Short Vita **Richard Graham Hamlet** **October, 2010**

Education

Degree	*Institution*	*Year*	*Specialty*
B.S.	University of Wisconsin	1959	Electrical Engineering
M.S.	Cornell University	1964	Engineering Physics
Ph.D.	University of Washington	1971	Computer Science

Selected employment history

Employer	*Years*	*Position*	*Discipline*
Portland State University	2005-	Professor (emeritus)	Computer Science
National University of Ireland	2003-2004	E.T.S. Walton Fellow	Mathematics
Portland State University	1988-2005	Professor	Computer Science
Portland State University	1996-98	Chair	Computer Science
National University of Ireland	1998-99	Fulbright Scholar	Mathematics
University College, Galway	1996	Visitor	Mathematics
Oregon Graduate Center	1984-88	Professor	Computer Science
University of Maryland	1977-84	Associate Professor	Computer Science
University of Melbourne	1982	Visiting Lecturer	Computer Science
University of Maryland	1971-77	Assistant Professor	Computer Science
Computer Center Corporation	1968-69	Programming Director	
University of Washington	1966-68	Systems Supervisor	

Professional activities

Reviewer for ACM *TOSEM*, IEEE *TSE*.

General Chair ISSTA, Seattle, 1994.

Program committee, Component-based Software Engineering workshop (CBSE), 2002-2008.

Selected Grants

Source	*Description*	*Year*	*Amount*
E.T.S. Walton Fellowship, Science Foundation Ireland	Formal methods	2003-2004	Euro 120,000
National Science Foundation	Component reliability	2001-2006	$300,000
Oregon Reg. Strategies Board (with W. Harrison)	Testing Laboratory	1994-1995	$134,958
National Science Foundation	Testing foundations	1988-1990	$130,000
Renewal		1991-1993	$180,000
Air Force Office of Scientific Research	Logic programming	1986-1987	$47,000
Air Force Office of Scientific Research (with J. Gannon)	Data abstraction/testing	1979-1980	$52,000
Renewal (with V. Basili et al.)		1980-1985	$759,000

Research Interests

Theory of software engineering, particularly testing and specification theory; tools for software engineering; component-based software development.

Major Software Projects

Designed and implemented supporting tools for system synthesis from components, 2001-.

Designed and implemented system for prototyping testing tools, 1990-94.

(With John Gannon, Paul McMullin) Designed and implemented DAISTS compiler which tests specifications against implementations automatically, 1980-81.

(With R. Haralick) Designed and implemented transportable image-processing package, 1979-80.

Wrote compiler for the first "mutation" testing system, 1975-78.

Designed and wrote compiler for PDP-11 systems-implementation language, 1973-77.

Rewrote and maintained a timesharing/batch version of Burroughs B5500 MCP, 1967-70.

Representative Publications

1. *Composing Software Components: A testing-theory perspective,* Springer, August 2010, 368pp.
2. Tools and experiments supporting a testing-based theory of component composition, *ACM Trans. on Soft. Eng. Methodology* (May, 2009), Article 12, 40pp.
3. Software component composition: a subdomain-based testing-theory foundation, *J. Software Testing, Verification and Reliability* (December, 2007), 243-269.
4. Subdomain Testing of Units and Systems with State, Proceedings International Symposium on Software Testing and Analysis (ISSTA), Portland, ME, July, 2006, 85-96.
5. Defining 'predictable assembly', Proceedings 9th Symposium on Component-based Software Engineering (CBSE), Vasteras, Sweden, June, 2006, 320-327.
6. Invariants and state in testing and formal methods, Proceedings Program Analysis for Software Tools and Engineering (PASTE), Lisbon, September, 2005, 48-51.
7. Continuity in software systems, Proceedings International Symposium on Software Testing and Analysis (ISSTA), Rome, July, 2002, 196-200.
8. Axiomatically checking an implementation against its formal specification, (with S. Antoy), *IEEE Trans. Software Engineering* SE-26 (January, 2000), 55-69.
9. Evaluating testing methods by delivered reliability, (with P. Frankl, B. Littlewood, and L. Strigini), *IEEE Trans. Software Engineering* SE-24 (August, 1998), 586-601.
10. Implementing prototype testing tools, *Software--Practice & Experience,* April, 1995, 347-372.
11. Partition testing does not inspire confidence (with Ross Taylor), *IEEE Trans. Software Engineering* SE-16 (December, 1990), 1402-1411.
12. Theory of modules (with J. Gannon & H. Mills), *IEEE Trans. Software Engineering* SE-13 (July, 1987), 820-829.
13. Data abstraction implementation, specification, and testing, *TOPLAS* 3 (July, 1981), 211-223 (with J. Gannon & P. McMullin).
14. Reliability theory of program testing, *Acta Informatica* 16 (1981), 31-43.