

# Curriculum Vitae

Harry Halpin

Business Address:

Institute of Communicating and Collaborating Systems  
School of Informatics  
University of Edinburgh  
2 Buccleuch Place  
Edinburgh EH8 9LW  
Scotland, UK  
+44 (0) 131 650 4421  
email: hhalpin@ibiblio.org

## Degrees

**Ph.D. in Informatics** (Current) Expected Graduation: Oct 2007. Advisors: Henry S. Thompson and Andy Clark.

**MSc. in Informatics** with Honors. Major Specialism: Learning from Data. Minor Specialism: Natural Language Processing and Engineering. Thesis: “The Plots of Children and Machines: Statistical and Symbolic Analysis of Narrative Texts.” Advisor: Johanna Moore. Oct 2003. University of Edinburgh. (Best MSc. Prize)

**B.S. Mathematical Sciences (Computer Science)** with Honors and Highest Distinction. Minor in Cognitive Science. Thesis: “Models of Topic Segmentation: Computational, Cognitive, and Behavioral.” Advisor: Peter C. Gordon May 2001. University of North Carolina at Chapel Hill.

## Research Interests

**Topic:** For my Ph.D. thesis, I am currently investigating the foundations of Web architecture and a new approach to information aggregation via improved pipelining (called FunctionalXML) with Henry S. Thompson that combines colloquial XML and Web Services seamlessly within a single XML document, relying on the Semantic Web as a type theory and based on pure functional subset of Scheme. With Andy Clark, I am trying to articulate a “philosophy of the Web” that provides a lucid and clear definitions of terms commonly used in Web architecture. My programming languages of choice are Python, Java, and Perl, and I’m also using Lisp now. I do mostly XML and Web programming, and am also skilled in statistical machine-learning and natural language processing. I have some experience with PHP, SQL, and Matlab as well as content management systems.

**W3C Working Group Chair** for GRDDL (Gleaning Resource Descriptions from Dialects of Language) to standardize methods of transforming XML documents into Semantic Web data. Also represent the University of Edinburgh on the W3C Working Group for SA-WSDL (Semantic Annotations for Web Services Description Language).

Founded and organizes **Philosophy, Psychology and Informatics Reading Group** that meets bi-weekly at the Uni. of Edinburgh to discuss papers of broad relevance to artificial intelligence and surrounding fields.

Organization Chair of **Identity, Reference, and the Web Workshop at WWW 2006** with Pat Hayes. Bringing together researchers in artificial intelligence, history, anthropology, and philosophy with Semantic Web and Web specialists from industry.

Co-organizer of **Hack the Knowledge Lab: Technology, Creativity, Social Organisation** at the University of Lancaster, in particular of the hands-on computer technology session. Brought together cutting-edge open source developers with academics from various disciplines.

Organized the **Informatics Distinguished Speaker Series** for a number of famous speakers, from initial contact to the actual speaking engagement, including Richard Stallman, Tim Berners-Lee, and Pat Hayes. The talk by Richard Stallman was considered the most well-publicized and attended event within memory at the School of Informatics in Edinburgh, and attracted members of Scottish Parliament.

## Publications

### Papers

Harry Halpin (2006). **XMLVS: Using Namespace Documents for XML Versioning**. In *Proceedings of Extreme Markup Languages*, Montreal, Canada.

Harry Halpin (2006). **Towards a Philosophy of the Web**. In *Proceedings of the North American Computing and Philosophy Conference (NA-CAP 2006)*, Troy, USA.

Harry Halpin (2006). **One Document to Bind Them: Combining XML, Web Services, and the Semantic Web**. In *Proceedings of the World Wide Web Conference (WWW 2006)*, Sydney, Australia.

Harry Halpin (2006). **Identity, Reference, Meaning, and the Web**. In *Proceedings of the Identity, Reference, and the Web Workshop (IRW2006) at the World Wide Web Conference (WWW 2006)*, Edinburgh, UK.

Harry Halpin and Henry S. Thompson. (2006) **One Document to Bind Them: Combining XML, Web Services, and the Semantic Web**. In *Proceedings of the World Wide Web Conference (WWW 2006)*, Edinburgh, UK.

- Harry Halpin (2006) **Representationalism: The Hard Problem for Artificial Life**. Forthcoming in *Tenth Conference on Artificial Life (ALife X)*.
- Harry Halpin (2006) **Automatic Evaluation and Composition of NLP Pipelines with Web Services**. Forthcoming in *Proceedings of Language Resources and Evaluation of Corpora Conference (LREC 2006)*.
- Harry Halpin (2006) **Digital Sovereignty: The immaterial aristocracy of the World Wide Web**. Forthcoming in editor Ed Emery, *Immaterial Labor, Multitudes, and New Social Subjects: Class Composition in Cognitive Capitalism*, Cambridge, UK.
- Harry Halpin (2006) **Reinventing Technology**. Forthcoming in *Constituent Imagination*, editors S. Shukaitis and D. Graeber. AK Press: 2006.
- Fiona McNeill, Harry Halpin, Ewan Klein, and Alan Bundy (2006) **Merging Stories with Shallow Semantics**. Forthcoming in *Knowledge Representation and Reasoning for Language Processing Workshop at the European Association for Computational Linguistics (EACL) conference (KRAQ 2006)*, Genoa, Italy.
- Harry Halpin (2005). **The Semantic Web as Types, Web Services as Functions: Ten Points on a Semantic Framework for Web Services**. W3C Workshop on Frameworks for Semantics in Web Services Innsbruck, Austria.
- Harry Halpin (2005) **Rules: Enabling Data Integration using the Semantic Web**. In *W3C Workshop on Rule Languages for Interoperability*, Washington D.C., USA.
- Harry Halpin and Henry S. Thompson. (2005) **Web Proper Names: Naming Referents on the Web**. In *Proceedings of Semantic Computing Workshop of the World Wide Web Conference (WWW 2005)*, Chiba Japan.
- Harry Halpin (2005) **Examining the Architecture of the Web: Social Implications of a Universal Information Space**. *International Journal of Technology, Knowledge, and Society*.
- Harry Halpin (2004) **The Semantic Web: The Origins of AI Redux**. In *Proceedings of History and Philosophy of Logic, Mathematics, and Computation (HPLMC 2004)*, San Sebastien, Spain.
- Harry Halpin, Johanna D. Moore and Judy Robertson. (2004) **Automatic Analysis of Plot for Story Rewriting**. In *Proceedings of Empirical Methods in Natural Language Processing (EMNLP 2004)*, Barcelona, Spain.
- Claire Grover, Harry Halpin, Ewan Klein, Jochen L. Leidner and Richard Tobin. (2004) **A framework for text mining services**. In *Proceedings of the Third UK e-Science Programme All Hands Meeting (AHM 2004)*. Nottingham, UK.

**Teaching Experience**

- Independent Project**, University of Edinburgh (2004) with Phil Wadler. Marked assignments and dealt with students on Web Services project dealing with an implementation of the MIT Chord system.
- Language Semantics and Implementation**, University of Edinburgh (2004) with Gordon Plotkin and Colin Stirling. Tutored and marked assignments on formal programming language semantics for functional programming.
- Enterprise Computing**, University of Edinburgh (2004) with Stephen Gilmore. Tutored sections and marked assignments on XML, Java, and Javebeans.
- Database Systems**, University of Edinburgh (2003, 2004) with Peter Buneman. Marked assignments and helped grade final exams.
- Software Engineering with Components**, University of Edinburgh (2002) with Stuart Anderson. Tutored sections and marked assignments on UML and software design.
- Introduction to Programming**, Dept. of Computer Science University of North Carolina at Chapel Hill (2000). Helped teach an introductory course to college students in C++ through helping them create a video game. Created and graded homework assignments. Gave help sessions and substitute taught.

**Work Experience**

- Infoseed and Indymedia** (2002-onwards). Wrote non-profit constitution, helped raise funds through grant writing, and administer a physical space (<http://www.infoseed.org>) and co-ordinate tutorials on software and hardware. Helped maintain several web-sites involving multimedia content management, including heavy use of digital audio, video, and open content.
- Digital Literacy and Web Developer** (2001-2002) Netcorps, Durham NC. Designed and created web-pages and web-enabled software, including a on-line computer literacy course for the Durham Literacy Council and helped set-up a wireless router for disadvantaged families.
- Research Assistant** L.L. Thurstone Psychometric Laboratory (2000-2001). Created and maintained set of tools for computational linguistic corpus work and processing, ran psychological experiments.
- Systems Administrator** (1998-2000) Dept. of Computer Science, University of North Carolina at Chapel Hill. Specialized in computer networking, helping maintain a network of hundred of computers and supercomputers.

**Honors and Awards**

Overseas Research Scheme Award (2003-2007)

Complex Systems Summer School (2006)

European Summer School for Language, Logic, and Information (2005)

Best MSc. Thesis Prize. (2003) School of Informatics University of Edinburgh.

St. Andrew's Society Scholarship. (2002)

American Friends of the University of Edinburgh Grant. (2002)

Phi Beta Kappa. (2001)

Cognitive Science Grant. (2000) Cognitive Science Program, University of North Carolina at Chapel Hill

Indiana University Summer Research Program. (1999) Cognitive Science Program, University of Indiana at Bloomington.

**References**

Henry S. Thompson  
World Wide Web Consortium and  
School of Informatics  
The University of Edinburgh  
2 Buccleuch Place  
Edinburgh EH8 9LW  
Scotland, United Kingdom  
E-mail: ht@inf.ed.ac.uk  
Phone: +44 (0)131 650 4440

Andy Clark  
Professor of Logic and Metaphysics  
Philosophy Department  
The University of Edinburgh  
David Hume Tower  
George Square  
Edinburgh EH8 9JX  
Scotland, United Kingdom  
Email: Andy.Clark@ed.ac.uk  
Phone: +44 (0)131 650 3659

Peter C. Gordon  
Head of Cognitive Science Program  
Department of Psychology  
CB 3270, Davie Hall  
University of North Carolina at Chapel Hill  
Chapel Hill, NC 27599-3270  
Email: pcg@email.unc.edu  
Phone: +001 (919) 962-2440

Matthew Latterell  
Executive Director  
NetCorps  
711 Iredell St.  
Durham, NC 27705  
Email: [matthew@netcorps.org](mailto:matthew@netcorps.org)  
Phone: +001 (919) 962-2440

June, 2006