

Editorial

Virgil D. Gligor

I am honored to serve as the Editor-in-Chief of the *IEEE Transactions on Dependable and Secure Computing (TDSC)* and grateful to Professor Ravi Iyer for his vision, initiative, and successful efforts in bringing *TDSC* to the level of prominence it currently enjoys within the dependability and security communities.

The *IEEE Transactions on Dependable and Secure Computing* has a unique role among the premier publications in computer science and engineering. As initially conceived by Professor Iyer, it attempts to bridge the technical interests of two mature research disciplines for the benefit of both. Most of us who believe that both communities need a joint publication have been encouraged by the success of *TDSC* to date. At long last, we have a first-rate publication that exposes the advances in dependability to the security community and viceversa. In fact, I believe *TDSC* has accomplished more than this necessary step: It has inspired joint work across the two disciplines, as witnessed by several articles published to date. My belief is it will continue to serve these two domains and retain its position as one of the prominent publications in computer science and engineering in the future. To help assure this, several initiatives, mentioned below, were agreed to at the last meeting of the Editorial Board.

A key factor for any research publication is the strength, prestige, and diversity of the technical interests of its Editorial Board members. A strong Editorial Board is very likely to attract high-quality submissions as most potential authors would want prominent members of their community to shepherd their work toward timely, high-quality publications. To date, *TDSC* has benefited from the work of such a board. To ensure continuity and enhance diversity of technical interests, we need to continue to attract Editorial Board members from all over the world. To this end, we will encourage editorial work by a growing pool of young researchers in various research laboratories and universities from the US, Europe, and Asia. In particular, for the past four years, we received a large number of submissions from Asia, which is a strong indicator of the rapid technical growth of our fields in that region. Better Editorial Board representation from that region will be beneficial to *TDSC*.

An important goal of *TDSC* has been the bridging of technical interests of the dependability and security disciplines. This requires periodic assessment of the *TDSC* scope, namely, the expansion of some technical areas and the refinement of others. One of the current initiatives toward this goal has been to publish extended versions of the best papers of the two key technical conferences in these two areas: the Dependable Systems and Networks conference and the Security and Privacy symposium. This initiative will be extended to encompass publications from new areas that truly reflect joint concerns of dependability and security. For example, such cross-cutting and largely unexplored problems can be found in the areas of survivable systems and networks and human-computer interaction. At the same time, we will refine the scope of *TDSC* in other areas, such as cryptography and systems management. Although cryptography comprises an important set of tools for both dependability and security, research in the theory aspects of cryptography have traditionally benefited from publication in other well-established journals. In cryptography, *TDSC* would best serve its readership and potential authors if the scope of publication is restricted to techniques that are manifestly used to solve a specific problem of a dependability or security application. This redefinition in scope will also benefit potential authors of articles in cryptography as they will receive more timely feedback on their work from the Editorial Boards and reviewers of journals specializing in cryptography. Similarly, the Editorial Board has agreed to refine the scope of publication in the systems and network management areas to only include publication of articles reflecting specific dependability and security problems as opposed to more general concerns that are better addressed by publication in journals that specialize in that area.

The success of *TDSC*, as that of any journal, is based on the quality of the papers it publishes. In large measure, publication quality depends on the insightful suggestions and constructive criticism offered by reviewers to prospective authors. Unlike conferences, where the review process is, by necessity, limited, journal submissions undergo a rigorous evaluation by reviewers who volunteer their time and exercise their technical skills for the advancement of our profession. Yet, there are few tangible, direct rewards for reviewing journal submissions despite the criticality of the review process in all publication decisions. I believe that it is time to recognize reviewers for the quality of their work, professionalism, and dedication. To this end, I will ask the Editorial Board and the IEEE Publications Office to nominate the distinguished reviewers (e.g., most thorough, constructive, timely reviews) of the year and ensure that the institutions which employ them become aware of their substantial service to the profession.

Finally, I am pleased to announce the appointment of Dr. Catherine Meadows of the Naval Research Laboratory, Washington, D.C., and of Professor Neeraj Suri of the Technical University, Darmstadt, as the Associate Editors-in-Chiefs of *IEEE TDSC*. Their brief biographies appear below. While Dr. Meadows and Professor Suri are well-known researchers in formal methods and dependable embedded systems, respectively, they bring a wealth of experience in systems design and evaluation in both government and corporate worlds. Above all, they will continue to bring sound judgment to the Editorial Board and help resolve situations where I may have a conflict of interest.

Virgil D. Gligor
Editor-in-Chief



Catherine Meadows received the AB degree in mathematics from the University of Chicago in 1975 and the PhD degree in mathematics from the University of Illinois in 1981. She heads the Formal Methods Section in the Center for High Assurance Computer Systems at the Naval Research Laboratory. She is the principal designer of the NRL Protocol Analyzer, one of the first software tools to be used successfully for cryptographic protocol analysis, and has long been one of the leading figures in this area. She has been active in the Internet Engineering Task Force, promoting the use of formal methods in the analysis of developing standards; she has performed analyses of the Internet Key Exchange (IKE) Protocol and the Group Domain of Interpretation Protocol and serves on the IETF Security Directorate. Dr. Meadows has published more than 90 papers on formal methods, cryptography, and security and has chaired program committees for many technical conferences, including, most recently, the ACM Computer and Communications Security Conference (2005) and the European Workshop on Security and Privacy in Sensor Networks (2007). She is a co-editor-in-chief of the *International Journal of Information Security*. She also currently serves as the Chair of IFIP Working Group 1.7 on Foundations of Security Analysis and Design. In 2004, she won a "Woman of Influence Award" from the Executive Women's Forum for her services to the area. Prior to joining the Naval Research Laboratory in 1985, Dr. Meadows was an assistant professor in the Texas A&M Math Department from 1981 to 1985



Neeraj Suri received the MS and PhD degrees from the University of Massachusetts at Amherst. He currently holds the TU Darmstadt Chair Professorship in "Dependable Embedded Systems and Software" at TU Darmstadt, Germany and is also affiliated with the University of Texas at Austin. His earlier academic appointments include the Saab Endowed Professorship and faculty earlier at Boston University. His research interests focus on the design, analysis, and assessment of distributed, dependable embedded systems and software. His current research emphasizes composite issues of dependability and security, covering topics of 1) robustness hardening ("autonomic dependability and security") of software/OSs, 2) verification/validation of protocols, embedded SW/OS, and 3) "trusted/secure SW/systems by design." His group's research activities have garnered support from DARPA, NSF, ONR, German DFG, European Commission, NASA, Boeing, Microsoft, Intel, Saab, Volvo, Daimler Chrysler, and Hitachi among others. He is also a recipient of the US NSF CAREER award. He served as an inaugural editorial board member for *IEEE Transactions on Dependable and Secure Computing*, an editor for the *IEEE Transactions for Software Engineering*, for the *ACM Computing Surveys* covering embedded systems and real-time, for the *Journal of Security and Networks*, and he has been an editor for the *IEEE Transactions on Parallel and Distributed Systems*. He is a member of IFIP WG 10.4 on Dependability, on the steering committees for the DSN and HASE conferences; PC Chair for DSN 2008 and past SRDS, HASE, IASA conferences, etc. He is also a member of Microsoft's Trustworthy Computing Academic Advisory Board. More professional details are available at: <http://www.deeds.informatik.tu-darmstadt.de/suri/activities/activities.html>.