

TIGP Bioinformatics Program

Seminar

Fall 2024 Syllabus

For the latest syllabus, please visit the BP website: <https://idv.sinica.edu.tw/tigpbio/>

Seminar Announcement: https://www.stat.sinica.edu.tw/cht/index.php? Place: Auditorium, B1F, Institute of Statistical Science, Academia Sinica. Time: Thursday 14:00-15:20 Chair: Academia Sinica: Dr. Chung-Yen Lin (Informatics), Dr. Chien-Ling Lin (Biology), Dr. Wei-Chung Liu (Statistics) Remarks: 1. Attend 2 non-BP Seminars (on or off campus) conducted in English within the current semester. *The deadline for the report is December 26th, 2024. 2. Write 2 seminar reports (1-page A4, 12pt font, single-spaced) titled “TIGP-BP Seminar Student Report”(click to download). 3. Send the reports to your advisor/lab professor for grading and signature. 4. Submit the graded and signed reports (PDF file) to the BP office before December 26th. Grades: Attendance 100% (2 non-BP seminar reports included)					
Week	Date	Topics/Brief Description	Speaker's Affiliation	Speaker	Student Host
1	2024/9/5	Exponential growth dynamics and nonlinear reaction networks [abstract]	Institute of Molecular Biology, Academia Sinica	Dr. Wei-Hsiang Lin	Ping-Yun Ou (1)
2	2024/9/12	Biomedical research in AI era: from precision medicine to precision health [abstract]	Institute of Biomedical Informatics, National Yang Ming Chiao Tung University	Prof. Chun-Ying Wu	Ru-Yin Jian
3	2024/9/19	A network-based perspective on biodiversity [abstract]	Institute of Statistical Science, Academia Sinica	Dr. Wei-chung Liu	Shang-Kok Ng (1)
4	2024/9/26	Leveraging Distant Relatedness in Biobanks to Identify Undiagnosed Mendelian Disease Cases [abstract]	Institute of Biomedical Sciences, Academia Sinica	Dr. Hung-Hsin Chen	Cai-Sian Liao (1)
5	2024/10/3 Rescheduled to 10/15	Rescheduled to 10/15 due to the impact of Typhoon Krathon	--	--	--

6	2024/10/8 (Tues) 14:00-15:20	Advancing Accurate Prediction of Gene Expression and Biological Networks in Ever-Changing Environments [abstract]	Institute of Plant and Microbial Biology, Academia Sinica	Dr. Ting-Ying Wu	Daniel Garcia-Ruiz (1)
6	2024/10/10	Holiday—Double Tenth Day (no class)	--	--	--
7	2024/10/15 (Tues) 10:00-11:20	Detecting ongoing natural selection affecting allele frequencies across age groups to uncover genetic variants contributing to disease susceptibilities [abstract]	Department of Life Sciences and Institute of Genome Sciences, National Yang Ming Chiao Tung University	Prof. Wen-Ya Ko	Hsin-Ying Chang (1)
7	2024/10/17	Review Week (no class)	--	--	--
8	2024/10/24	Midterm Exam Week (no class)	--	--	--
9	2024/10/29 (Tues) 14:00-15:20	Multimodal AI and Whole Genome Sequencing: Transforming Stroke and Dementia Care through Digital Twin Technology [abstract]	Biomedical Technology and Device Research Laboratories, Industrial Technology Research Institute	Dr. Kai-Cheng Hsu	Daniel Garcia-Ruiz (2)
9	2024/10/31 Rescheduled to 12/12	--Rescheduled to 12/12 due to the impact of Typhoon Kong-rey--	--	--	--
10	2024/11/7 Rescheduled to 10/29	Rescheduled to 10/29	--	--	--
11	2024/11/12 (Tues) 14:00-15:20	Characterizing eQTLs using paired scRNA-seq and scATAC-seq data [abstract]	Department of Biomechatronics Engineering, National Taiwan University	Prof. Chien-Yu Chen	Ping-Yun Ou (2)
12	2024/11/21	Systems approaches towards molecular profiling of human diseases [abstract]	Institute of Biomedical Sciences, Academia Sinica	Dr. Shih-Yu Chen	Apriandy Angdresey
13	2024/11/28	Information theory framework for one-shot synaptic weight update in a real brain [abstract]	Institute of Biomedical Sciences, Academia Sinica	Dr. Ching-Lung Hsu	Hsin-Ying Chang (2)
14	2024/12/5 Rescheduled to 12/10	Rescheduled to 12/10	--	--	--
15	2024/12/10 (Tues) 14:00-15:20	Regulatory divergence between humans and chimpanzees [abstract]	Biodiversity Research Center, Academia Sinica	Dr. Wen-Hsiung Li	Cai-Sian Liao (2)

15	2024/12/12	Elucidating causal interaction of sensorimotor cortices through neural manifolds [abstract]	Institute of Molecular Biology, Academia Sinica	Dr. Yu-Wei Wu	Shang-Kok Ng (2)
16	2024/12/19	Final Exam Week (no class)	--	--	--