

# Ion A Muslea

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Language Weaver, Inc.  
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Fax: (310) 437-7307

## PROFESSIONAL EXPERIENCE

*Research Scientist*  
March 2005 – Present  
I am investigating Data Mining techniques for improving the quality of Machine Translation systems.

Language Weaver, Inc.  
Marina del Rey, CA

*Computer Scientist*  
September 2003 – February 2005  
My primary focus was on using machine learning for relaxing over-constrained, SQL-like queries. I have also worked on learning procedural knowledge via programming-by-demonstration and programming-by-observation.

SRI International  
Menlo Park, CA

*Post-doctoral Fellow*  
December 2002 – July 2003

Within Professor Padhraic Smyth's group, I worked on entity-based data mining from spatio-temporal and text-based data streams. My primary focus was on developing unsupervised learning techniques for documents clustering and retrieval.

University of California, Irvine  
Irvine, CA

*Graduate Research Assistant*  
May 1996 – December 2002

I worked on active, semi-supervised, and meta-learning techniques that were applied to information extraction, text classification, and discourse tree parsing. I was also involved in research on AI planning and integrating heterogeneous information sources.

Information Sciences Institute (USC)  
Marina del Rey, CA

*Graduate Research Assistant*  
August 1994 – May 1996

I worked on enabling technologies for distributed medical systems. My focus was on a client-server architecture for storing and accessing distributed patient records.

West Virginia University  
Morgantown, WV

*Research Associate*  
December 1993 – April 1994

I developed a graphical environment for learning C++ programming techniques.

"Make A Difference in Romania"  
Cluj-Napoca, Romania

*Leader of the Multimedia Group*  
February 1992 – July 1994

I lead the design and development of a PC-based frame-grabber and video-mixer for the German partner FAST Multimedia, GmbH.

Keysys Software  
Cluj-Napoca, Romania

*Research Associate*  
August 1991 – February 1993

I designed and implemented a medical pattern-recognition system.

I.T.C. Cluj  
Cluj-Napoca, Romania

## EDUCATION

Ph.D., Computer Science, December 2002  
"Active Learning with Multiple Views"  
Co-advisors: Craig Knoblock & Steve Minton  
University of Southern California

M.S., Computer Science, August 1996  
"The very-offline k-server problem in trees"  
Co-advisors: S. Kankanahalli & W. Klostermeyer  
West Virginia University

B.S., Computer Science, July 1991  
"An object-oriented approach to graphical user interfaces"  
Advisor: I. Salomie  
Polytechnic Institute of Cluj-Napoca (Romania)

## AWARDS AND HONORS

- 2002 - Nominated by the University of Southern California for the "2003 ACM Doctoral Dissertation Award"
- 1999 - The "ACM Student Paper Award" at the Conference on Autonomous Agents
- 1999 - Two papers selected in the "Best of Agents-99" issue of J. of Autonomous Agents and Multi-Agent Systems
- 1998 - Information Sciences Institute's "Meritorious Service Award"
- 1997 - Third place out of 32 teams at the Robocup-97 with the ISIS team
- 1994 - "The People Technology Foundation" Award for Outstanding Research
- 1993 - The Frank Ponzio Foundation Scholarship (New Jersey, USA)
- 1992 - Winner of several prizes with the FAST Multimedia's VideoMachine development team ("BYTE's Best of Spring Comdex", "BYTE Award of Distinction", "Award of Master Corporate Video")
- 1991 - Third place at "The National Computer Science Students Contest" (Romania)
- 1989 - Selected for "The National Computer Science Outstanding Students Retreat" (top 20 Romanian students)
- 1989 - Third place at "The French Contest of the Polytechnic Institute"
- 1989 - Second place at "The Romanian Computer Science Students Contest"
- 1988 - "The Best Paper Award," Romanian Students' National Research Conference
- 1984 - First Place at "High-school Students Mathematics Contest"

## PROFESSIONAL ACTIVITIES

### **Proposal Reviewer**

- National Science Foundation (2003, 2004)
- Science Foundation Ireland (2002)

## **Organizer**

- AAAI-2004 workshop on "Adaptive Text Extraction and Mining" (chair)
- IJCAI-2001 workshop on "Adaptive Text Extraction and Mining"
- AAAI-1999 workshop on "Machine Learning for Information Extraction"

## **Program Committee**

- International Conference on Machine Learning (ICML 2003-2005)
- International Conference on Knowledge Discovery & Data Mining (KDD-2005)
- International Joint Conference on Artificial Intelligence(IJCAI 2003, 2005)
- National Conference on Artificial Intelligence (AAAI 2004-2005)
- Discovery Science (2005)
- International Conference on Tools with Artificial Intelligence (2001)
- Genetic Programming (GP-98)

## **Journal Reviewer**

- Machine Learning Journal
- Artificial Intelligence
- Journal of Artificial Intelligence Research
- Computational Linguist
- ACM Computing Surveys
- IEEE Transactions on Signal Processing
- ACM Transactions on Information Systems
- ACM Transactions on Internet Technology
- Information Systems Journal
- Data & Knowledge Engineering Journal
- WWW Journal
- Tourism Management

## **Reviewer**

- Encyclopedia of Data Warehousing & Mining (ed. J. Wang, 2005)
- ACM SIGMOD 2004
- International Conference on Intelligent User Interfaces (IUI 2002-2003)
- Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-03)

## **Other**

- Panelist at AAAI-2004 "Doctoral Consortium"
- Librarian of the RISE repository of information extraction tasks (<http://www.isi.edu/muslea/RISE>)

RESEARCH  
GRANTS AND  
CONTRACTS

- Leader of a \$30,000 IR&D grant at SRI for “Building a Bayesian Learning Toolkit.”
- Co-author of a \$780,291 AFOSR research contract on ”Rapidly building high-performance information agents”. I wrote the technical part for active learning and information extraction. Dec 2000 – Nov 2003.

PATENTS

- Muslea, I., S. Minton, C. Knoblock: Active Learning with Multiple Views
- Muslea, I., S. Minton, C. Knoblock: Wrapper Induction by Hierarchical Data Analysis

BOOKS

Muslea, I. (1994). C++ pentru avansati. Proiectarea aplicatiilor orientate pe obiecte (Advanced C++. Object- Oriented Software Design) MicroInformatica Press, Cluj-Napoca, 1994.

Muslea, I. (1992). Initiere in C++ (An Introduction to C++), MicroInformatica Press, Cluj-Napoca, 1992.

BOOK CHAPTERS

Muslea, I. (2005). ”Active learning with multiple views”. In J. Wang (ed.), ”Encyclopedia of Data Warehousing & Mining,” to appear

Knoblock, C., K. Lerman, S. Minton, I. Muslea (2002). ”Accurately and reliably extracting data from the Web: a machine learning approach”. In P. Szczepaniak, J. Segovia, J. Kacprzyk, L. Zadeh (eds.) ”Intelligent Exploration of the Web”, p. 275-287, Springer, 2002.

JOURNAL  
PUBLICATIONS

Muslea, I., S. Minton, C. Knoblock (2001). ”Hierarchical wrapper induction for semi-structured information sources”. Journal of Autonomous Agents and Multi-Agent Systems, 4:93-114. 2001.

Marsella, S., J. Adibi, Y. Alonaizan, A. Erdem, G. Kaminka, I. Muslea, M. Tallis, M. Tambe (2001). ”Experiences acquired in the design of Robocup teams: a comparison of two fielded teams”. Journal of Autonomous Agents and Multi-Agent Systems, 4:115-129, 2001.

Ambite, J.L., C. Knoblock, I. Muslea, A. Philpot (2001). ”Compiling source descriptions for efficient and flexible information integration” Journal of Intelligent Information Systems, 16:149-187, 2001.

Knoblock, C., S. Minton, J.L. Ambite, N. Ashish, I. Muslea, A. Philpot (2000). ”The ARIADNE approach to Web-based information integration”. International Journal of Cooperative Information Systems, 10(1-2): 145- 169, 2000.

Tambe, M., J. Adibi, Y. Alonaizan, A. Erdem, G. Kaminka, I. Muslea (1999). ”Building agent teams using an explicit teamwork model and learning”. Artificial Intelligence Journal, 110(2):215-239, 1999.

REFEREED  
CONFERENCE  
PROCEEDINGS

Muslea, I. ”Machine Learning for Online Query Relaxation”, Proceedings of the International Conference on Knowledge Discovery & Data Mining, p. 246-255, 2004.

Muslea, I., S. Minton, C. Knoblock. "Active Learning with Weak and Strong Views: A Case Study on Wrapper Induction", Proceedings of the International Joint Conference on Artificial Intelligence, p. 415-420, 2003.

Muslea, I., S. Minton, C. Knoblock. "Active + Semi-Supervised Learning = Robust Multi-View Learning", Proceedings of the 19th International Conference on Machine Learning ICML-2002, p. 435-442, 2002.

Muslea, I., S. Minton, C. Knoblock. "Adaptive View Validation: A First Step Towards Automatic View Detection", Proceedings of the International Conference on Machine Learning ICML-2002, p. 443-450, 2002.

Muslea, I., S. Minton, C. Knoblock (2000). "Selective sampling with redundant views". Proceedings of the Seventeenth National Conference on Artificial Intelligence AAAI-2000, p. 621-626, 2000.

Barish, G., Y. Chen, D. DiPasquo, C. Knoblock, S. Minton, I. Muslea, C. Shahabi (2000). "TheaterLoc: using information integration technology to rapidly build virtual applications". Proceedings of International Conference on Data Engineering ICDE 2000, p. 681-2, 2000.

Muslea, I., S. Minton, C. Knoblock (1999). "A hierarchical approach to wrapper induction". Proceedings of the Conference on Autonomous Agents, p. 190-197, 1999.

Tambe, M., G. Kaminka, S. Marsella, I. Muslea, T. Raines (1999). "Two fielded teams and two experts: a Robocup response challenge from the trenches". Proceedings of the International Joint Conference on Artificial Intelligence, IJCAI'99, p. 276-281, 1999.

Marsella, S., J. Adibi, Y. Alonaizan, A. Erdem, G. Kaminka, I. Muslea, M. Tallis, M. Tambe (1999). "On being a teammate: experiences acquired in the design of Robocup teams", Proceedings of the Autonomous Agents Conference, p. 221-227, 1999.

Knoblock, C., S. Minton, J. L. Ambite, N. Ashish, P. Modi, I. Muslea, A. Philpot, S. Tejada (1998). "Modeling Web sources for information integration". Proceedings of the Fifteenth National Conference on Artificial Intelligence AAAI-1998, p. 211-218, 1998.

Tambe, M., J. Adibi, Y. Alonaizan, A. Erdem, G. Kaminka, S. Marsella, I. Muslea, M. Tallis (1998). "ISIS: using an explicit model of teamwork in Robocup'97". Proceedings of the First Robot World Cup Competition and Conferences, p. 123-131, 1998.

Muslea, I. (1997). "SYNERGY: a linear planner based on genetic programming". Proceedings of the Fourth European Conference on Planning ECP-97, p. 312-324, 1997.

Muslea, I. (1997). "The very-offline k-vehicle routing problem in trees". Proceedings of the International Conference of the Chilean Computer Science Society, p. 155-163, 1997.

Tambe, M., J. Adibi, Y. Alonaizan, A. Erdem, G. Kaminka, S. Marsella, I. Muslea, M. Tallis (1998). "ISIS: an explicit model of teamwork at RoboCup-97", *AI Magazine*, 19(3):56, 1998.

REFEREED  
WORKSHOPS

Knoblock, C., K. Lerman, S. Minton, I. Muslea (2001). "A machine learning approach to accurately and reliably extracting data from the Web". *IJCAI-01 Workshop on "Adaptive Text Extraction and Mining"*, 2001.

Muslea, I., S. Minton, C. Knoblock (2001). "Selective sampling + semi-supervised learning = robust multi-view learning". *IJCAI-01 Workshop on "Text Learning: Beyond Supervision"*, 2001.

Muslea, I., S. Minton, C. Knoblock (2001). "Active learning compensates for domain clumpiness", *The Snowbird Workshop on Learning*, 2001.

Muslea, I., S. Minton, C. Knoblock (2000). "Naive Co-Testing for wrapper induction: preliminary results", *ECAI-2000 workshop on "Machine Learning for Information Extraction"*, 2000.

Muslea, I., S. Minton, C. Knoblock (2000). "Selective sampling with Co-Testing". *The CRM Workshop on "Combining and Selecting Multiple Models"*, 2000.

Muslea, I. (1999). "Extraction patterns for information extraction tasks: a survey". *AAAI-99 Workshop on "Machine Learning for Information Extraction"*, 1999.

Muslea, I., S. Minton, C. Knoblock (1998). "Wrapper induction for semi-structured, Web-based information sources". *Proceedings of the Conference on Automatic Learning and Discovery*, Pittsburgh, PA, 1998.

Muslea, I., S. Minton, C. Knoblock (1998). "STALKER: learning extraction rules for semistructured, Web-based information sources", *AAAI-98 Workshop on "AI for Information Integration"*, 1998.

Ambite, J.L., N. Ashish, C. Knoblock, S. Minton, P. Modi, I. Muslea, A. Philpot, S. Tejada (1998). "ARIADNE: a system for constructing mediators for Internet sources". *System Demonstration. Proceedings of the ACM SIGMOD Conference on Management of Data*, 1998.

Muslea, I., R. Jain, A. Suvaiala, S. Kankanahalli (1995). "RAMSES: a distributed name server system". *Proceedings of the International Workshop on "Intelligent Computer Communication"*, p. 216-220, 1995.

RECENT  
PRESENTATIONS

- Brown University, September 30, 2004
- Hewlett-Packard Research Labs, November 4, 2003
- U. Maryland College Park, May 20, 2003
- Carnegie Mellon University, April 16, 2003
- U.C. Berkeley, Center for Intelligent Systems seminar, April 10, 2003
- NASA Ames, April 9, 2003

- PARC, February 11, 2003
- U.C. Los Angeles, CS seminar, January 23, 2003
- Stanford, Computational Learning & Adaptation seminar, January 9, 2003
- Lawrence Livermore National Laboratories, AI seminar, January 10, 2003
- Jet Propulsion Laboratories, AI seminar, December 18, 2002
- Overture Inc., AI seminar, December 2002
- Institute for Creative Technologies, December 2002
- Information Sciences Institute, A.I. seminar, November 2002
- U. of Toronto, ML seminar, November 2002
- U.C. San Diego, AI Seminar, November 2002
- U.C. Irvine, AI Seminar, September 2002
- Google Inc., November 2001
- U.C. San Diego, AI Seminar, October 2001

TEACHING  
EXPERIENCE

*Spring 2002* *University of Southern California*  
Teaching Assistant for "Information Integration on the Web". My duties involved designing and delivering several lectures, assisting in preparing and grading the homeworks and projects, and holding office hours.

*Fall 1996* *University of Southern California*  
Guest lecturer in CSCI-102 - "Introduction to Object-Oriented Design".

*Summer 1996* *University of Southern California*  
I presented a CORBA tutorial for the ISI's Intelligent Systems Division.

*July–October 1993* *Symbolic Systems  
Madison, New Jersey*  
I offered lectures and tutorials on C++ and object-oriented design to several companies in New Jersey, USA.

*1990 – 1992* *Transactions and Databases Company  
Cluj-Napoca, Romania*  
I offered lectures and tutorials on C++ and object-oriented design to several companies.

*Fall 1992* *Technical University of Cluj-Napoca  
Cluj-Napoca, Romania*  
Teaching Assistant for the "Computer Aided Design" course.