

16/03/2000

HKUST Computational Mathematician Leads 973 IT Project

Dr Du Qiang, associate professor in the Mathematics Department of the Hong Kong University of Science and Technology (HKUST), has recently been appointed by the Chinese Government as Chief Scientist of an information technology research project of the National "973" Key Basic Research Developments Program.

The project, entitled "Large Scale Scientific Computation Research", received an initial two-year funding of over 13 million yuan from the Ministry of Science and Technology. It was selected among nearly 300 research projects through a rigorous screening process that lasted two years.

Dr Du is the second HKUST scientist to head a "973" project. Of the 50 research projects (15 in the first list; 35 in the second list) selected, only two are led by scientists from Hong Kong—the "Applied Theory and High-Performance Software for IT" project by Dr Jun Gu from HKUST's Computer Science Department, and Dr Du's project.

"The selection of Dr Du as Chief Scientist of this project is a recognition of the collective strength of our faculty in scientific computation, and enhances our efforts in the pursuit of excellence in this area," said Prof Shiu-Yuen Cheng, Head of the Department of Mathematics.

Large scale scientific computation is an area of multi-disciplinary, high-impact research aiming to solve difficult issues in science by employing effective algorithms and developing software systems. It can be widely applied to research in physics, chemistry, biology, energy, environment and material science.

The project combines basic and applied research under the following five categories: computation of environmental problems, computational material science, computation of problems in energy science, algorithm innovation and software development, addressing critical issues in the areas of pollution, atmospheric forecast, petroleum prospecting and reservoir simulation, the development of advanced materials and the efficient utilization of high-performance computers.

"Dr Du is the best person to lead the project. He is a young leader with outstanding research achievements and close mainland ties," said Prof Zhong-ci Shi, Member of the Chinese Academy of Sciences who recommended Dr Du as the project leader. He believes Dr Du will help promote academic and technological exchanges between the Chinese Mainland and Hong Kong.

Dr Du received his BS in Mathematics from the University of Science and Technology of China in 1983, and earned his PhD at the Carnegie Mellon University in 1988. Prior to joining HKUST in 1996, he had taught at the University of Chicago, the Michigan State University, the Carnegie Mellon University and the Iowa State University. He has published more than 50 academic papers in the past decade. His research interests are computational and applied mathematics, numerical and applied analysis as well as scientific computing.

The National "973" Key Basic Research Developments Program is launched by the Chinese Government to promote scientific, economic and social developments in the 21st century. The program involves seven areas: energy, information, environment science, medicine and health, material science, agriculture and basic research.