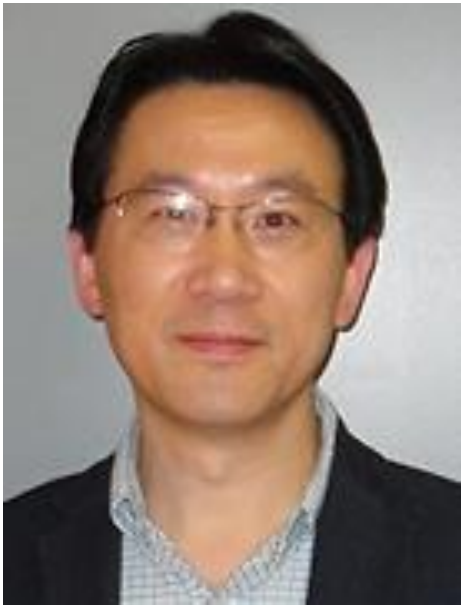




# BIOLOGY COLLOQUIUM

Friday, 9 Mar 2018 | 4pm | DBS Conference Room 1

Hosted by A/P Liou Yih Cherng



## The spindle plasticity and regulation during mitosis

**By Xuebiao Yao**

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In eukaryotes, microtubules are essential for cellular plasticity and dynamics. During cell division, accurate chromosome segregation requires formation of a bipolar spindle and chromosome movement along the spindle. Microtubules are fibrous polymers that are regulated by an array of microtubule-binding proteins, post-translational modifications and the context-dependent synergism. Our recent findings identify dynamic acetylation of microtubule plus-end tracking protein EB1 as a molecular mechanism to orchestrate accurate kinetochore-microtubule interactions in mitosis. In addition, our recent studies delineate how the generation of a chemical gradient of Ran-GTP at the mitotic spindle is coupled to mitotic post-translational modifications. Finally, I will share our most recent progresses on elucidation of novel post-translational modifications in spindle orientation control and accurate metaphase-anaphase transition.