

ACADEMIC ACTIVITIES

Seminar Series #18

Recent developments on covariate-assisted recommender systems

Prof. Junhui WANG, Professor of Department of Mathematics, City University of Hong Kong, presented a brief review about recommender systems, including its problem setup and challenges on 23 July. Some existing approaches were discussed in detail, such as collaborative filtering, content-based filtering, matrix completion, and hybrid systems.

Publications of the week

1. Lu, L., Xu, D. D., Liu, H. Z., Zhang, L., Ng, C. H., Ungvari, G. S., An, F. R., and Xiang, Y. T. (2018) Internet addiction in Tibetan and Han Chinese middle school students: prevalence, demographics and quality of life. *Psychiatry Res* **268**, 131-136
2. Wang, L., Wang, Y., Zhang, C., Li, J., Meng, Y., Dou, M., Noguchi, C. T., and Di, L. (2018) Inhibiting Glycogen Synthase Kinase 3 Reverses Obesity-Induced White Adipose Tissue Inflammation by Regulating Apoptosis Inhibitor of Macrophage/CD5L-Mediated Macrophage Migration. *Arterioscler Thromb Vasc Biol*
3. Xia, Y., Yu, T., Li, F., Zhu, W., Ji, Y., Kong, S., Li, C., Huang, B., Zhang, X., Tian, Y., and Zhou, H. (2018) A lipid droplet-targeted fluorescence probe for visualizing exogenous copper (II) based on LLCT and LMCT. *Talanta* **188**, 178-182
4. Zhang, D., Xu, H., Zhang, X., Liu, Y., Wu, M., Li, J., Yang, H., Liu, G., Liu, X., Liu, J., and Yuan, Z. (2018) Self-Quenched Metal-Organic Particles as Dual-Mode Therapeutic Agents for Photoacoustic Imaging-Guided Second Near-Infrared Window Photochemotherapy. *ACS Appl Mater Interfaces*
5. Zhang, J., Meng, Y., He, J., Xiang, Y., Wu, C., Wang, S., and Yuan, Z. (2018) McGurk Effect by Individuals with Autism Spectrum Disorder and Typically Developing Controls: A Systematic Review and Meta-analysis. *J Autism Dev Disord*
6. Zhang, Z., Yan, T., Wang, Y., Zhang, Q., Zhao, W., Chen, X., Zhai, J., Chen, M., Du, B., Deng, X., Ji, F., Xiang, Y., Wu, H., Song, J., Dong, Q., Chen, C., and Li, J. (2018) Polymorphism in schizophrenia risk gene MIR137 is associated with the posterior cingulate Cortex's activation and functional and structural connectivity in healthy controls. *Neuroimage Clin* **19**, 160-166
7. Zheng, W., Luo, X. N., Li, H. Y., Ke, X. Y., Dai, Q., Zhang, C. J., Ng, C. H., Ungvari, G. S., Xiang, Y. T., and Ning, Y. P. (2018) Prevalence of insomnia symptoms and their associated factors in patients treated in outpatient clinics of four general hospitals in Guangzhou, China. *Bmc Psychiatry* **18**, 232



FHS NEWS

Prof. Tzuming Liu's team won second prize at "the Greater Bay Area (Macau) Youth Innovation and Entrepreneurship Competition"

The innovation team named Catydid, formed by Prof. Tzuming LIU, FHS undergraduate student Steven, Kan Min HSU, FHS Research Assistant William, Wai How CHONG and FBA undergraduate student Amy, Yu Xin DU, aims to develop and commercialize the blood fluorescence meter for the evaluation of liver function. The team participated in "the Greater Bay Area (Macau) Youth Innovation and Entrepreneurship Competition" (大灣區(澳門)青年創新創業大賽), hosted by the Alumni Federation of Macau University of Science & Technology on 24 July. Out of the 12 teams in the final round of competition, Catydid won the second prize .



Prof. Greta Mok, FHS joint associate professor, received the Tracy Lynn Faber Memorial Award

Prof. Greta Mok, an associate professor of FHS and the Faculty of Science and Technology recently received the Tracy Lynn Faber Memorial Award at the 65th Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging (SNMMI). She also received the International Best Abstract Award year for her work titled 'Comparison of Different Tc-99m-MAA Imaging Protocols for Y-90 SIRT Treatment Planning'. For more information, please refer to the UM News: <https://www.umac.mo/news-centre/news-and-events/news-and-press-releases/detail/45489/>.



FHS NEWS

Representatives from Imperial College London visited FHS

Professor Maggie DALLMAN, Vice President (International) and Associate Provost (Academic Partnerships), and Mr. Alex PAGE, Senior International Relations Officer (Asia) International Relations Office of Imperial College London visited FHS as part of their courtesy visit at the University of Macau on 26 July. They were accompanied by Rector Yonghua SONG, VRR Rui MARTINS, and Director of GAO Ms. Cindy LAM and led on a tour of FHS by Prof. Chuxia DENG and other Faculty members. The party showed great interest in FHS’s history, development and facilities.



FHS Hosts a Group of UM High School Camp (澳大高中營) Participants

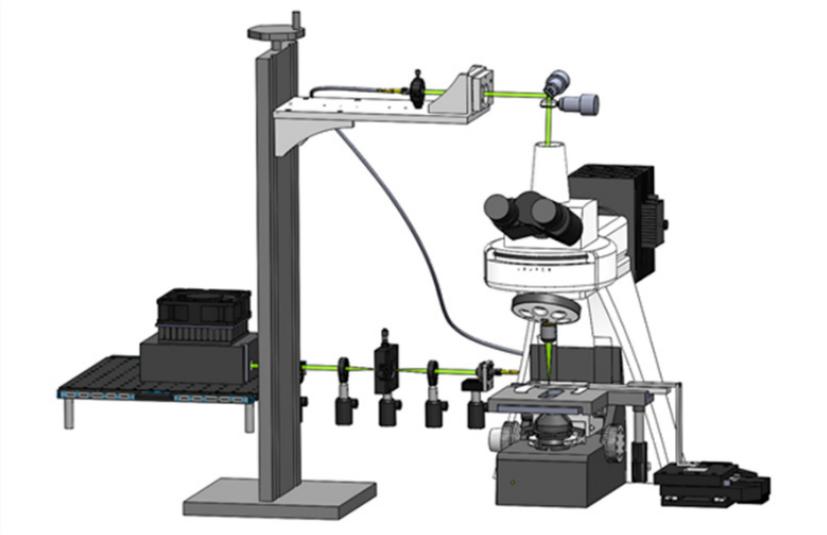
A delegation of six UM High School Camp (澳大高中營) participants, Form 4 and Form 5 students from different local secondary schools, visited the FHS on 26 July. Prof. Henry KWOK and his research team members led the students on a laboratory tour of N22 and introduced them to the Faculty’s history, values and mission on research and teaching. After the laboratory tour, the Prof. KWOK and his research team guided the students to discuss two topics titled “What are the differences between normal cells and cancer cells?” and “Using novel antibody/peptide targeted therapy to fight against cancer”.



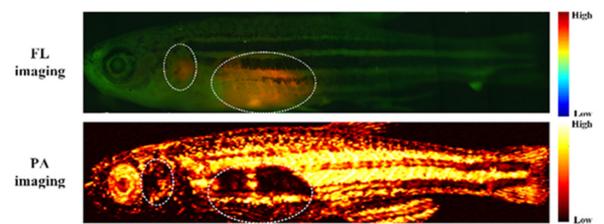
FEATURED NEWS

FHS-Made Dual-Modal *in vivo* Fluorescence/Photoacoustic Microscopy Imaging System

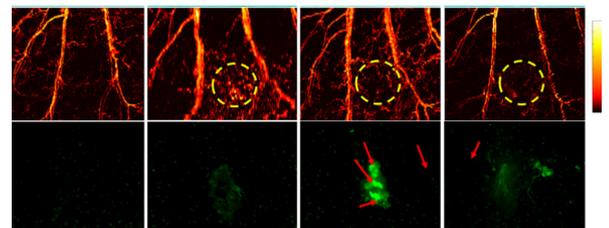
Prof. Zhen YUAN's team developed a FHS-made multimodal optical microscopy system for multiscale structural, functional and molecular imaging of biological tissues. The integrated fluorescence microscopy subsystem and optical-resolution photoacoustic microscopy subsystem are able to achieve high-resolution, high-contrast and high sensitivity *in vivo* imaging.



The development of dual-modal fluorescence/photoacoustic imaging is of great importance for the detection of disease pathology, monitoring tumour microenvironment, and development of innovative therapeutics. Photoacoustic imaging (PAI) is rapidly growing, largely because PAI can reconstruct both the functional and structural information of biological tissues with high optical contrast, high ultrasound resolution and satisfactory penetration depth. Meanwhile, fluorescence imaging (FLI) has been widely used in biomedical field due to its high sensitivity, which plays an essential role in the study of cellular level events such as gene and protein expressions, cancer early detection and treatment. To take advantage of the complementary information from these two optical imaging modalities, Prof. YUAN's team presents an optimized approach that combines FMI and PAI to improve the *in vivo* imaging sensitivity. They believe the new imaging system can recover images of biological tissues with high accuracy and molecular specificity.



In vivo fluorescence microscopy (top image), and photoacoustic microscopy imaging of adult zebrafish (bottom image).



In vivo fluorescence microscopy (bottom image), and photoacoustic microscopy imaging of zebrafish (top image) for monitoring tumour microenvironment.

JULY/ AUGUST				
Mon	Tues	Wed	Thurs	Fri
30 <i>Summer Camp (1)</i> <i>Summer Laboratory Work Experience Programme (Phase IV)</i>	31	<u>B-CAT Meeting #23</u> ¹ Prof. Jun ZHENG Time: 17:00 Venue: E12-G004	2	3
6 <i>Summer Camp (2)</i> <i>Summer Laboratory Work Experience Programme (Phase IV)</i>	7	<u>PhD Oral Defense</u> ⁸ Ms. Chenyin WANG Time: 10:00 Venue: N6-G010	9	10
13 <i>Summer Laboratory Work Experience Programme (Phase V)</i>	14 <u>PhD Oral Defense</u> Mr. Zheng YANG Time: 10:00 Venue: N6-G010	15 <u>B-CAT Meeting #24</u> Prof. Xiaoling XU Time: 17:00 Venue: E12-G004 <u>PG New Student Orientation</u> Time: 10:30-12:00 Venue: E12-G003 <u>UG New Student Orientation</u> Time: 14:30-16:00 Venue: E12-G003	16	17
20	21 <u>New Student Welcome Reception</u> Venue: E12 Learning Common	22	23	24

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