




20 Years of Chasing Light, Let's CATCH the Future Together: A Relay of Four Space Science Satellites Missions, An Invitation from a Chief Designer

 April 17, 2026 (Friday)

 2:30 p.m.

 Room 522, 5/F, Chong Yuet
Ming Physics Building,
The University of Hong Kong



Dr. Yonghe ZHANG

Innovation Academy for Microsatellites, CAS

Abstract: Transient celestial objects are a central focus of time-domain astronomy and multi-messenger astronomy. The China-France SVOM satellite and the China-Europe Einstein Probe (EP) satellite are equipped with wide-field hard X-ray and soft X-ray telescopes, respectively, enabling autonomous detection and localization of transients. With high-precision telescopes and agile maneuvering, they also perform onboard follow-up observations. Currently operating in coordination, these two satellites serve as powerful platforms for capturing transient phenomena.

The eXTP satellite, part of the China's "Space Exploration of Origins" program, is an enhanced X-ray Timing and Polarimetry Observatory designed to observe black holes, neutron stars, and extreme explosive events. The CATCH project leverages the low-cost advantage of small satellites to achieve high-frequency monitoring of all-sky variable sources through space-based networking. Both projects are planned for launch in 2030.

The science satellite engineering team led by Chief Designer Zhang Yonghe has dedicated twenty years to the development of these satellites. Looking ahead, more young talents are urgently needed to join the field of space science exploration. We welcome passionate and motivated university students to become part of this endeavor and help write a new chapter in the exploration of the universe.

Biography: Dr. Zhang Yonghe is the Deputy Director of the Innovation Academy for Microsatellites, Chinese Academy of Sciences, Director of the Sino-Portuguese Joint Laboratory (STARLab), and Director of the Key Laboratory of Satellite Digital Technology. He has long been dedicated to research on space science exploration satellite system design and control technology. He served as the Chief Designer of the Einstein Probe (EP) satellite and the Project Director and System Engineer of the China-France cooperation astronomical satellite--SVOM satellite. He led the development of an integrated space-ground multi-band detection system for cosmic transients such as gamma-ray bursts, and he is also the principal investigator for drag-free control technology of gravitational wave detection spacecraft.

Currently, Zhang Yonghe serves as the Chief Designer of the flagship X-ray telescope (eXTP) satellite under China's "Space Exploration of Origins" program, and is also leading the system study of CATCH, the follow-up constellation project of the China-France SVOM satellite mission.

Over twenty years of research in the aerospace field, Dr. Zhang has continuously advanced international cooperation efforts, collaborating with ESA, CNES, CEA, MPE, and NSSTC on satellite engineering and development. He has received the 2024 Aerospace Contribution Award, and his team was honored as one of the "2025 Top Ten Inspiring Figures in Shanghai." He has published two monographs and 26 SCI papers in the past five years.



宇宙追光二十載，邀您共創新未來—— 四項空間科學衛星接力，一位總師的邀約

 2026年4月17日 (星期五)

 下午2:30

 香港大學莊月明物理樓522課室



張永合 副院長

中國科學院微小衛星創新研究院

演講摘要：

暫現天體是時域天文與多信使天文學的核心研究對象。中法合作SVOM衛星與中歐合作的“天關”衛星（Einstein Probe），分別搭載寬視場硬X射線和軟X射線望遠鏡，自主捕獲、定位暫現天體；同時藉助高精度望遠鏡和敏捷機動，實現星上后隨觀測。目前兩星協同在軌，成為暫現天體的強力捕獲平台。“太空探源”計劃中的eXTP衛星，是一台增強型X射線時變與偏振天文台，用於觀測黑洞、中子星和極端爆發天體。CATCH計劃則發揮小衛星低成本優勢，以空間組網方式實現全天變源的高頻監測。兩個項目計劃於2030年發射。張永合總師帶領的科學衛星團隊研製上述衛星，已走過二十年征程，未來亟需更多有志青年投身空間科學探測事業。歡迎有激情、有志向的大學生加入，共創宇宙探索新篇章。

講者介紹：

張永合，中國科學院微小衛星創新研究院副院長，中葡星海聯合實驗室主任，衛星數字化技術重點實驗室主任，長期致力於空間科學探測衛星系統設計與控制研究，曾擔任天關衛星（Einstein Probe）總師，中法天文星（SVOM）衛星總指揮兼系統工程師，牽頭構建了面向伽馬暴等宇宙暫現源的天地一體多波段綜合探測系統，主持引力波探測航天器無拖曳控制技術研究。目前，張永合擔任中國“太空探源”計劃中旗艦型X射線望遠鏡（eXTP）衛星總師，同時在牽頭論證中法天文衛星SVOM的後續星座項目--CATCH。在二十年的航天領域研究中，張永合持續推進國際合作工作，與ESA、CNES、CEA、MPE及NSSTC合作開展衛星工程研製。獲得2024年度航天貢獻獎，2025年度感動上海十大人物（團隊）等榮譽，近五年出版專著一部，發表SCI論文26篇。