Missouri S&T — University of Science & Technology

Distinguished Seminar IEEE & Computer Science

Where the Rubber Meets the Code – Static Code Analysis for Software Assurance in the Acquisition Life Cycle

Dr. Paul Croll, Computer Sciences Corporation

Nov 8th Tuesday, 12:30 to 1:30pm

Turner Room @ Havener Center

Abstract - Finding vulnerabilities in code through product testing is often too little, too late. Static code analysis addresses weaknesses in program code that might lead to vulnerabilities and affords the opportunity to uncover such weaknesses early in and throughout the life cycle. Such analysis may be manual, as in code inspections, or automated through the use of one or more tools. Automated static code analyzers typically check source code but there is a smaller set of analyzers that check byte code and binary code, especially useful when source code in not available (e.g for COTS components).

This presentation describes current state of practice in static code analysis for software assurance and makes recommendations regarding use of static analysis methods and tools during acquisition life cycle.

Brief Bio - Paul Croll is the current IEEE Computer Society Vice President for Technical and Conference Activities, and a Fellow in CSC's Defense Group where he is responsible for researching, developing and deploying systems and software engineering practices, including practices for cybersecurity. Paul has over thirty-five years experience in mission-critical systems and software engineering. His experience spans the full life cycle and includes requirements specification, architecture, design, development, verification, validation, test and evaluation, and sustainment for complex systems and systems-of-systems.

Paul was most recently Chair of the Technical Council on Software Engineering and is also the current Chair of the IEEE Software and Systems Engineering Standards Committee. Paul is also the past Chair and current Vice Chair of the ISO/IEC JTC1/SC7 U.S. Technical Advisory Group (SC7 TAG). Paul is a Senior Member of the IEEE and a member of the Computer Society's Golden Core.