

CHAD T. LANGLEY

Language Technologies Institute
Carnegie Mellon University
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EDUCATION

CARNEGIE MELLON UNIVERSITY 1998 – present

LANGUAGE TECHNOLOGIES INSTITUTE, SCHOOL OF COMPUTER SCIENCE

Ph.D. in Language and Information Technologies (expected Summer 2003)

Master of Science in Language Technologies (May 1999)

Thesis topic: Combining phrase-level semantic parsing and machine learning for natural language analysis in interlingua-based speech-to-speech machine translation

Advisor: Alon Lavie

Committee: Alex Waibel, Lori Levin, Jaime Carbonell, Kevin Knight

QPA: 3.89/4.0

Coursework included Algorithms for Natural Language Processing; Machine Learning; Speech Recognition; Seminar in Robust Parsing; Topics in Statistical Natural Language Processing

UNIVERSITY OF PITTSBURGH 1996 – 1998

INTELLIGENT SYSTEMS PROGRAM

Ph.D. program – No degree awarded

Transferred to Carnegie Mellon University because advisor left University of Pittsburgh

Advisor: Johanna Moore

QPA: 3.82/4.0

Coursework included Foundations of Artificial Intelligence; Human Information Processing; Pragmatics; Machine Learning and Communication; Theory of Learning Algorithms; Computational Linguistics; Perspectives on Cognitive Science; Psychology of Language and Reading; Knowledge Representation

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN 1992 – 1996

Bachelor of Science in Computer Science with Highest Honors (May 1996)

GPA: 5.0/5.0

Coursework included Introduction to Artificial Intelligence; Psychology of Language; Language Acquisition; Cognitive Psychology; Psychology of Learning and Memory; The Brain and the Mind; Brain, Learning, and Memory

RESEARCH EXPERIENCE

CARNEGIE MELLON UNIVERSITY May 1998 – present

Graduate Research Assistant

Research member of several interlingua-based speech-to-speech machine translation projects led by Alon Lavie, Lori Levin, and Alex Waibel.

NESPOLE! (2000-2003)

Speech-to-speech machine translation over the Internet for e-commerce applications.

Developed natural language analysis module. Assisted with the design of a distributed server-based architecture for translation over the Internet. Integrated translation components into translation servers for English and German. Maintained translation servers and demo system.

CSTAR II (1998-2000)

Speech-to-speech machine translation for travel planning.

Implemented generation module. Maintained translation systems for English and German.

LingWear

Wearable navigation, sightseeing, and translation support for travelers.

Incorporated translation server module into wearable system.

UNIVERSITY OF PITTSBURGH

May 1997 – April 1998

Graduate Research Assistant

Research member of the Autobrief project led by Johanna Moore and Steven Roth.

Worked on natural language generation and knowledge representation for coordinated presentation of text and graphics.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

January 1996 – May 1996

Lab Assistant

Skill Acquisition Laboratory led by Stephanie Doane.

Provided support for computer simulations exploring problem solving techniques and strategies.

TEACHING EXPERIENCE

CARNEGIE MELLON UNIVERSITY

Fall 1999

Teaching Assistant for Algorithms for Natural Language Processing

Graduate-level course on the computational properties of natural languages and fundamental algorithms for processing natural languages.

Assisted with writing and grading homework assignments and exams. Held weekly office hours and recitation sessions. Presented two lectures.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Fall 1994 – Spring 1995

Undergraduate Classroom Assistant for introductory calculus courses

Assisted with instruction, recitation sessions, tutoring, and grading.

PUBLICATIONS

- 2003 Levin, L., C. Langley, A. Lavie, D. Gates, D. Wallace, and K. Peterson. "Domain Specific Speech Acts for Spoken Language Translation". In Proceedings of 4th SIGdial Workshop on Discourse and Dialogue, Sapporo, Japan, July 2003.
- 2003 Langley, C. and A. Lavie. "Parsing Domain Actions with Phrase-Level Grammars and Memory-Based Learners". In Proceedings of 8th International Workshop on Parsing Technologies (IWPT-2003), Nancy, France, April 2003.
- 2002 Langley, C. "Analysis for Speech Translation Using Grammar-Based Parsing and Automatic Classification". In Proceedings of Student Research Workshop at the 40th Annual Meeting of the Association of Computational Linguistics (ACL-02), Philadelphia, PA, July 2002.
- 2002 Langley, C., A. Lavie, L. Levin, D. Wallace, D. Gates, and K. Peterson. "Spoken Language Parsing Using Phrase-Level Grammars and Trainable Classifiers". In Proceedings of Workshop on Speech-to-Speech Translation: Algorithms and Systems at the 40th Annual Meeting of the Association of Computational Linguistics (ACL-02), Philadelphia, PA, July 2002.

- 2002 Lavie, A., F. Metze, R. Cattoni, E. Costantini, S. Burger, D. Gates, C. Langley, K. Laskowski, L. Levin, K. Peterson, T. Schultz, A. Waibel, D. Wallace, J. McDonough, H. Soltau, G. Lazzari, N. Mana, F. Pianesi, E. Pianta, L. Besacier, H. Blanchon, D. Vaufreydaz, and L. Taddei. "A Multi-Perspective Evaluation of the NESPOLE! Speech-to-Speech Translation System". In Proceedings of Workshop on Speech-to-Speech Translation: Algorithms and Systems at the 40th Annual Meeting of the Association of Computational Linguistics (ACL-02), Philadelphia, PA, July 2002.
- 2002 Metze, F., J. McDonough, H. Soltau, A. Waibel, A. Lavie, S. Burger, C. Langley, L. Levin, T. Schultz, F. Pianesi, R. Cattoni, G. Lazzari, N. Mana, and E. Pianta. "The NESPOLE! Speech-to-Speech Translation System". In Proceedings of HLT-2002 Human Language Technology Conference, San Diego, CA, March 2002.
- 2002 Lavie, A., F. Metze, F. Pianesi, S. Burger, D. Gates, L. Levin, C. Langley, K. Peterson, T. Schultz, A. Waibel, D. Wallace, J. McDonough, H. Soltau, R. Cattoni, G. Lazzari, N. Mana, E. Pianta, E. Costantini, L. Besacier, H. Blanchon, D. Vaufreydaz, and L. Taddei. "Enhancing the Usability and Performance of NESPOLE! - a Real-World Speech-to-Speech Translation System". In Proceedings of HLT-2002 Human Language Technology Conference, San Diego, CA, March 2002.
- 2001 Lavie, A., C. Langley, A. Waibel, F. Pianesi, G. Lazzari, P. Coletti, L. Taddei, and F. Balducci. "Architecture and Design Considerations in NESPOLE!: a Speech Translation System for E-commerce Applications". In Proceedings of HLT-2001 Human Language Technology Conference, San Diego, CA, March 2001.
- 2001 Lavie, A., L. Levin, T. Schultz, C. Langley, B. Han, A. Tribble, D. Gates, D. Wallace, and K. Peterson. "Domain Portability in Speech-to-Speech Translation". In Proceedings of HLT-2001 Human Language Technology Conference, San Diego, CA, March 2001.

SERVICE ACTIVITIES

- Ph.D. Student Representative to the Faculty* August 1999 – April 2003
 Worked with faculty and students to develop departmental policies to improve the experience of students in the Language Technologies Institute.
 Organized activities for prospective students during the departmental open house.
- Liaison Officer of the Graduate Student Assembly* January 2001 – December 2001
 The Graduate Student Assembly is the graduate student government at Carnegie Mellon University. Acted as a liaison between the Graduate Student Assembly and the university administration.
 Represented graduate student interests on campus life issues such as stipends, health care, and safety.
- Member of the Language Technologies Institute Admissions Committee* January 2000 and 2001
- Graduate Student Assembly Representative* January 1999 – December 2000

HONORS AND AWARDS

Andrew Mellon Predoctoral Fellowship at University of Pittsburgh	1996-1997
Bronze Tablet Award for graduation in top 3% of class at University of Illinois	1996
Edmund J. James Scholar Honors Program	1992-1996
Dean's List at University of Illinois at Urbana-Champaign	1992-1996
Clement T. Hansen Memorial Scholarship	1992-1996
Catholic Order of Foresters Scholarship	1992-1996
Daniel L. Slotnick Memorial Scholarship	1994-1996
Calvin B. Niccols Scholarship	1993-1995
Fred Eggers Engineering Scholarship	1995

PROFESSIONAL MEMBERSHIPS

Association for Computational Linguistics
American Association for Artificial Intelligence

REFERENCES

Alon Lavie
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Alex Waibel
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