

**IEICE/IEEE Joint Special Section on  
Autonomous Decentralized Systems Technologies and Their Application to Networked Systems**

The IEICE Transactions on Communications and Transactions on Information and Systems announce a forthcoming IEICE/IEEE Joint Special Section on "Autonomous Decentralized Systems Technologies and Their Application to Networked Systems" to be published in **January 2011**.

The Autonomous Decentralized Systems (ADS), born in Japan 30 years ago, have technologically evolved in communication networks, information systems, and control systems. It has been applied in many actual systems, and it has progressed in standardization activities. IEICE and IEEE published joint Special Sections on "Autonomous Decentralized Systems" in May 2000, October 2001, December 2005, and September 2008 cooperating with the International Symposium on Autonomous Decentralized Systems (ISADS). However, after that, ADS technology has been making drastic improvement, and innovative new research is being reported successively.

Recently, assurance systems are widely noticed as new system technology. Assurance system yields synergistic effects by cooperation of heterogeneous systems, which satisfy heterogeneity of requirements and adaptability to change of circumstances. Research meeting on Assurance System has been started in June 2000 under the Technical Group on Dependable Computing. In the United States, IEEE, DARPA, industries and universities established High-Assurance Systems Engineering Symposium (HASE). In July 2002 some members from Technical Group on Information Networks and Technical Group on Dependable Computing founded the International Workshop on Assurance in Distributed Systems and Networks (ADSN). The first ADSN was held in July 2002, and the workshop was finally held. In addition, the 9<sup>th</sup> ISADS 2009 was held at Athena in Greece in March 2009. It is very challenging to realize Assurance Systems with conventional Fault Tolerance Technology and High Reliability Technology. Hence, ADS is expected to be promising as the core technology for Assurance Systems substituting conventional technologies.

The objective of this Special Section is to discuss new technologies in the field of Autonomous Decentralized System through papers. The Special Section solicits paper submissions not only from people who presented new technologies in the International Symposium on Autonomous Decentralized Systems (ISADS 2009) in March 2009 but also from people who are interested in this field.

**NOTE: The same paper presented in ISADS 2009 cannot be accepted because IEEE owns the copyrights to all papers in the conference proceedings. If it was originally appeared in ISADS2009, the submitted paper has to be revised substantially. It must have a different title and contain new results opening up new vistas. In this case, it is required to place a footnote indicating it clearly, for example, "This work is based on "(full title)", by (authors' names) which appeared in Proc. IEEE International Symposium on Autonomous Decentralized Systems (ISADS 2009), Athena Greek, March 2009, ©2009 IEEE." The accepted papers in this IEICE/IEEE Joint Special Section will be published in IEICE Transactions Online, but not included in the IEEE Xplore.**

1. Interesting topics

- Autonomous decentralized systems, Autonomous decentralized control;
- Information service system architecture; Heterogeneous distributed information / control systems;
- Mobile ad hoc networks, Sensor networks, P2P;
- Intelligent network, The Internet, Ubiquitous network; Mobile agents, computer-supported cooperative works;
- Fault tolerance, on-line expansion and on-line maintenance; Distributed software development and maintenance;
- Object management architecture / design pattern / application framework;
- Novel applications: electronic commerce, production systems, supply chain management, intelligent transport systems, traffic and transportation control, aerospace systems, logistics systems, medical systems, electronic government, Cyber-physical system, etc.

2. Papers submission and process

The submitted papers will be reviewed by referees according to the ordinary rules of the Editorial Committee. Manuscript should be prepared according to the guideline in the "Information for Authors". The latest version is available at the web site, [http://www.ieice.org/eng/shiori/mokuji\\_cs.html](http://www.ieice.org/eng/shiori/mokuji_cs.html). The length of the paper should be within eight printed pages for a PAPER and two printed pages for a LETTER in principle. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for other issues (60 days) because of the tight review schedule. In this special section, electronic submission is adopted. Prospective authors are requested to follow carefully the submission process described below.

1. Submit a manuscript and electronic source files (TeX/Word files, figures, authors' photos and biography) for publishing using the IEICE Web site [https://review.ieice.org/regist\\_e.aspx](https://review.ieice.org/regist_e.aspx). Authors should choose the [Special-EB] or [Special-ED] Autonomous Decentralized Systems Technologies and Their Application to Networked Systems as a "Type of Issue (section) / Category of Transactions" on the online screen. Do not choose [Regular-EB] or [Regular-ED].

2. "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" must be sent by E-mail, FAX, or postal mail to the following address (the secretary of this section) by the above due date. There is a possibility that we shall withdraw the manuscript without receiving them by the deadline, even if we have received the manuscript by electronic submission.

\* Authors select the transaction that carries the paper. Editorial committee, however, may change it.

3. Submission Deadline **April 25, 2010 (Hard deadline)**

4. Mailing and/or inquiry

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\* Please note that if accepted, all authors, including authors of invited paper, are requested to pay for the page charges covering partial cost of publications. Authors will receive 50 copies of reprints.

\* At least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception. We recommend that authors unaffiliated with IEICE apply for membership. For membership applications, please visit the web-page, <http://www.ieice.org/eng/member/OM-appli.htm>