

# Tony Chan Named NSF Assistant Director



**Tony F. Chan**

new position on October 1, 2006.

In an email interview, Chan said he took the position at the NSF for the opportunity to serve the MPS community at a national level. “MPS at NSF is one of the major federal funding agencies for math and physical sciences, and the assistant director can potentially have significant influence and impact on national science funding policy,” he said. “Personally, it also means a new and exciting challenge, and interaction with new colleagues. I also look forward to the opportunity (and necessity) to learn more about cutting-edge science.”

Chan’s current research interests focus mainly on interdisciplinary mathematics in such fields as image processing and computer vision, multiscale computational methods, optimization and multi-level methods for electronics design, and computational geometry for brain mapping. He has written over 200 research publications and has won two

The National Science Foundation (NSF) has named Tony F. Chan, professor of mathematics and dean of physical sciences at the University of California at Los Angeles, to be assistant director for Mathematics and Physical Sciences (MPS) at the NSF. The MPS directorate, which has an annual budget of approximately US\$1 billion, is the larger organizational unit within the NSF that houses the Division of Mathematical Sciences. In addition to mathematics, the MPS funds astronomy, chemistry, materials science, physics, and multidisciplinary activities. Chan assumes his

best-paper awards from the Institute of Electrical and Electronics Engineers. He has supervised more than twenty-five Ph.D. students and fifteen post-doctoral fellows. His research is currently supported by the NSF as well as the Office of Naval Research and the National Institutes of Health (NIH).

The MPS directorate funds large, expensive facilities that attract a lot of attention, as well as “small science” like mathematics. Balancing the needs of the diverse disciplines within the MPS is a major challenge, Chan said. “But I see it not just between math and other sciences, but more generally the balance between support for major facilities/equipment and support for ideas and people, between research targeted around a certain theme (e.g., nano) and curiosity-driven research, between individual PI-led research and team-based research,” he explained. “The ultimate goal should be a combination that produces the best ‘return’ for the national investment.”

Chan also emphasized that, because the NSF is the only federal agency with a mandate to fund basic science, this must remain the focus of the foundation. “That should be its mission—science should always come first,” he said. At the same time, science is the basis for technology, which in turn contributes to the economic health of the nation. “The on-going bipartisan support for the American Competitiveness Initiative [ACI] is a recognition of this fact and a great opportunity for NSF to take a leadership role in ensuring U.S. global competitiveness in science and technology,” he noted. The ACI will support research and workforce training, both areas in which mathematics plays a critical role. Chan said that three funding agencies are targeted to receive increased funding through the ACI: the NSF, the Department of Energy, and the National Institute of Standards and Technology. Of these, the NSF “is the only one mandated to do

basic science research,” he noted. “Of the three, NSF probably also funds the training of the largest number of students. The challenge is to come up with creative programs that will respond directly to ACI and produce measurable results.”

Chan received a B.S. in engineering and an M.S. in aeronautics from the California Institute of Technology in 1973, and a Ph.D. in computer science from Stanford University in 1978. He taught at Yale University from 1979 to 1986, when he moved to UCLA. While he served as UCLA’s mathematics department chair from 1997 to 2000, he led the effort to establish an NSF-funded mathematics institute at UCLA, resulting in the founding of the Institute for Pure and Applied Mathematics (IPAM) in 2000. Chan served as the director of IPAM during 2000 and 2001.

Since becoming dean of the Division of Physical Sciences at UCLA in 2001, Chan has overseen six departments and several research institutes comprising more than 200 faculty, 1,700 undergraduates, and 700 graduate students. The division receives over US\$60 million annually in research awards. Chan is also co-director of UCLA’s NIH Center for Computational Biology.

Chan has been active in professional societies, particularly the Society of Industrial and Applied Mathematics (SIAM), where he currently serves on the Board of Trustees and the Committee on Science Policy. Previously he served on the SIAM Council and the Committee on Human Rights. He has served on the Editorial Boards Committee and the Committee on Committees of the AMS.

Chan said that he looks forward to working closely with the newly appointed director of the Division of Mathematical Sciences, Peter March of the Ohio State University. Chan added, “I welcome suggestions and ideas as to how MPS can do the best job in its mission, and I look forward to opportunities to engage directly with the mathematical sciences community in this context.”

—*Allyn Jackson*