TIGP Bio 2021 Fall Syllabus & Guidelines
Student Presentation

For the latest syllabus, please visit https://tigpbp.iis.sinica.edu.tw/tigpbio/index.html

Place: Room 101, New Building of the Institute of Information Science, Academia Sinica

Time: Thursday, 15:30-17:00

Chair: Dr. Chuan-Hsiung Chang (cchang@ym.edu.tw), Dr. Chen-Ching Lin (chaoslin@ym.edu.tw)

*Please read seminar presentation guidelines on the following pages.

*Effective from 2014 Fall semester, all TIGP-BP students are required to present once a semester in seminar.

*First Year Students: The paper should be assigned by your lab professor)

*The following schedule is confirmed and will not be changed. Please contact Dr. Chuan-Hsiung Chang and Dr. Chen-Ching Lin if you do have a difficulty on the assigned date.

*The presenter shall introduce the host and attended professors in the beginning of each seminar.

Week	Date	Topics	Student
1	2021/9/16 (online)	Multimorbidity prediction using link prediction	Yu-Ching Hsu 徐于晴
2	2021/9/23 (online)	DeepImmuno: deep learning-empowered prediction and generation of immunogenic peptides for T-cell immunity	Po-Yuan Chen 陳柏元
3	2021/9/30 (online)	Molecular determinants of response to PD-L1 blockade across tumor types	Hsin-Ju Hung 洪欣如
4	2021/10/7 (online)	Deep learning suggests that gene expression is encoded in all parts of a co-evolving interacting gene regulatory structure	David Nicola Streuli 施大衛
5	2021/10/14	Detection and characterization of lung cancer using cell-free DNA fragmentomes	Yi-Chen Yeh 葉奕成(NYCU)
6	2021/10/21 (online)	Pan-cancer landscape of homologous recombination deficiency	Wen-Ting Tseng 曾文婷
7	2021/10/28 (online)	Data-efficient and weakly supervised computational pathology on whole-slide images	Chi-Tang Wang 王啓唐(NYCU)
8	2021/11/4	Midterm Exam (No class)	
9	2021/11/11 (2 presentations)	Jia-Ying Su: Testing cell-type-specific mediation effects in genome-wide epigenetic studies Tsai-Yang Sun (NYCU): Quality of Care and One-Year Outcomes in Patients with Diabetes Hospitalised for Stroke or TIA: A Linked Registry Study	Jia-Ying Su 蘇家瑩 & Tsai-Yang Sun 孫在陽(NYCU)
10	2021/11/18	CRISPRidentify: identification of CRISPR arrays using machine learning approach	Yu-Chun Huang 黃郁珺

11	2021/11/25	[Evolutionarily informed machine learning enhances the power of predictive gene-to-phenotype relationships](#)	Hsin-Han Lee 李昕翰
12	2021/12/2 (2 presentations)	Chien Jung Huang 黃千容(NYCU): [Predicting microbiomes through a deep latent space](#) Rodrigo Espinoza Silva 羅德: [GenNet framework: interpretable deep learning for predicting phenotypes from genetic data](#)	Chien Jung Huang 黃千容(NYCU) & Rodrigo Espinoza Silva 羅德
13	2021/12/9	[MDN: A Deep Maximization-Differentiation Network for Spatio-Temporal Depression Detection](#)	Hao-Jen Deng 鄧皓仁
14	2021/12/16 (online)	[Gut-microbiota-targeted diets modulate human immune status](#)	Shu-Chuan Chen 陳淑娟(NYCU)
15	2021/12/23 (online) (2 presentations)	Tzu-Hsiang Lin 林子翔: [Genome-wide detection of cytosine methylations in plant from Nanopore data using deep learning](#) Aishwarya Tiwari 艾希雅: [Comparative transcriptome analyses reveal genes associated with SARS-CoV-2 infection of human lung epithelial cells](#)	Tzu-Hsiang Lin 林子翔 & Aishwarya Tiwari 艾希雅
16	2021/12/30	Final Exam (No class)	--

<p style="text-align:center;color:red;">< Seminar presentation guidelines on the following pages ></p>

Seminar presentation guidelines for PhD program students:

2021-08-26

This <u>research</u> seminar course is intended to provide students planning a research career in Bioinformatics with the opportunity to develop the skill of <u>critically reading and</u> <u>evaluating research papers</u>. The course consists of a weekly timetabled session in which students will read, present and discuss research papers published on high impact journals. A fixed threshold of impact factors is not imposed. Use your common sense instead.

Guidelines:

1. **Research article**: Each week, students will choose RESEARCH papers to be presented. The paper (+ supplements) pdf file should be emailed to cchang@ym.edu.tw (Dr. Chuan-Hsiung Chang), ChaosLin@ym.edu.tw (Dr.Chen- Ching Lin), tigp.bio@gmail.com (TIGP_Bio), all students in student presentation class, and also other participating professors at least one week before your in-class seminar

presentation takes place. Any delay will result in 10 points deducted from your final grade. Please also send the slides to everyone 2 days before the report. Because some modification may be made right before the report, it is okay if the slides are not the final version.

2. **Article selection:** You are required to select a recent RESEARCH article that was published after September 2020. (Review articles are NOT acceptable.)

3. **Presentations**: Everyone in the class will present one paper. You should plan to talk for around 40 minutes. Starting from this you should initiate a discussion of the paper (so it is a good idea to conclude your slide presentation with a selection of points to consider and discuss). We should plan to have time for a lively discussion of each paper; your job in giving a presentation is to initiate this discussion. Make sure to
   a. Draw **valid** conclusions from results of your presented paper.
   b. Summarize evidence for each conclusion. (How does the paper support its conclusions?)
   c. Compare the results with other similar experiments published previously, if appropriate.

   ■ Please refrain from presenting an article written by your supervisor or your friends/classmates. You need to increase the exposure to the breadth and depth of bioinformatics research.
   ■ Students are encouraged to prepare a few questions for group discussion at the end of the presentation. Students are not expected to simply sit in the class.
   ■ Please make a rehearsed presentation if you don't know how long your presentation is going to last. An over-length presentation doesn't translate to a good one.

4. **Language of presentation**: You are required to present your research article in English.

Evaluation Criteria:

You will be evaluated by the following criteria:
   1. Your attendance (10%).
   2. Your seminar presentation (70%).
   3. Your participation of discussion (20%).