



Research Field: Planetary dust and radiation environment

Focused Field: Lunar & cometary dust, space radiation

SHORT BIO

I finished my B.Sc. and PhD degree in Physics in 2004 and 2010 at Nanjing University, China. In 2008-2010, I spent my last two years of PhD study as a student assistant in Nuclear Science Division, Lawrence Berkeley National Laboratory, USA.

In 2010-2012, I worked as a post-doc in Department of Engineering Physics, Tsinghua University. During 2011.1-2011.6, I visited Department of Physics & Astronomy, UCLA, as a research scholar.

In 2012, I became an assistant professor in Space Science Institute, Macau University of Science and Technology. In 2017, I was promoted to an associate professor in the same institute. In 2018, this institute was upgraded as the State Key Laboratory of Lunar and Planetary Sciences. In 2023, I became a full professor of the Lab.

Now I have been leading the planetary surface environment & small bodies group in the lab. My personal research focuses on the dust and radiation environment of the Moon, comets and Mars. I teach the "University Physics" course for undergraduate students.

Professor

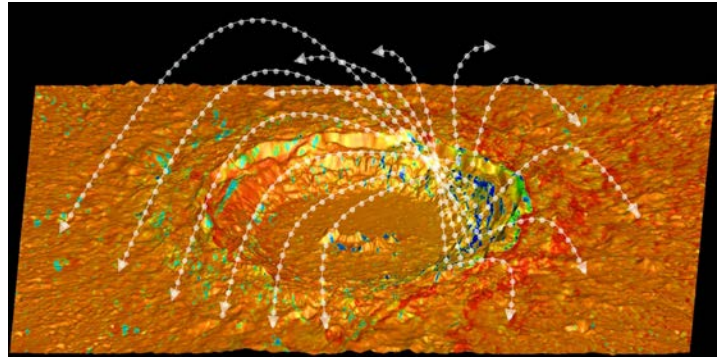
XIAOPING ZHANG

张小平



PhD (2010): Physics (Nuclear Physics) – Nanjing University

Bachelor (2004): Physics (Microelectronics) – Nanjing University



L. Xie, X. Zhang* et al. Lunar dust fountain observed near twilight craters, Geophysical Research Letters (2020)

RECENT PUBLICATIONS (300+ papers, 10000+ citations, <https://scholar.must.edu.mo/scholar/100153>)

Pengwei Luo, **Xiaoping Zhang***, Renrui Liu et al., **Engineering Geology** 325, 107278 (2023)

Plume effects on Martian surface: Revealing evolution characteristics of plume-surface interaction at Tianwen-1 landing site

Hsinchen Yu and **Xiaoping Zhang***, **Physics of Fluids** 34, 123106 (2022)

Molecular-kinetic study of multilayers gas-adsorption in a rarefied gas environment (Editor's pick)

Pengwei Luo, **Xiaoping Zhang***, Shuai Fu et al., **Science Advances** 8, eabk1760 (2022)

First measurements of low-energy cosmic rays on the surface of the lunar farside from Chang'E-4 mission



PROFESSIONAL EXPERIENCE

2023 – now – Macau University of Science and Technology, Macau, China – Professor

2017 – 2023 – Macau University of Science and Technology, Macau, China – Associate Professor

2012 – 2017 – Macau University of Science and Technology, Macau, China – Assistant Professor

2010 – 2012 – Department of Engineering Physics, Tsinghua University, China – Postdoctoral researcher

2008 – 2010 – Nuclear Science Division, Lawrence Berkeley National Laboratory, USA – Student Assistant

PROJECTS & AWARDS (Selected)

Scientific PI of two scientific payloads: Dust Analyzer for Chinese asteroid mission (2021-2025) & Solar X-ray Detector for "Aoke-1" Satellite (2020-2022)

Macau Natural Science Award 2016 (First Prize) & 2022 (Second Prize)

FDCT – **2022-2025** – PI – Study on electrostatic migration mechanism of dust in space environment

FDCT – **2019-2022** – PI – Scientific analysis of Chang'E-4 lunar exploration data

NSFC-FDCT – **2017-2020** – PI – Theoretic study on some key nuclear reactions and its applications in the research of Mars radiation environment

FDCT – **2014-2017** – PI – Research on the scientific and engineering questions about lunar dust

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