SECURITY EDUCATION AND CRITICAL INFRASTRUCTURES
IFIP – The International Federation for Information Processing

IFIP was founded in 1960 under the auspices of UNESCO, following the First World Computer Congress held in Paris the previous year. An umbrella organization for societies working in information processing, IFIP's aim is two-fold: to support information processing within its member countries and to encourage technology transfer to developing nations. As its mission statement clearly states,

*IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.*

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is in information may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly, National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.
SECURITY EDUCATION AND CRITICAL INFRASTRUCTURES

IFIP TC11 / WG11.8 Third Annual World Conference on Information Security Education (WISE3)
June 26–28, 2003, Monterey, California, USA

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Preface

Dear Friends and Colleagues in Information Security Education,

Welcome to WISE 3, the third convening of the World Conference on Information Security Education. The theme of this conference is teaching the role of information assurance in an age of critical infrastructure protection. In ways, both obvious and obscure, information technology is transforming our daily lives. We depend upon information systems to ensure that electric power is distributed to our homes and businesses. The financial sector uses extensive systems to manage the world’s money and the economies of nations. Water and transportation networks are controlled by underlying networks of distributed computer systems. Health care systems not only contain our medical histories but also control complex, life-saving medical equipment that can ease pain and speed recovery. There are many more examples. Unfortunately, information security is often an afterthought in infrastructure design and implementation.

The vulnerabilities of software products increases with no apparent plateau in sight: in 2000 approximately 1100 software vulnerabilities were reported, but by 2002 that number had increased by close to 300% to over 3,200. These flaws open the door to cyber exploits that run amok across global networks with lightning speed.

The possibility of cyber attack against various infrastructures has received considerable attention in certain government circles and the media. Yet, thus far, no clear mandate to set a new course toward greater security has been articulated. As information technology becomes increasingly embedded in everything we do, our vulnerabilities will only increase. How
will protection be designed into the fabric of our new world and maintained so that it remains strong and resilient?

Security is an enabling technology. If our systems are built so that they can be trusted, so that our privacy is maintained, so that transaction integrity can be relied upon, so that resources are there when needed, then we will have succeeded. New paradigms will emerge. For those of us in education, the challenge is to create ways to ensure that those who must construct our enabling technology are equipped with the foundations and knowledge required to do the job.

This is the third time the World Conference on Information Security Education (WISE 3) meets. It is held by Working Group 11.8 under the IFIP Technical Committee 11 (TC11) on Security and Protection in Information Processing Systems. The conference follows in the footsteps of WISE 1, held in Stockholm, Sweden in 1999 and WISE 2, which followed two years later in Perth, Australia. These World Conferences did not emerge from nowhere; instead, they were the result of many information security education workshops held in Capetown, South Africa; Copenhagen, Denmark; Samos, Greece; and at a venue on the Danube between Vienna, Austria, and Budapest, Hungary. We can look forward to WISE 4, to be held in Moscow, Russia. Through these conferences and workshops an international community of security educators is working together toward a common vision.

The conference received a total of thirty submissions. All were reviewed by at least two referees on the international program committee. Twenty-three were selected for presentation at the conference. These papers present important perspectives and ongoing efforts in countries including: Australia, Czech Republic, UK, Germany, Finland, Sweden, Russia, and USA.

Contributions to the conference include the following:

Refereed papers. These were papers selected through a process of blind review by an international program committee.

Invited papers. Well-known experts in the field of information security and computer science were invited by the program committee to make presentations.

Panel presentations. Panel proposals were reviewed by the program committee and selected for presentation.

We hope that the readers of this volume will join the conference organizers, authors and participants for the next conference on information security education, WISE 4 in Moscow, by submitting papers and panel proposals.

There are many who made this workshop possible, but particular thanks goes to National Science Foundation for support of the workshop under Grant Number DUE-0210762. This allowed us to introduce many
newcomers to the art and challenges of information security education. We are grateful for the work of the members of the program committee who volunteered their time to review the many excellent submissions for this conference. The organizing committee has provided us with the support in the complexities of conference mechanics. This workshop would not have been possible without the help of those who quietly work behind the scenes. We would especially like to thank Naomi Falby for her invaluable support in helping with the organization of the conference. We are grateful to Matthew Rose whose attention to detail has resulted in this well crafted book. Our thanks extend to David Riebandt and several of our Naval Postgraduate School students, who have provided support during the conference.

June 2003
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