In an era when virtually all the tools of our daily lives are connected to and reliant upon computer networks, a cyber attack could knock out electricity, drinking water and sewage systems, assembly lines, communications and, of course, our financial institutions—to name just a few.

We must improve our ability to respond to these threats. And our response must go beyond immediate defensive measures.

We need to conduct the research and development (R&D) necessary to make computers and networks much harder to break into and much less subject to damage when they are violated. That requires a focused, well-funded R&D effort in cyber security—something I championed as chairman of the House Committee on Science.

My legislation, the Cyber Security Research and Development Act was signed into law by President Bush in 2002. It authorized $903 million in new federal funding for R&D in this critical area. Under the bill, the National Science Foundation created new cyber security research centers, individual investigator grants, and fellowships.

The result has been new research—conducted at leading-edge universities, like the State University of New York at Buffalo—that is producing innovative and creative approaches to computer security, drawing more researchers into the field and to developing a cadre of students, who will become the next generation of cyber security researchers and protectors of our information networks.
That is why I am so pleased and honored that Professor Upadhyaya asked me to provide the foreword to this text. Looking at these chapters, authored by top experts from academia, industry, and international partners, I feel like the cyber security legislation we drafted in the science committee four years ago is having some real impact on real problems in 2006. This is good news by any measure.

_U.S. Rep. Sherwood Boehlert (R-NY)_

_Chairman, House Committee on Science (2001-2006)_

_October 11, 2006_

_The Hon. Sherwood Boehlert_ was chairman of the U.S. House of Representatives’ Committee on Science (2001-2006). He was first elected to represent Central New York in the House of Representatives (1982). Recognized as the leading Republican environmentalist in the House, Boehlert has made a name for himself as a champion of federal investment in science and technology.

Boehlert received a bachelor’s degree from Utica College (1961). Before serving as Oneida County Executive (1979-83), he was manager of public relations at Wyandotte Chemical (1961-64) and served two years in the U.S. Army (1956-58). Boehlert also served as chief of staff for two Congressmen, Alexander Pirnie (1964-72) and Donald Mitchell (1973-79).