

Cheng-En Tan

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OBJECTIVE - Bioinformatics scientist with both computer science and biotechnology background, specialized in genomics and metabolomics data analysis seeking to learning advanced knowledge and techniques of analyzing large scale of integrated omics data in hopes of mining meaningful biological information and making contributions in systems biology.

SCIENTIFIC EXPERTISE

- Genomics: Collecting, Integrating and Analyzing Microarray and RNA-seq data from multiple database
- Metabolomics: LC/GC-MS data analysis
- Bioinformatics: Metabolic Flux Analysis (MFA), Dynamic system simulation
- Bioinformatics toolkits with Graphical user interface (GUI) development
- Isolation of DNA, RNA and Proteins
- Northern Blot, Southern Blot and Western Blot
- Synthetic biological circuit implemented in *E. coli*

WORKING EXPERIENCE

- Research Assistant (RA), the Tagkopoulos Lab, UC Davis (09/2016—present)
- Knowledge Keeper, Archilife Research Foundation (11/2012—present)
- Research Assistant (RA), Metabolomics Core Lab, NTU (11/2012 — 08/2016)
- Part-time RA, Chung Yuan Christian University (01/2012 — 08/2016)
- Mentor, Team NTUBIOMOD in Biomod Competition (12/2013 — 11/2014)
- Instructor, Team NTUTAIDA in iGEM Competition (12/2013 — 11/2014)
- Part-time RA, Metabolomics Core Laboratory, NTU (09/2012 — 11/2014)
- TA in Metabolomics, Department of CSIE, NTU (03/2014 — 06/2014)
- TA in Workstation Laboratory, Department of CSIE, NTU (09/2012 — 01/2013)

AWARDS

- Chuang, Yen Fellowship for graduate students in UC Davis, US \$20000 (2017)
- Gold Medal, iGEM, as an instructor of Team NTU TAIDA (2014)
- Gold Medal, iGEM, as a presenter of Team NTU TAIDA (2013)
- Dean award (Top 10% Total GPA), College of Life Science, NTU (2012)
- Research Scholarship Recipient, National Science Council, Taiwan (2011)
- Bronze Medal, Interdisciplinary training project, Ministry of Education, Taiwan (2011)
- Presidential Award (Top 5% GPA in a semester) (Spring 2009)
- Presidential Award (Top 5% GPA in a semester) (Fall 2008)
- Presidential Award (Top 5% GPA in a semester) (Fall 2007)

PUBLICATIONS

Peer-reviewed Article

1. Tian, T. F., Wang, S. Y., Kuo, T. C., **Tan, C. E.**, Chen, G. Y., Kuo, C. H., ... & Tseng, Y. J. (2016). Web Server for Peak Detection, Baseline Correction, and Alignment in Two-Dimensional Gas Chromatography Mass Spectrometry-Based Metabolomics Data. *Analytical chemistry*, 88(21), 10395-10403.

Conference Presentation

1. **Tan, C. E.**, Chung, Y. Y., Kuo, C. H., Tseng, Y. J. (2014). IDMass: GC/MS Data Management and Analyzes Software for Metabolomics Studies, Metabolomics Society, Japan, 2014

ACADEMIC QUALIFICATION

- Master of Science, Department of Computer Science and Information Engineering, National Taiwan University. DISSERTATION: *IDMass 2.0: Component Extraction, Identification and Statistics GUI Processing Toolkit for GC-MS* [2012-2014]
- **Double Degree of Bachelor of Science, Department of Biochemical Science and Technology and Department of Computer Science and Information Engineering**, National Taiwan University, with top 10% Grade Point Average and Dean Award, College of Life Science [2007-2012]

PROJECT 1:

- **Title:** Large-scale gene expression compendium for Salmonella
- **Supervisor:** **Prof. Tagkopoulos, I.**
- **Institute:** The Tagkopoulos Lab, University of California, Davis
- **Duration:** September 2016 – present

PROJECT 2:

- **Title:** Optimizing Antibody Production Rate in Chinese Hamster Ovary Cell using Metabolomics Flux Analysis and Dynamic Systems Simulation
- **Supervisor:** **Prof. Tseng, Y. J.**
- **Institute:** Metabolomics Core Laboratory, National Taiwan University
- **Duration:** December 2014 – August 2016

TOOLS

- **Programming language:** C, MATLAB, R and Python
- **Bioinformatics Software Design and Development:** Visual Studio
- **Application Programming Interface (API) Used:** Rpy2, WxPython
- **Database and API for access:** MySQL and Django

STRENGTHS

- Concept realization and implementation
- Desirable bridge between biologist and engineer

LINGUISTIC ABILITY

- Chinese: native language
- Cantonese: native language
- English: fluent (reading), intermediate (speaking, listening, writing)

REFERENCES

Prof. Tagkopoulos, I.,

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