

# Thomas Richard Lynam

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Expected Graduation Date: December 2006

## Education

2002 - Present	Doctor of Philosophy (Computer Science) University of Waterloo, Waterloo, Ontario
1999 - 2002	Masters of Mathematics (Computer Science) University of Waterloo, Waterloo, Ontario
1995 - 1999	Honours Bachelor of Science (Computer Science) Lakehead University, Thunder Bay, Ontario

## Work Experience

May - Aug 2003	MultiText Expert MultiText Group NRRC Mitre Bedford, Massachusetts	Involved in the NRRC Reliable Information Access workshop where information retrieval experts interactively experiment with top systems. Supervisors: Charlie Clarke and Gordon Cormack
May - Aug 2002	Research Associate University of Waterloo Waterloo, ON, CA N2L 3G1	Created techniques for automated question answering through the development of knowledge-based systems. Participated in the Text REtrieval Conference (TREC) Question Answering track. Supervisor: Gordon Cormack
Summers 1996, 1997 Jan - Aug 1998 Summer 1999	Temporary Staff Sun Life of Canada Toronto, ON, CA M5H 1J9	Upgraded Sun Life's reporting environment as part of the Y2K project team. Duties included converting Focus reports to Crystal reports. Also responsible for scheduling Crystal reports using Crystal Info. Assisted the LAN administrators with set-up/training of new users and in handling a multitude of problems. Involved heavily in client support. Managers: Philip Scott & Fay Rakoff

## Academic Experience

2005, 2002 Fall Terms	Sessional Lecturer University of Waterloo Waterloo, ON, CA N2L 3G1	Instructor for Real Time systems. The students write embedded systems on microcomputers for applications such as process control, data acquisition and communication.
2005 Spring Term	Sessional Lecturer University of Waterloo Waterloo, ON, CA N2L 3G1	Instructor for Operating Systems. The students learn the fundamentals of operating system function, design, and implementation.
1999 - Present	Teaching/Research Assistant University of Waterloo Waterloo, ON, CA N2L 3G1	Teaching assistant for Real Time systems, Compilers, Currency, and many other courses. Research assistant for projects including question answering, spam evaluation and information retrieval. Supervisor: Gordon Cormack

## Computer Knowledge

### Information Retrieval

I have a keen interest in information retrieval; my master thesis topic was a question answering system. I have participated in five Text REtrieval Conferences (TREC) as part of the University of Waterloo's MultiText research team. I have completed courses in data mining, statistical artificial intelligence, question answering, and information retrieval. For my honours thesis I developed a real time search engine using IBM's aglet mobile agents to search many different servers at once.

### Spam Filtering

My Ph.D. dissertation will be on spam filtering and evaluation of such systems. I was an integral part in developing the TREC public spam corpus. I have also researched fusion methods for combining multiple spam filters to produce a new filter that outperforms any of the combined filters.

### Evaluation

Co-coordinator of the 2005 TREC spam track. Developed the TREC Spam Filter Evaluation Tool Kit. Also currently working on developing a method of adding confidence intervals to the standard IR average precision(AP) and mean average precision(MAP) measures.

### Programming languages

C, C++, Perl, Assembly, Java, SQL and object oriented programming experience. Have completed courses on programming language design, implementation and evaluation. The algorithm and design course has enhanced my efficiency in programming. In my honours year, I created my own compiler for Pascal.

### Operating Systems

I enjoyed teaching a third year Operating Systems and fourth year Real Time systems course during which students create their own OS. Completed a Distributed Systems course, developing my own client/server model. Also studied Parallel Algorithms.

### General Computer Interest

I have taken a wide range of computer courses from Graphics, Internet Computing, and Artificial Intelligence, to Financial Computing. Also I have studied computational linear algebra and numerical approximation, algorithm design and analysis, and theory of computing.

## **Publications**

### **Chapters in Books**

Charles L. A. Clarke, Gordon V. Cormack, Thomas R. Lynam and Egidio L. Terra. Question Answering by Passage Selection. In *Advances in Open Domain Question Answering*, Kluwer Academic Publishers, 2004. To appear.

G. V. Cormack, C. L. A. Clarke T. R. Lynam and C. R. Palmer. MultiText Experiments for TREC. In *TREC: Experiments and Evaluation in Information Retrieval*, 2004.

### **Conference Papers**

Gordon V. Cormack and Thomas R. Lynam. TREC 2005 Spam Track Overview. Presented at the 2005 Text REtrieval Conference (TREC 2005), Gaithersburg, Maryland, November 2005.

Gordon V. Cormack and Thomas Lynam. Spam Corpus Creation for TREC. Proceedings of the Second Conference on Email and Anti-Spam (CEAS 2005), Mountain View CA, U.S.A.

Thomas R. Lynam, Chris Buckley, Charles L. A. Clarke, Gordon V. Cormack A multi-system analysis of document and term selection for blind feedback. Proceedings of the Thirteenth ACM conference on Information and Knowledge Management (CKIM 2004), Washington D.C., U.S.A.

David L. Yeung, Charles L. A. Clarke, Gordon V. Cormack, Thomas R. Lynam and Egidio L. Terra. Task-Specific Query Expansion. Presented at the 2003 Text REtrieval Conference (TREC 2003), Gaithersburg, Maryland, November 2003.

C. L. A. Clarke and G. V. Cormack and G. Kemkes and M. Laszlo and T. R. Lynam and E. L. Terra and P. L. Tilker. Statistical Selection of Exact Answers. Presented at the 2002 Text REtrieval Conference (TREC 2002), Gaithersburg, Maryland, November 2002.

C. L. A. Clarke, G. V. Cormack, M. Laszlo, T. R. Lynam and E. L. Terra. The Impact of Corpus Size on Question Answering Performance. Short paper in Proceedings of the 25th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, Tampere, Finland, August 2002. Poster version.

C. L. A. Clarke, G. V. Cormack, T. R. Lynam, C. M. Li and G. L. McLearn. Web Reinforced Question Answering. Presented at the 2001 Text REtrieval Conference (TREC 2001), Gaithersburg, Maryland, November 2001.

Charles L. A. Clarke, Gordon V. Cormack and Thomas R. Lynam. Exploiting Redundancy in Question Answering. In Proceedings of the 24th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, New Orleans, September, 2001.

T. R. Lynam, C. L. A. Clarke and G. V. Cormack. Information Extraction with Term Frequencies. Short paper in Proceedings of the Human Language Technology Conference, San Diego, 2001.

C. L. A. Clarke, G. V. Cormack, D. I. E. Kisman and T. R. Lynam. Question Answering by Passage Selection. Presented at the Ninth Text REtrieval Conference (TREC-9), Gaithersburg, Maryland, November 2000.

### **Master Thesis**

Thomas Richard Lynam. Exploitation of Redundant Inverse Term Frequency for Answer Extraction. Master Thesis, University of Waterloo, Computer Science, Waterloo, Ontario, May 2002

### **Scholarship**

2003 - 2005 Natural Sciences and Engineering Research Council of Canada (NSERC PSG-B) Scholarship

### **References**

Available upon request.