

Project Summary

The University of Chicago has put together an interdisciplinary effort, the Center for the Presentation of Science, **CPS**, aimed at involving graduate students in presenting scientific results in science museums. As a pilot for this broader effort, The University of Chicago, henceforth called "Chicago" and SciTech Hands-on-Museum, in Aurora, Illinois have, with their own funds, begun a pilot project, **SCOPE**, aimed at bringing Chicago's MPS science and scientists to Aurora. We shall especially focus on soft condensed matter and cosmology. This document proposes NSF funding for expanding and implementing the SCOPE project through years II, III and IV. The goals and objectives of both the CPS and SCOPE include:

- * Enabling the presentation of science, including both the results of up-to-the-moment scientific research and basic science, to a broad public.
- * Teaching graduate students about the presentation of Science, especially the conceptual design of museum exhibits.
- * Helping museums more effectively present scientific material, especially using computerized methods.
- * Developing new career paths for students.
- * Expanding museums' audience base, especially in attracting additional under-served audiences
- * Building greater diversity in the groups taught by the physical sciences division of the University of Chicago.
- * Building a working collaboration that can be replicated.

In SCOPE, each year a team of Chicago graduate students from several different disciplines would spend nine months working and learning together. The students would be trained in and participate in the presentation of scientific knowledge to a broad public. Chicago people will collaborate with SciTech in a team including a faculty or professional-scientist coach and six graduate students, including physical scientists, computer scientists, and social scientists.

Project leadership and administration will come from Professor Leo P. Kadanoff, Emeritus Professor of Physics and Mathematics, (Director and PI) and Dr. Ronen Mir, Executive Director, SciTech Hands on Museum (Co-Director). Additional faculty PI's include Prof. Leo Irakliotis, Computer Sciences, Chicago and Prof. Morris Fred, Social Sciences, Chicago. The overall effort is being pursued under the sponsorship of the MRSEC (Materials Research Science and Engineering Center) and the CfCP (Center for Cosmological Physics), both NSF supported Centers, and in addition the Computation Institute (CI), the High Energy Physics group, and the Masters program in the Social Sciences at Chicago. Scientists from all these sponsoring groups would help the students understand and present the results of their research.

The broad impact of the program would be in the training of a new kind of scientific museum professional and also in the better presentation of MPS science within museums.

The intellectual merit of the proposed program will be in its development of a better knowledge of how science may be presented and in the development of new methods of presentation. As a result it is expected that even the MPS research scientists involved will understand science better.