorable Mention, 2010

Imperial British Marshall Scholarship, 2009

Barry M. Goldwater Scholarship, 2008

Indiana University Bloomington

- Department of Mathematics:
 - Ciprian Foias Prize, 2009
 - Marie S. Wilcox Award, 2006, 2009
 - Thelma Abell Prize, 2008
 - Cora B. Hennel Memorial Scholarship, 2007
- Department of Chemistry:
 - James C. White Award, 2009
 - William H. Bell Award, 2008
 - Dennis G. Peters Scholarship, 2007
 - Harry G. Day Summer Research Fellowship, 2007
- Department of Psychological & Brain Sciences:
 - Summer Capstone Research Award, 2006
- Department of Biology:
 - Integrated Freshmen Learning Experience, 2005
- Wells Scholars Program, 2005–2009

ACADEMIC EXPERIENCE

Imperial College, London, UK

Graduate Teaching Assistant

October 2010 to December 2010

- Lab demonstrator for Modelling in Biology (BE3-HMIB), a 3rd/4th year Bioengineering module taught by Dr. Guy-Bart Stan & Dr. Aldo Faisal.
- Also graded lab reports/problem sheets.

Postgraduate Student

October 2009 to September 2011

Indiana University, Bloomington, Indiana USA

Undergraduate Researcher

December 2005 to July 2009

- Used a variety of mathematical and computational techniques to find dense homomorphisms from five particular fuchsian groups to $SO(n)$, working under Professor Michael J. Larsen.
- Researched mechanisms of pain transmission in the molecular neuroscience laboratory of Professor J. Michael Walker, using a variety of analytical chemistry and molecular biology techniques.

Member, Board of Aeons

August 2007 to May 2009

Student research and advisory panel to IU President McRobbie

- Researched solutions to student issues on the Bloomington campus.
- Conducted surveys, focus groups, and interviews regarding the student union building and the Hutton Honors College.
- Compiled and analyzed data gathered. Presented findings and recommendations to relevant IU administrators.

Co-facilitator, Labyrinth Literary Magazine

August 2005 to March 2009

Undergraduate literary magazine for poetry, short prose, and visual art

- Organized and publicized panel discussions and readings for aspiring writers.
- Conducted surveys, focus groups, and interviews regarding the student union building and the Hutton Honors College.
- Designed organizational website using CSS, XHTML, and SSI.

Undergraduate Teaching Intern

August 2007 to December 2008

- Assisted BIOL-L311 (Genetics) instruction under Professor Wayne Forrester.
- Taught weekly 1-hour revision sessions.
- Graded exams and weekly problem sets.

Chemistry Department Tutor

August 2007 to December 2007

- Held weekly 3-hour sessions for general and organic chemistry (Chem-C117, S117, C341, S341, C342, S342).

Undergraduate Student

August 2005 to May 2009

PUBLICATIONS

Tan B, O'Dell DK, Yu YW, Monn MF, Hughes HV, Burstein S, & Walker JM. (2010). Identification of endogenous acyl amino acids based on a targeted lipidomics approach. *Journal of Lipid Research*, **51**, 112–119. doi:10.1194/jlr.M900198-JLR200

Tan B, Yu YW, Monn MF, Hughes HV, O'Dell DK, & Walker JM. (2009) Targeted lipidomics approach for endogenous N-acyl amino acids in rat brain tissue, *Journal of Chromatography B*, **877**(26): 2890–2894. doi:10.1016/j.jchromb.2009.01.002

Tan B, Bradshaw HB, Rimmerman N, Srinivasan H, Yu YW, Krey JF, Monn MF, Chen JS, Hu SS, Pickens SR, & Walker JM. (2006). Targeted lipidomics: discovery of new fatty acyl amides, *The AAPS Journal*, **8**:3, 461–465. doi:10.1208/aapsj080354

POSTER PRESENTATIONS

Yu YW, Barahona M, Yaliraki SN. (2010). Protein dynamics: a multiscale approach using community detection and graph comparison. *50th Anniversary Symposium of the British Biophysical Society, Cambridge, UK, July 16-18, 2010*

SKILLS & EXPERTISE

- Programming: MATLAB (3 years), C/C++ (2 years), Python (2 years), Microsoft Visual Basic 6 (2 years)
- Operating Systems: Linux (9 years), Microsoft Windows family (5 years), OS X (2 years)

INTERESTS

Dance (swing, ballet, tap, contemporary), computer security, science fiction/fantasy