EDITORIAL

Editorial

Ngoc Thanh Nguyen

It is my honor to present the inaugural issue of *Vietnam Journal of Computer Science* (VJCS), published by Springer. VJCS is a new international journal addressing all subdisciplines of computer science, with a particular emphasis on information systems and knowledge engineering, artificial intelligence, soft computing including computational intelligence, agents and multiagent systems, Web intelligence, and optimization. VJCS is a peer-review and archival journal serving the academic research community by publishing high-quality scientific articles that present methods, techniques, tools, implementations, and applications of research. VJCS welcomes also articles that highlight advances in the use of computer science methods and technologies for solving tasks in management, industry, engineering, administration, and education.

VJCS tries to be an effective element in promoting and supporting the development of computer science research in Vietnam and the world. Although there are many journals related to computer science topics, the *Vietnam Journal of Computer Science* will be characterized by international aspects, the high quality of papers, Open Access, and the fact that publication in it is free of charge for all authors.

The inaugural issue of VJCS consists of six invited papers from reputable international computer science researchers. It can serve as a sample for future VJCS issues in terms of qualify and standard.

The issue starts with the article entitled "*Big Data as the New Enabler in Business and Other Intelligence*" by Gottfried Vossen, in which a valuable review of the issues, techniques, and applications of Big Data, with an emphasis on future business intelligence architectures, is included. The

author presents an interesting and useful analysis of technologies for handling Big Data, which is a new and very dynamic subfield of Data Engineering.

The next article, entitled "*DC Programming in Communication Systems: Challenging Problems and Methods*", by Le Thi Hoai An and Tao Pham Dinh, deals with a novel technique for optimization, named "Difference of Convex Programming". It tries to show that many challenging problems in computer science can be modeled using DC programs and solved by DC-based algorithms. The authors offer to the community of computer science researchers several promising approaches for various applications such as routing, power control, congestion control of the Internet, and resource allocation in networks.

In the third article, with the title "*Paraconsistent Process Order Control*", Kazumi Nakamatsu and Jair M. Abe propose a framework for paraconsistent process order control, which is based on a paraconsistent annotated logic program called "Before–After Extended Vector Annotated Logic Program with Strong Negation" with a small example of pipeline process order verification. This approach is very useful for many practical applications where conflict resolution must be handled.

The fourth article is by Hoang Pham, with the title "*Loglog Fault-detection Rate and Testing Coverage Software Reliability Models Subject to Random Environments*". It presents two new software reliability models with considerations of the fault-detection rate based on a Loglog distribution and with the testing coverage subject to the uncertainty of the operating environments. The author discusses also a method, called normalized criteria distance, to show ways to rank and select the best model among software reliability growth models satisfying all defined criteria.

In the next article, "*Feature Selection and Replacement by Clustering Attributes*", Tzung-Pei Hong et al. present an

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approach for selecting features based on attribute clustering, an important problem for indexing datasets. This method enables to find useful and relevant features from an original feature space, which can effectively characterize big sets of data. The method can be very useful for solving classification and clustering problems in which the training datasets are very large.

The last article, entitled "*WORL: A Nonmonotonic Rule Language for the Semantic Web*", by Son Thanh Cao, Linh Anh Nguyen and Andrzej Szalas develops a new Web ontology rule language, called WORL, which combines a variant of OWL 2 RL with eDatalog. This language contains such additional features like negation, minimal number restriction, and unary external checkable predicates. Well-founded semantics and stable model semantics for WORL are also presented. This approach can be very useful in ontology representation.