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Preface

Dear Friends and Guests,

The Organizing Committee of IWISA 2009 warmly welcomes you to the 2009 International Workshop on Information Security and Application, held on November 21 - 22, 2009 in Qingdao, China. IWISA2009 is sponsored by Shandong Institute of Automation, and co-organized by Computer Engineering Institute of Qingdao Technological University and Trent University, Canada.

It is the first time for the conference which features the theme IWISA to be held in Qingdao, China. The Workshop aims to report the results of research efforts in a broad range of Information Security and Its Application. The workshop is also aimed at discussing with all of you the wide range of problems encountered in present and future high technologies.

This proceeding includes the fully refereed papers presented at the workshop. The main workshop themes are Information Security and its application. The workshop aims to bring together researchers, scientists, engineers, and practitioners to exchange and share their experiences, new ideas, and research results about all aspects and discuss the practical challenges encountered and the solutions adopted. The main goal of the event is to provide international scientific forums for exchange of new ideas in a number of fields that interact in-depth through discussions with their peers from around the world.

IWISA2009 has solicited and gathered technical research submissions related to all aspects of the two major themes. All the submitted papers in the proceeding have been peer reviewed by the reviewers drawn from the scientific committee depending on the subject matter of the paper. After the peer-review process completed, the submitted papers were selected on the basis of originality, significance, and clarity for the purpose of the workshop. Hopefully, the selected and presented papers as well as the keynote speeches will inspire all participants for further interesting research work.

We would like to thank all program members involved in organizing this workshop for their hard and wonderful work. Thanks also go to the Academy Publisher, for their wonderful editorial service to this workshop proceeding.

We are also grateful to all those who have contributed to the success of IWISA 2009. We hope that all participants benefit scientifically from the proceedings and also find it inspiring in the process. Finally, we would like to wish you success in your technical presentations and social networking.

We hope you have a unique, rewarding and enjoyable time at IWISA 2009 in Qingdao, China.

With our best regards,

IWISA 2009 Organizing Committees
21 - 22 November 2009 in Qingdao, China

Message from the General Chairs

This is the proceedings of 2009 International Workshop on Information Security and Application, organized by Computer Engineering Institute of Qingdao Technological University, China, Trent University, Canada and Shandong Institute of Automation, China

The conference received 365 papers which come from 3 countries. A total number of 170 papers are selected for the proceedings by the conference scientific committee through referee review.

The selected papers cover various areas in Information Security and Applications, and some related areas in computer graphics, virtual reality, image processing, information hiding and digital watermarking, network information theory, data compression, coding, intrusion detection technology, and intelligent control theory, etc.

With the global movement toward information age, security concern has increased. IWISA2009 is the 1st International Workshop on advances in theory, systems, and applications for all information security. The aim of this workshop is to encourage activities in this field, bring together researchers with information security, share ideas, and promote the security technology. Participants of the workshop will hear from renowned keynote speakers including: Prof. Alagar from Montreal University, Canada and Prof. Wenying Feng, from Trent University, Canada.

We are very grateful to all those who have contributed to the success of IWISA 2009. We hope that all participants benefit scientifically from the proceedings and also find it inspiring in the process. Finally, we would like to wish you success in your technical presentations and social networking.

We hope you have a unique, rewarding and enjoyable time at IWISA 2009 in Qingdao, China.

With our best regards,

IWISA 2009 Workshop Co-General Chairs:

Professor Tiejun Zhao

Vice president of Qingdao Technological University, China

Lei Jia

President of Institute of Automation Shandong Academy of Sciences

Assistant President of Shandong University, China

21 - 22 November 2009 in Qingdao, China

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Keynote Speech

Dependable Development of Service-Oriented Systems

Vasu Alagar

Department of Computer Science and Software Engineering
Concordia University, Montreal, Quebec, Canada

Abstract

In this talk we give a quick overview of our current research on Dependable Service-oriented Systems Development. In particular we show how dependability criteria can be specified within a component-based service-oriented architecture (SOA) and a framework (DF) can be built to support a rigorous development of dependable service-oriented applications.

What is new? The concept of service-oriented architecture is known for a long time. However, its current status is not sufficiently mature to develop dependable systems that we need today. The new features that we need are the following:

- A. formal definition of *service*,
- B. formally defining *dependability attributes for a service*,
- C. formalizing *dependable components and systems composed with components*,
- D. formally defining a *contract for service*,
- E. formal definition of *context-based service*,
- F. formal definition of *architecture incorporating the above concepts with contexts and contracts*,
- G. the development of *tools* that are necessary to achieve and certify high assurance of dependability through development, deployment and maintenance phases, and
- H. *a process* for an orderly linking of activities and use of these tools to create a framework for the development of dependable service-oriented systems.

Biography

Dr. Alagar graduated from McGill University, Montreal in 1975 with a Ph.D. degree in Computer Science. He joined Concordia University, Montreal in 1975 and currently is a Professor Emeritus in the Faculty of Engineering and Computer Science. He has more than 120 research publications, graduated many Ph.D. students, chaired International Conferences and Workshops, and served on the Editorial Committee of journals. He is the author of two books and has edited five others. His current research interest is in Trustworthy Computing Systems Development.