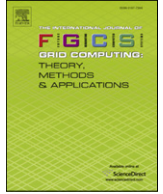




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Editorial

Special section: Grid/distributed computing systems security

Tai-hoon Kim^{a,*}, Wai-chi Fang^b

^a Hannam University, 133 Ojeong-dong, Daeduk-gu, Daejeon 306-791, Republic of Korea

^b Department of Electronics Engineering, National Chiao Tung University, Taiwan

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We are delighted to present to you the special section of *Future Generation Computer Systems* (FGCS) on grid/distributed computing systems security. This special section contains five technical papers dealing with cutting-edge research and technology related to the design, modeling, and implementation of architectures, algorithms and protocols of computer systems or environments.

In the paper "Secure verifiable non-interactive oblivious transfer protocol using RSA and bit commitment in a distributed environment", Soongohn Kim et al. analyze the basic concept of an OT (Oblivious Transfer) protocol for exchanging secret information fairly, survey the basic idea of an interactive and secure non-interactive OT protocol, and present a new non-interactive type of OT protocol which is verifiable. The amount of traffic of transferring information of the suggested method is less than or equal to that of the conventional interactive method.

The paper "Structure design and test of an enterprise security management system with advanced internal security" by Seoksoo Kim et al., analyzes existing enterprise security management systems and, on the basis of the results, proposes and tests an enterprise security management system with reinforced internal security. For the test, the authors used a firewall through log analysis and designed Intranet work using a virtual IP system.

J. H. Abawajy proposes a new two-level adaptive space-sharing scheduling policy for non-dedicated heterogeneous commodity-

based high-performance clusters. Using trace-driven simulation, the performance of the proposed scheduling policy is compared with those of existing adaptive space-sharing policies. Results of the simulation show that the proposed policy performs substantially better than the existing policies.

Yun Ji Na, et al., in the paper "A multilayered digital content distribution using a group-key based on the Web", focused on designing a security technique for each group in a multilayered structure, on a caching technique, which is based on this security technique, and on improving the user's response speed. And the authors implemented the prototype and verified the performance of the proposed system through testing.

The paper "A mechanism for grid service composition behavior specification and verification", by Jing Zhou and Guosun Zeng, constructs an interactive behavior model for grid service composition and specifies the interactive behavior using Cpi-calculus. The case study shows that the mechanism for grid service specification and verification could be the algebraic foundation to be used afterwards in automatic and dynamic composition.

Finally, we would like to express our sincere appreciation to all the authors for their valuable contributions and also to the referees for their cooperation and hard work in reviewing the papers in a timely and professional manner.

* Corresponding author. Tel: +82 42 629 8373, +82 10 6253 4800 (Mobile); fax: +82 42 629 8383.

E-mail addresses: taihoonn@empal.com, taihoonn@hannam.ac.kr (T.-h. Kim), wfang@mail.nctu.edu.tw, dr.wfang@gmail.com (W.-c. Fang).