2012 NASA IV&V Workshop Call for Papers

The 4th International Workshop on Independent Validation & Verification of Software

http://www.nasa.gov/centers/ivv/workshops/index.html

West Virginia University's Erickson Alumni Center
Morgantown, West Virginia, USA

September 11- 13, 2012

The NASA IV&V Facility and its affiliates are pleased to host this year's NASA Independent Validation and Verification Workshop. The IV&V Annual Workshop offers an in-depth understanding of the challenges that V&V organizations face in assuring that system software operates safely and reliably. The goal of the workshop is to generate solutions to these challenges.

TOPICS

Feasibility studies
IV&V of early lifecycle artifacts
Reliability Engineering

Service oriented requirements engineering
Requirements Engineering
Software dependability
Software Quality
Requirements quality

Agent architectures, ontologies, languages and protocols
Multi-agent systems
Integrity, Security, and Fault Tolerance
Service oriented architectures
Partitioned systems
Fault Tolerance

Design completeness, correctness
Designing for Performance

Software Interfaces
Data integrity

Software Reuse
Generated Software
Static Analysis

Static and dynamic testing
Cost effective software based test environments
Certified Test Environments
Software Test Programs
Test Oracles
Verifying scripts
Operational readiness

Knowledge Representation and Retrieval
Knowledge Engineering Tools and Techniques
Knowledge Visualization
Data visualization
Learning Software Organization
Software Assurance
Software Domain Modeling and Meta-Modeling
IV&V as an explicit risk reduction strategy
Architecture frameworks as applied to NASA systems
Applying social media to IV&V
Software Engineering Decision Support
Software Maintenance and Evolution
Software Process Modeling
Application of Data Mining tools to support IV&V
Modeling and simulation
New technologies for IV&V

Off-nominal operations
Documenting critical systems
Anomaly work-around
System recovery

NASA systems engineering processes
Computing the value of IV&V
Management and Planning of Independent Verification and Validation
Issue and Risk Tracking
Criticality Analysis

Interface agents
Mobile agents
Mobile Systems
Autonomic computing
Adaptive Systems
Enterprise Software, Middleware, and Tools
Service-centric software engineering
Embedded and Ubiquitous Software Engineering
Knowledge Acquisition
Human-Computer Interaction
Pervasive Computing
Swarm intelligence
Commercial Space
Software Safety
Software Security
Robotic systems
Automotive

DOD
FAA
Security
Law Enforcement
Power Generation and Distribution
Software based hazard causes, contributors, and controls
Security threats and risks
Reactive Systems
Complex algorithms
Disaster Recovery planning

Agent-based software engineering
Artificial Intelligence Approaches to Software Engineering
Component-Based Software Engineering
Automated Software Specification
Automated Software Design and Synthesis
Computer-Supported Cooperative Work
Measurement and Empirical Software Engineering
Programming Languages and Software Engineering
Patterns and Frameworks
Reflection and Metadata Approaches
Program Understanding
Transitioning NASA experience to non-space domains
The future of software development and its impact on IV&V
Software product lines
Improving effectiveness and efficiency of IV&V methods
Team-based approach to performing IV&V of systems
IV&V Challenges and Opportunites of SLDC Choices

NASA systems engineering processes
Management and Planning of Independent Verification and Validation
Issue and Risk Tracking
Criticality Analysis

WORKSHOP SITE

The IV&V Annual Workshop will be held at the WVU Erickson Alumni Center in Morgantown, West Virginia, USA. http://alumni.wvu.edu/eac

INFORMATION FOR AUTHORS

Abstracts must be written in English. An electronic (PDF or MS Word format) should be submitted via email to Sadie.E.Downs@nasa.gov.

IMPORTANT DATES

March 15, 2012	*Abstract submission due*
April 2, 2012	*Notification of Acceptance*
June 1, 2012	*Attendee Registration opens*
July 1, 2012	*Sponsorship registration deadline*
August 31, 2012	*Attendee Registration closes*

POINTS OF CONTACT

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