



# CALL FOR PAPERS

## Information Sciences

### (SCI Impact Factor: 2.147)

**SPECIAL ISSUE ON**

**Data Mining for Software Trustworthiness**

As the modern society becomes increasingly dependent on software, the cost and consequences of software failures become more and more serious. How to develop software systems that can be justifiably trusted is considered a critical issue by academia, government, and industry. In the National Software Strategy Steering Group's 2005 report - *Software 2015: A National Software Strategy to Ensure U.S. Security and Competitiveness*, *software trustworthiness* is listed as one of the four most important focuses of future research. The National Science Foundation funded about USD 150 million in projects related to Software Trustworthiness and the National Science Foundation of China (NSFC) funded CNY 150 million (about USD 22 million) in the Fundamental Research on Trustworthy Software Program.

Data mining and knowledge discovery (DMKD), which develops methods, algorithms, and techniques to extract useful information from huge amounts of data, emerged in 1990s and grew rapidly since then. Data mining techniques, such as classification, association, and clustering, can be used to analyze different types of software engineering data to assist substantially in building software trustworthiness. Data mining for software trustworthiness has been an active research area in the past decade. Many data mining methods, techniques, and tools have been developed to support various aspects of software development, including software design, programming, testing, deployment, and maintenance. Although there are successful cases, the complexity in building software trustworthiness requires specialized data mining methods and techniques.

This special issue seeks articles from researchers and practitioners from all related disciplines, and it will focus on theoretical and practical issues about data mining for software trustworthiness. Topics of interest include (but not limited to) the following:

- Data mining for software trustability analysis
- Measurements and models for software trustworthiness
- Data mining techniques for software programming, debugging, testing, and maintenance
- Data mining and knowledge discovery in software engineering

### Important Dates

- 1. Dec 31, 2009: Submission Deadline.**
- 2. Mar 30, 2010: First round referee reports to the authors.**
- 3. Jun 30, 2010: First submission of the revised papers.**
- 4. Sep 30, 2010: Second round referee reports to the authors.**
- 5. Dec 31, 2010: Submission of the final revised papers.**
- 6. Jan 10, 2011: Final Paper Acceptance/Rejection Notice.**

Papers will be evaluated on their merits, depth of knowledge, application in industry, contribution to the field, suitability to the special issue, and overall quality.

To prepare their manuscript, authors should closely follow the “*Guide for Authors*” that is presented in the *Information Sciences* website

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Manuscripts will be strictly refereed based on the standards of the *Information Sciences*, An International Journal.

The Special Issue’s submission, review and decision process is managed entirely online using the Elsevier Editorial System <http://ees.elsevier.com/ins/>. During the submission, please choose article type as “**Spec.Iss.:Software Trustworthiness**”, when you reach the “Please Select an Article Type” step of the submission process.

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<p><b>Dr Gang Kou</b>  <b>Managing Guest Editor</b>          Professor          School of Management and Economics          University of Electronic Science and Technology of China          No 4, Sec 2, North Jianshe Rd          Chengdu, P.R. China, 610054          Tel: +86-15982498501          Fax: +86-28-83208808          E-mail:  <a href="mailto:kougang@uestc.edu.cn">kougang@uestc.edu.cn</a></p>	<p><b>Dr Yong Shi</b>          Professor          Graduate University of Chinese Academy of Sciences, China          No 80 Zhongguancun East Rd,          Haidian District, Beijing 100080, China          Tel: +86-13501093251          Fax: +86-10-82680684          E-mail: <a href="mailto:yshi@gucas.ac.cn">yshi@gucas.ac.cn</a>          And          Charles W. and Margre H. Durham Distinguished Professor          University of Nebraska at Omaha, USA          282 D PKI          College of Information Science and Technology          Omaha, Nebraska 68182-0572 USA          Phone: +1 (402) 554 - 3652          Fax: +1(402) 554 - 3400          Email:  <a href="mailto:yshi@mail.unomaha.edu">yshi@mail.unomaha.edu</a></p>	<p><b>Dr Guozhu Dong</b>          Professor          Dept of Computer Sci &amp; Engr          Wright State University          3640 Colonel Glenn Hwy.          Dayton, OH 45435-0001          USA          Phone: ++1(937)775-5066          Fax: ++1(937)775-5133          Email:  <a href="mailto:guozhu.dong@wright.edu">guozhu.dong@wright.edu</a></p>
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