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UNIVERSITY VIEWPOINT:

Hong Kong University of Science and Technology

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Hong Kong University of Science and Technology: Innovating Today, Imagining Tomorrow



Photo credit: Guancong Ma

The Hong Kong University of Science and Technology (HKUST) is a dynamic, young research university with a diverse international student body and faculty who relentlessly pursue excellence in teaching and research. Situated on a hillside overlooking scenic Clear Water Bay at the eastern edge of Hong Kong and the southeastern coast of China, HKUST has rapidly established itself as a leading institution on the academic

world map. Since the university's founding in 1991, the physics department has grown from 9 to 37 faculty members and now has 175 research graduate students. The department's research areas have also expanded to include condensed-matter physics; atomic, molecular, and optical systems and quantum optics; particle physics and cosmology; quantum information; scientific computation; soft-matter and biological physics; and metamaterials.

The physics department promotes the pursuit of cutting-edge research by cultivating a collaborative, supportive, and cohesive environment. For example, the Center for Fundamental Physics focuses on theoretical and experimental research about the origin, fate, and fundamental building blocks of the universe, and it has participated in several global endeavors, including the ATLAS collaboration at CERN. The emphasis of the Center for Metamaterials Research is on the design, fabrication, and characterization of different metamaterials to explore novel wave phenomena and to manipulate light and sound in ways not possible before. The newly established Center for Quantum Technologies brings together a team working across several core areas with focuses on quantum materials and devices, quantum control, and software.

The physics department's research efforts are supported by critical infrastructure, specialized equipment, high-performance computer clusters, and services provided by the university's Central Research Facilities. For example, the Materials Characterization and Preparation Facility offers advanced characterization tools, sample and materials preparation apparatus, and a helium liquefier. The Nanosystem Fabrication Facility has state-of-the-art equipment for developing innovative micro/nano devices and systems.

The department's goals for future growth are to enhance existing core strengths and build up world-class capabilities in rapidly developing areas aligned with university initiatives, such as big data and renewable energy and new energy materials. To achieve these goals, the department will strive to continuously attract outstanding new faculty members at all ranks, and it plans to fill 10 new faculty positions in the next few years. To learn about opportunities as soon as they are posted, interested candidates may visit jobs.physicstoday.org and create an alert for "HKUST."

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