

张克非

基本信息

姓名：张克非

学位：博士

职称：二级教授

行政职务：资源环境技术研究院院长，太空采矿国际研究中心/空间信息智能感知与创新主任



研究方向：大地测量、全球卫星导航系统、GNSS 大气探测、太空采矿/空间资源开发利用、3S 技术与智慧农业、地下大空间智能感知与应急管理

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个人简介

张克非, 国家高层次人才, 二级教授, 博士生导师; 中国测绘学会会士, 国际大地测量协会 (International Association of Geodesy - IAG) 会士、国际大地测量协会中国委员会委员, 国际矿山测量协会 (International Society of Mine Surveying - ISM) 种子委员会 (Seed Commission) 主席, 教育部空间信息科学与技术创新引智基地负责人, 云南省自然资源智能监测与时空大数据治理重点实验室学术委员会副主任, 太空采矿国际研究中心创始人, 澳大利亚皇家墨尔本理工大学名誉教授。

主要从事太空资源开发与利用、大地测量、卫星导航定位, 近地空间环境感知等方面的理论和应用研究, 以跨学科、前沿性、独特性为特色, 长期致力于空间信息智能感知技术在太空资源勘察、地下大空间应急管理、气象灾害预警与农业智能化等方面的理论与应用研究。主持了国家自然科学基金重点项目、国际(地区)合作项目; 国家科技重点研发计划 (课题); 澳大利亚基金委、科技部、环境部项目、澳中、中日、中波、澳美以及欧盟国际科技合作等 70 余项重大科研项目, 获得澳大利亚国家创新卓越 (Excellence in Innovation for Australia - EIA) 最高奖等 50 余项奖项, 获批 50 余项专利, 在国际一流期刊和会议上发表论文 600 余篇 (其中 SCI 300 余篇)、150 余次特邀和主旨报告, 研究成果被国内外媒体广泛采访和报道。

社会、学会及学术兼职

评审与人才工作: 担任人社部外国专家、中国科学院海外评审专家, 国家高层次人才计划 (QR、杰青、优青、长江学者等) 及多国 (北美、欧盟、亚太、中东等) 国家基金和职称评审专家, 参与基金委重点项目、国际合作项目、青年基金及科学院青年科学家奖等评审工作。

学术组织与会议：先后创立澳大利亚空间研究中心（SPACE Research Centre），担任全球华人定位导航协会主席、副主席及顾问委员会委员，国际大地测量协会专题研究组主席，并在国际大地测量协会、国际工程师协会（FIG）、亚洲大洋洲地球科学学会（AOGS）等学术组织中主持特别行动计划组或大会组织委员会工作，百余次担任国际学术会议总会或分会主席。

教育与科研经历

1981-09 月至 1985-07 月，武汉大学，本科

1985-09 月至 1988-07 月，武汉大学，硕士

1994-03 月至 1997-04 月，澳大利亚科廷大学，博士

1997-04 月至 1999-10 月，英国诺丁汉大学，副研究员

1999-10 月至 2008-12 月，澳大利亚皇家墨尔本理工大学，高级讲师、副教授

2009-01 月至 2020-10 月，澳大利亚皇家墨尔本理工大学，正教授、空间研究中心主任

2016-08 月至今，中国矿业大学，环境与测绘学院测绘工程系，教授

2010-10 月至今，澳大利亚皇家墨尔本理工大学，终身荣誉教授

荣誉奖励

2024 年，江苏省五一劳动荣誉奖章获得者

2024 年，中国卫星导航定位一等奖，（R1/15）

2024 年，江苏省科学技术奖，（R1/10）

2023 年，测绘科技二等奖（R1/10）

2023 年，中国产学研合作创新奖（个人）

2023 年，中国矿业大学度科研育人先进个人

2023 年，紫金山英才高峰计划

2023 年，第四届全国高等学校 GIS 教学成果奖一等奖

2022 年，中国矿业大学教师成果奖（研究生教育类）

2021 年，紫金山英才（江北明珠计划、外国人才计划）

2020 年，中国矿业大学优秀指导教师奖

2019 年，国际大地测量协会会士(Fellow, the International Association of Geodesy)

2017 年，江苏省高校创新类“双创人才，双创团队领军人才

2016 年, 中共中央委员会组织部国家特聘专家

2014 年, The Australian Innovation Challenge Award, 澳大利亚创新挑战杯提名奖

2014 年, RMIT University Innovation Excellence Award, RMIT 卓越创新奖 (唯一获奖者)

2013 年, RMIT University Research Excellence Award, RMIT 大学优秀研究成就奖

2012 年, The Excellence in Innovation for Australia (EIA) Team Award 2012 (澳大利亚创新卓越 (最高) 奖)

2012 年, Research Income Performance Award, 研究基金收入最高成就奖

近期科研项目

- (1) 国家自然科学基金十四五重点研发项目(课题)1 项, 主持
- (2) 国家自然科学基金-国际 (地区) 合作与交流 1 项, 主持
- (2) 国家自然科学基金面上项目 2 项, 主持
- (3) 教育部空间信息科学与技术创新中心 (111) 引智基地项目 1 项 (一期, 二期), 主持
- (4) 江苏省“双创团队”项目和“双创个人”项目各 1 项, 主持
- (5) 江苏省国际合作重点项目 1 项, 主持
- (6) 江苏省外国专家工作室, 主持
- (7) 科技部外国专家项目 1 项, 主持
- (8) 江苏省徐州市重点研发计划项目 1 项, 主持
- (9) 中国矿业大学双一流建设“太空采矿”项目 2 项, 主持

科研创新、教育与培养与学术成果

长期从事 GNSS+近地空间环境 (对流层/电离层) 探测、3S 技术与智慧农业、太空资源开发与利用、地下大空间导航定位与控制技术、矿山变形监测等领域的理论技术和创新应用研究, 是国际上率先将大地测量技术运用到 GNSS 大气探测、空间追踪和太空资源探测与利用等领域的开拓者。

主持的中澳国际科技合作项目“井下人员与设备定位跟踪”被列为中澳科技合作三十年成功典范, 并在 2010 年上海世博会展出; 研发的 GNSS 大气探测技术将澳大利亚天气预报时效性改善了 10 小时, 被誉为“革命性技术”; 研发的多传感器集成体育竞技智能跟踪系统, 被誉为澳大利亚奥林匹克竞技国家队的“神秘武器”。承担国家“111”引智基地计划、国家自然科学基金重点和国际(地区)合作、澳大利亚自然科学基金、联邦工业部、中日、中波、澳中、澳美、澳洲-欧盟等重大项目 70 余项, 累计获得近 1 亿美元研究资金, 发表学术论文近 600 余篇, 其中 SCI 收录 300 余篇, 申请授权国际国内发明专利 50 余项, 作国际会议特邀报告和主旨演讲 100 余次, 领导了一个由 60 多名教师、博士后和博士/硕士研究生组成的团队, 研究成果被

国际主流媒体采访与报道，并获得澳大利亚创新卓越最高奖、测绘学会奖、江苏省科技奖、中位协导航定位奖、江苏省五一劳动荣誉奖章等 50 余项国内外重要奖项。

学术论文 (近 5 年, IF=影响因子, Q=JCR/科学院分区)

[1] Shi J, Li M, Steiner AK, Scher S, Zhang M, Hu J, Gao W, Fan Y, **Zhang K**. Evaluation of reanalysis precipitable water vapor under typhoon conditions using multi-source observations[J]. EGU sphere, 2025, 2025: 1-30. [SCI, Q2, IF=3.3]

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[3] Li W, Guan X, Yang F, Zuo X, Zhao D, Li L, **Zhang K**. Li W, Guan X, Yang F, et al. Reconstruction of 2D/3D ionospheric disturbances during the X9.0 solar flare on 3 October 2024 using multi-instrument observation[J]. JGR: Space Physics, 2026, 131(4): e2025JA034816. [SCI, Q2, IF=3]

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[10] Zhu S, Liu X, **Zhang K**, et al. Comparative analyzes of three consistency and anomaly detection methods for GNSS precise clock offset products[J]. *Measurement Science and Technology*, 2026, 37(4): 046302. [SCI, Q3, IF=2.9]

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[27] **张克非***, 刘增亮, 段亚博, 卞朝法, 倪铭言, 朱守庆, 黄晨, 李怀展, 李龙江, 赵东升 (2025) 面向小行星深空探测的测绘遥感技术应用. *国际太空* (8):40–46.

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[29] 邵文凯, 刘尘旻, **张克非**, 李瑞林, 董良, 赵跃民 (2025) 近地小行星矿物分离与资源提取的挑战与展望. *宇航学报* 46(1):17–36. [中文核心]

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[33] Zhang M, Li L, **Zhang K***, Wu S, Sun P, Zhao D, Shi J, Rohm W (2024) Development of an adaptive 4-D water vapour density model for GNSS tropospheric tomography. GPS Solutions 28(4):159. [SCI, IF=4.2, Q2]

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[38] Zhao D, Cui S, Zhang X, Li L, Sun P, Bian C, Ban W, Hancock CM, Wang QX*, **Zhang KF***. Analysis of global ionospheric scintillation and GPS positioning interference triggered by full-halo CME-driven geomagnetic storm: A case study. Advances in Space Research 74(5): 2492–2509 (2024). [SCI, Q2, IF=2.7]

[39] 高枫林;丁楠; **张克非**; 张书毕; 张文渊; 闫香蓉.基于多系统的 GNSS 三维水汽层析质量评价方法[J].全球定位系统,2024,49(03):107-114.

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[44] 尹智, **张克非**, 段亚博, 刘军生, 穆庆禄 (2024) 地球科学和深空探测的引力场建模理论研究进展, *地球与行星物理论评*, 55: 1-12.

[45] Wu H, **Zhang K***, Wu S, Liu X, Shi S, Bian C (2024) Unsupervised Blind Spectral-spatial Cross-super-resolution Network for HSI and MSI Fusion, *IEEE TGARS* [SCI, Q1, IF= 8.8]

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[47] 何琦敏,**张克非**,李黎,连达军,赵伟,陈国栋,富尔江,王瑞 (2024) 基于 PWV 到达时间差估计台风运动状态的四参数模型,*测绘学报*. [中文核心]

[48] 何佳星, 郑南山, 丁锐, **张克非**, 陈天悦 (2023) 粒子群优化卷积神经网络 GNSS-IR 土壤湿度反演方法, *测绘学报*,52(8): [中文核心]

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