Editors' Preface

It is not uncommon for conference papers to be revised and expanded for publication in a journal. We encourage conference chairs to solicit the authors of the best presented papers to submit an enhanced version to JCS. By acting as JCS editors in obtaining reviews of these papers, the conference chairs may become guest editors of a special issue or special section of an issue featuring them. This was done for Issue 2, edited by Ravi Sandhu from the 1991 Computer Security Foundations Workshop, and for the present issue as well. Despite our support for special conference issues, we wish to assure authors that there will be plenty of opportunities for publication of papers submitted directly to the Journal.

The guest editors for this issue are Teresa Lunt and John McLean, program chairs of the 1991 IEEE Symposium on Research in Security and Privacy. Their introduction, with comments on the papers they selected, is below.

Note that Issues 3 and 4 are combined under one cover, completing Volume 1 of the Journal. This was done partly for the convenience of keeping the Sympsium papers together, and partly to help preserve the association between Volumes and calendar years.

As a result of combining issues, two additional papers are included that were not from the 1991 Symposium. The first of these is "The Extended Schematic Protection Model," by Paul Ammann and Ravi Sandhu. This paper presents a monotonic access control model which is theoretically equivalent in expressive power to the monotonic case of the Harrison-Ruzzo-Ullman model, but retains the strong safety properties of Sandhu's Schematic Protection Model (SPM). Extended SPM (ESPM) is identical to SPM except that it allows for multi-parent creation instead of the conventional single-parent creation of SPM. Like SPM, ESPM has decidable safety analysis for propagation of access rights provided creation is acyclic in types. The paper demonstrates that multi-parent creation is a useful operation from practical and theoretical viewpoints.

"Basic Theorems About Security," by Jeremy Jacob, presents a formal system motivated by the features of a broad class of security policies that are visible at a high level of abstraction. It considers the relationships between properties that induce a "goodness" preorder on implementations. It notes the conflict between functionality and confidentiality, using an abstract definition of confidentiality that captures the essence of the idea without the details that distinguish different approaches to it. This paper also continues our experiment of publishing an occasional paper that makes use of Z notation.

Sushil Jajodia and Jonathan Millen