Over the past several years, structural health monitoring (SHM) of key civil infrastructure has become a major branch of pioneering research worldwide. This is particularly the case for the US and China, two world leaders in SHM. The synergy between the two nations is a natural one, with individual investigators and ad hoc joint research teams already forming. In an attempt to increase and improve bi-lateral research in SHM, a US-China working group was assembled to formulate a joint research plan. The comprehensive joint program is being developed to stimulate and guide the research communities in their formulation of joint proposals in high priority areas which meet the common interests of both countries, and leverage the resources and strengths of both sides. With this plan, leading investigators from both countries can initiate bilateral research in an orderly fashion, and major funding agencies might be able to prioritize smart structures and SHM in their budget allocations. This program development project has been strongly endorsed and supported by the National Science Foundation (NSF) and the National Natural Science Foundation of China (NSFC).

The goals of the working group are to identify thrust areas and important topics of structural health monitoring that need special research solutions over the next ten years, rank these topics so that the more critical ones are investigated first, identify appropriate test beds in both countries, assemble complimentary bi-national teams, and integrate research, education, and application. The document to follow explains where the working group has advanced toward these goals. In particular, the document outlines many of the important areas of bi-national excellence, and areas that will need further work over the next decade. The working group is expected to continue its efforts to foster closer bi-national ties and research collaboration and to advance the knowledge base for autonomous system intelligence, and implementation of SHM technologies that would transform practices in construction and protection of civil infrastructural systems, threat detection, and damage and loss mitigation.

We feel this special report would be valuable not only to those who are interested in US-China research cooperation in smart structures, systems and SHM, but probably also to the general readership of journals in these technical areas. We therefore wish to acknowledge the agreement of Dr. C. K. Choi, Editor-in-Chief of Journal of Smart Structures and Systems to publish this special report in a timely fashion.

We would also like to acknowledge the entire working group for putting this report together. Each member has made important contributions to the document and are here acknowledged.
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Date: February 20, 2007