



21st Stevens Lecture on Software Development Methods

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Contact: Elliot Chikofsky, EM&I
tel +1 (781) 272-0049, e.chikofsky@computer.org

Philip Newcomb to Receive the 21st Stevens Award

Burlington, MA, USA -- Philip H. Newcomb has been named as the 21st recipient of the international [Stevens Award](#).

The award presentation will take place on **Tuesday morning, 18 October 2011** in Limerick, Ireland, as a keynote plenary session of the **18th Working Conference on Reverse Engineering (WCRE)**, sponsored by the Reengineering Forum industry association with technical co-sponsorship by IEEE, the Institute of Electrical and Electronics Engineers.

The international **Stevens Award** was created to recognize outstanding contributions to the literature or practice of methods for software and systems development. The lecture presentations focus on lessons learned and challenges, with an emphasis on advancing or analyzing the state of software methods and their direction for the future.

This prestigious award lecture is named in memory of **Wayne Stevens** (1944-1993), a highly-respected consultant, author, pioneer, and advocate of the practical application of software methods and tools. His 1974 *IBM Systems Journal* article "Structured Design" was the first published on the topic and has been widely reprinted. Stevens was the author of the books: *Software Design: Concepts and Methods* (Prentice-Hall Intl, 1991) and *Using Structured Design* (Wiley, 1981). His last article "Data Flow Analysis and Design" appears in the *Encyclopedia of Software Engineering* (Wiley, 1994). Stevens was the chief architect of application development methodology for IBM's consulting group.

Philip H. Newcomb

A principal leader in architecture-driven reengineering and modernization, **Philip Newcomb** has been instrumental in both research and development and commercialization of automated renovation methods and tools. His dedicated work has advanced the application of AI- and rule-based technologies for reverse engineering, architecture reassessment, testing, and redevelopment, providing innovative products and services for reliable reengineering of mission-critical and high assurance systems.

Philip Newcomb is founder, Chief Executive Officer, and chairman of **The Software Revolution, Inc. (TSRI)**, which has successfully completed more than 85 automated modernization projects in diverse areas such as satellite command and control, strategic warfare planning, ballistic missile early warning,



health care, logistics, and engineering operational sequencing. Over the last 30 years, Mr. Newcomb has contributed at the intersection of the fields of reverse-engineering, automatic programming and formal methods with more than 35 technical publications. His latest book, **Information System Transformation: Architecture-Driven Modernization** with William Ulrich, was published by Morgan-Kaufman in 2010. He is an active contributor to the Object Management Group (OMG) task force defining industry-based modeling standards and best practices for Architecture Driven Modernization. He was a research scientist at Boeing's Artificial Intelligence Laboratory for 12 years before founding TSRI in 1994.

This award and Mr. Newcomb's keynote address at the WCRE conference recognize and celebrate the deployment of the generated Java version of the Eurocat air traffic management system by Thales Air Systems at Shannon Airport, Ireland, in April 2011. Prof. James Buckley of Lero, the Irish Software Engineering Research Centre, notes that "This 2011 milestone represents a major breakthrough in the acceptance of reverse and reengineering technologies and automated transformation in a large-scale safety-critical and highly-regulated industry."

Previous Stevens Award Recipients

The 20 prior recipients of the Stevens Award are:

- **Barry Boehm** (2011), leader in the understanding of software engineering processes, economics, and management (USA);
- **Jared Spool** (2011), advocate of software usability and the practical outcomes of methods and tools (USA);
- **Peter Aiken** (2010), evangelist of data reengineering for data-focused methods (USA);
- **Watts Humphrey** (2010), leader on software engineering process for organizations, teams, and individuals (USA);
- **Larry Constantine** (2009), pioneer of structured methods, quality metrics, interaction design (USA);
- **Harry Sneed** (2008), for his leadership in the principled growth of software maintenance techniques and their industrialization (Germany);
- **Nicholas Zvegintzov** (2007), leader in the practice and understanding of software maintenance (USA);
- **Grady Booch** (2006), for leadership in object-oriented analysis and Unified Modeling Language (UML) development (USA);
- **Mary Shaw** (2005), instrumental in the foundations of software architecture and software engineering education (USA);
- **Jim Highsmith** (2005), advocate of agile and adaptive methods in software development and project management (USA);
- **François Bodart** (2004), research leader in practical applications of systems development technologies (Belgium);
- **Manny Lehman** (2003), authority on software evolution (United Kingdom);
- **Cordell Green** (2002), founder and chairman of Kestrel Institute (USA);
- **Peter Chen** (2001), advocate of entity-relationship modeling (USA);
- **Gerald Weinberg** (2000), noted author on understanding how people and software technology work together (USA);
- **Tom DeMarco** (1999), principal of Atlantic Systems Guild and noted authority on software project management, methods, and people processes (USA);
- **Tom McCabe** (1998), software metrics expert and creator of cyclomatic complexity analysis (USA);
- **Michael Jackson** (1997), creator of the Jackson Software Development methods (United Kingdom);
- **David Harel** (1996), professor at the Weizmann Institute of Science (Israel) and founder of i-Logix and the Statemate toolset; and,
- **Tony Wasserman** (1995), founder of Interactive Development Environments and researcher on software tools (USA).

The Stevens Award and lecture is managed by the Reengineering Forum (REF) industry association. The award

was founded by IWCASE, an international workshop association of users and developers of Computer Aided Software Engineering (CASE) technology, recently merged into REF. Stevens was a member of the IWCASE executive board.

Reference web sites:

Stevens Award: <http://reengineer.org/stevens/>

WCRE conference: <http://www.cs.wm.edu/semeru/wcre2011/>

Lero: <http://www.lero.ie/>

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Reengineering Forum industry association
P.O. Box 400, Burlington, MA 01803 USA
+1 (781) 272-0049

stevens@reengineer.org

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