2010 ITEA Journal *Themes*

The ITEA Publications Committee has established themes for the 2010 issues of *The ITEA Journal* and invites articles in the following areas:

The Role of T&E in Systems Engineering (March issue). Systems engineering is the engineering of complex systems and is intrinsically multi-disciplinary just as test and evaluation (T&E) are. Systems engineers, with their broad view of a program, are in a unique position to diagnose problems in the event of system failure. In T&E the operational requirements of a system must be decomposed to technical requirements and a strategy developed for measuring parameters that can lead back to assessment of mission performance. Systems engineering supplies the process and tools and along with integrated testing is the foundation for future T&E. Integrated testing is the collaborative planning and collaborative execution of test phases and events to provide shared data in support of independent analysis, evaluation, and reporting by all stakeholders. The purpose of integrated testing is to identify system deficiencies early, comply with accelerated schedules, and reduce cost. Design of experiments enables an efficient test design considering all key factors and conditions affecting performance. This issue examines all aspects of systems engineering as well as design of experiments; T&E workforce and training; verification, validation, and accreditation; standards, metrics, data, analysis, and more. ***(Manuscript deadline: December 1, 2009)***

User-Centric Systems (June issue). Systems of systems and network-centric systems are viewed as force multipliers deriving from the mutual connectedness of the elements and the perceived value of timely, critical information. Yet the right information provided to the right person at the right time does not guarantee success. The human is the key and in emerging complex systems of systems the human is more than an operator, and instead is part of the system, a node in the network. Testing a system includes objectively testing the user and requires characterizing human performance. Systems can become so complex that training the user to operate them is no longer possible; rather the systems must be designed with human limitations in mind. This issue examines cognitive performance and measures in addition to traditional form, fit, and function; instrumentation; personal protective equipment; human-machine integration; and situation awareness. ***(Manuscript deadline: March 1, 2010)***

Simulation – Where is T&E Today? (September issue). Simulation is not new and is known by terms such as modeling & simulation and live-virtual-constructive simulation. In one form or another it has been around T&E for more than 20 years and spawned simulation-based acquisition in the Department of Defense, simulation-based design in industry, and a host of other initiatives and hopes. Yet the predictions and expectations have not been realized and the capabilities are often oversold. Where is simulation today in the business of T&E? What has prevented realizing the full power of simulation, what needs to change, or have we arrived already? This issue looks at simulation past, present, and future in T&E and addresses technology, policy, history, success stories, and lessons learned; as well as simulation experience in operational testing, training, design, and other applications. ***(Manuscript deadline: June 1, 2010)***

Cyberspace Test and Evaluation (December issue). Cyberspace is the fifth combat domain, beyond air, land, sea, and space and is the realm of computers, networks, and software. The terrain of cyberspace is not physical but is virtual and ever in flux as network topology and system connectivity dynamically change. In the Department of Defense (DoD) the importance was recognized by creation of cyber commands. Beyond the DoD, cyberspace encompasses commercial networks, the communications industry, power distribution, commerce, transportation, and nearly everything that touches our lives and business today. Systems and networks are subject to continual attacks including spam, phishing, viruses, Trojan horses, worms, root kits, spyware and other malware, and distributed denial of service. Cyber-crime is multi-jurisdictional and spam is being replaced by scam. This issue looks at cyber-infrastructure, data-driven security, information assurance, information operations, electronic warfare, network electronic attack, and other cyber-threats and defenses. ***(Manuscript deadline: September 1, 2010)***

In addition: T&E articles of general interest to ITEA members and *ITEA Journal* readers are always welcome. Each Issue includes specialty features, each 2-3 pages long: **"Featured Capability"** describes unique, innovative capabilities and demonstrates how they support T&E; **"Historical Perspectives"** recall how T&E was performed in the past, or a significant test or achievement, often based on personal participation in the "old days" of T&E.; **"TechNotes"** discusses innovative technology that has potential payoff in T&E applications or could have an impact on how T&E is conducted in the future. **Interested authors**: should submit contributions to the **ITEA Publications Committee Chairman (itea@itea.org, attn.: Dr. J. Michael Barton)**. Detailed Manuscript Guidelines can be found at **www.itea.org** under the ITEA Publications tab.