



**Hidden software defects may be costing you money, damaging your reputation, and exposing you to major security problems**

**“\$59.5 Billion wasted! The U.S.Gross Domestic Product [GNP] loses 0.6% a year because of software defects.”**

*M. Windholz, [www.objectwind.com](http://www.objectwind.com)*

**“About 40 to 50 percent of user programs contain non-trivial defects.”**

*IEEE Computer, January, 2001*

**“Eighty-five percent of all security problems can be placed in the category of failing to defend against hostile input’... in many cases, the defense [simply involves] avoiding... mistakes that have already been identified and are well known...mistakes [that are] committed over and over...”**

*ww.sei.cmu.edu/news –at SEI Center for Project Management*

**To reduce these risks, you need a cost-effective approach for “Validating and Verifying” the software your developers produce**

**Carroll University’s Masters level Software Validation and Verification course\*\* (one night per week) provides the basic training your developers need to minimize software defects without adding unnecessarily to development costs.**

**The course includes lectures, readings, examples, and case studies that communicate the essential concepts of software Validation and Verification; your developers will be taught:**

- The importance of V&V *throughout* software development
- That V&V is about both *defect avoidance & defect elimination*
- The Levels and Types of V&V
- The V&V approaches that might be considered for each Level Type combination
- The deliverables, resources, and processes that drive V&V
- The economic trade-offs re: V&V

**Our course instructor has formal training, industry certification, and nearly forty years experience in the Project Management (P.M.) of small, large, and very large software development efforts**

- He holds a Masters in Business Administration from The University of Chicago, CDP certification from the DPMA, and CQA certification from the Quality Assurance Institute
- He has served as Management Consultant, Testing Strategist or V&V Instructor for major corporations throughout the U.S.
- He has written or customized complete V&V Methodologies for several of those firms and has provided numerous in-house training classes for many of them
- He has been a Guest Speaker at numerous QAI Annual Test Management Conferences

\*\* (1) The three credits earned can be applied towards Master of Software Engineering degree or Certificate in Software Engineering. (2) The course fee is \$1275 for the academic year 2008-2009