

# Joseph F. Catalano

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## CONTACT INFORMATION

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## RESEARCH INTERESTS

Time Series, Language Acquisition, Machine Learning

## EDUCATION

**University of Maryland, Baltimore County**, Baltimore, Maryland

M.S., Computer Science, May 2004 (expected)

- Thesis Topic: “An Incremental Approach to Motif Discovery in Multivariate Streaming Time Series”
- Advisor: Tim Oates

**University of Massachusetts**, Amherst, Massachusetts

B.S., Computer Science, May 2002

Minor: Mathematics

## ACADEMIC EXPERIENCE

**University of Maryland, Baltimore County**, Baltimore, Maryland

*CORAL* – Cognition, Robotics and Learning Lab, Principle Investigator: Tim Oates

*Graduate Research Assistant*

**August 2002 - present**

Includes research in the areas of time series motif discovery with emphasis on real-time speech audio segmentation, visualization of relational data with uncertainty and change over time, and Masters level coursework. Project development in C and C++ both on Mac OS X and Linux.

*Graduate Teaching Assistant*

**August 2002 - December 2002**

Taught a discussion section for an introductory computer science course. Was also a TA for the undergraduate artificial intelligence course. Duties included teaching, grading assignments and exams, developing lecture material, and holding office hours. Developed a multi-player, TCP based version of the popular board game “Empire Builder” as a platform for developing intelligent software players, to be used as the class project. Game development entirely in ANSI Common Lisp with an OpenGL based game visualization component.

**University of Massachusetts**, Amherst, Massachusetts

*EKSL* – Experimental Knowledge Systems Laboratory, Principle Investigator: Paul R. Cohen

*Undergraduate Research Assistant*

**February 2001 - May 2002**

Performed research in the area of computer planning and control, simulation, and analysis of time series. Research was performed within the framework of a war-gaming simulator. Development in ANSI Common Lisp on the Macintosh platform.

*Undergraduate Teaching Assistant*

**January 2002 - May 2002**

Duties included grading assignments and exams, holding office hours, writing project assignments and coding project solutions. Project development in Java.

## PUBLICATIONS

King, G.W., Heeringa, B., Catalano, J., Westbrook, D.L., and Cohen, P. 2002. Models of Defeat. Proceedings of the *Second International Conference on Knowledge Systems for Coalition Operations*. pp. 85-90.

RECENT  
SUBMISSIONS

Catalano, J. and Oates, T. 2004. A Sampling Approach to Motif Discovery in Real-valued Multi-variate Time-Series. Submitted to the 14th European Conference on Machine Learning.

PROFESSIONAL  
EXPERIENCE

**Department of Computer Science**, Baltimore, Maryland

*Volunteer Service*

**August 2002 - present**

Designed and deployed new department website with an emphasis on a professional visual style and consolidation of content for easier navigation and retrieval. My primary responsibilities were the technical and visual design aspects.

In addition, I've taken on the responsibilities of system administrator for the CORAL and Maple labs. Our setup consists of a Mac OS X server and 15 - 20 Linux and Windows XP workstations as well as a few Mac OS X based laptops. Services provided include single-sign on, web, email, remote access, printing, and back-up.

**Jericho Public Library**, Jericho, NY

*Consultant*

**September 1998 - present**

Design and maintenance over multiple revisions of the library's website and intranet. Provided technical advice ranging from purchasing to systems and network configuration suggestions.

<http://www.jericholibrary.org>

**Office of Space Management and Campus Planning**, Amherst, Massachusetts

*Staff Programmer*

**October 1999 - December 2000**

Primary responsibility was development of a Java based application interface to the campus space inventory database which was hosted on Oracle 8i/Windows 2000 Server. Final application was deployed as 3-tiered solution using Java RMI and JDBC. Other duties included assisting staff creating reports using Seagate Crystal Reports, and the design and deployment of office websites. Development was done on Windows using the Macromedia design suite and deployment was to a UNIX system. <http://www.umass.edu/cpsm/>

COMPUTER SKILLS

- Languages: C/C++, Java, Objective-C, ANSI Common Lisp, XML, HTML/CSS, SQL
- Development Platforms: JSP, PHP, .NET, JDBC, Java RMI, OpenGL
- Platforms: Mac OS X/Classic, Linux, Windows, Oracle.
- Statistical Packages: some experience with SAS and Minitab.

AFFILIATIONS

Association for Computing Machinery (ACM)

American Association for Artificial Intelligence (AAAI)

HONORS AND  
AWARDS

Client for undergraduate software engineering course at UMBC, 2004

Treasurer – Computer Science and Electrical Engineering Graduate Collective, 2003 - 2004

Computer Science Talent Advancement Program, 1998