

# Andrew J. Ryan

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## EDUCATION

Spring 2004 to Present -- **George Mason University**  
Working towards Ph.D. in Public Policy  
Expected Graduation: Spring 2008

September 2000 to Fall 2003 -- **George Mason University**  
Ph.D. Student, School of Information Technology and Engineering

September 1998 to May 2000 -- **George Mason University**  
Master of Science in Systems Engineering (Certificate in Software Engineering)

September 1994 to May 1998 -- **Binghamton University** (State University of New York)  
Bachelor Science in Computer Science

Professional Academic Experience

## ASSOCIATION MEMBERSHIPS

American Educational Research Association (AERA)  
Brothers of the Academy (BOTA)  
International Council of Systems Engineers (INCOSE)  
International Who's Who of Professionals  
National Society of Black Engineers (NSBE)  
National Conference of Black Political Scientists (NCOBPS)

## PAPERS

(all except \* available at [mason.gmu.edu/~ajryan/research.html](http://mason.gmu.edu/~ajryan/research.html))

Ryan, Andrew J., *A Quantitative Approach to Non-Functional Requirements*

Ryan, Andrew J., *Increasing Route Utilization in the National Airspace System*

Ryan, Andrew J., *Optimizing Group Utility in the Collaborative Decision Making Process*

Ryan, Andrew J., *Human Factors and Collaborative Decision Making*

Ryan, Andrew J., *Knowledge Management and the FAA*

Ryan, Andrew J., *Heuristics Explored: With Examples from Traffic Flow Management*

## BOARD AFFILIATIONS

Archbishop Leadership Program; Harlem, NY [Harlem Based Youth Group]

Granville Academy; Fairfax, VA [Minority Entrepreneurial Program]

Midnight Forum; Washington D.C. [Hip-Hop Based Afterschool program]

## **PROFESSIONAL EXPERIENCE**

**November 2005 to present**

**United States Patent and Trademark Office (Stanley Associates consultant),  
Trainer**

- Provided classroom training for new patent examiners on computer applications/skills and proprietary tools used in their job function
- Taught classes in 2, 4 or 8 hour sessions
- Created instructional materials for courses
- Assisted in initial rollout of largest government telework program

**June 05 to August 2005**

**Friendship Edison Collegiate Academy, Math Teacher**

- Taught remedial math (algebra-based) to sophomore and juniors
- Created lesson plans and created course structure

**January 2005 to Present**

**Hip-Hop Matters, Founding Executive Director**

- Manage all duties for non-profit (advocacy, outreach, education)
- Editor in Chief of Journal of Hip-Hop
- Created Hip-Hop curriculums and managed afterschool programs

**September 2003 to December 2004**

**Metron Aviation Inc., Research and Strategy Analyst, Herndon, VA**

- Responsible for pursuing strategic alliances and identifying potential business opportunities.
- Authored white papers on emerging areas within transportation including: Intermodal transportation, UAVs, and innovative resource allocation algorithms.
- Performed policy and cost benefit analyses on aviation and transportation issues for Traffic Flow Management Modernization effort for FAA.
- Participated in proposal bids for various FAA and NASA solicitations. Responsible for future system concepts and benefit analysis. Worked as consultant to Lockheed Martin, Raytheon and Boeing on several efforts.
- Project Lead for Phase I (50K) and Phase II (600K) NASA Langley SBIR. SBIR examined the affect of the Small Aircraft Transportation System on the National Airspace system. Wrote proposals, status reports and final reports and briefed NASA technical monitor as needed. Performed various levels of analysis and designed demo website using PHP and SQL (in Phase I). Currently leading 6 person Phase II effort.

**May 2002 to March 2003**

**Metron Aviation Inc., Resource Manager, Herndon, VA**

- Responsible for staffing and development of seven junior employees.
- Conducted periodic reviews and coordinated tasking with project leads
- Attended senior management meetings and provided input as needed.

### **May 2001 to August 2003**

#### **Metron Aviation Inc., Research Analyst, Herndon, VA**

- Conducted analysis for National Airspace System Genome project. Dissected ‘corridor’ traffic between Chicago (O’Hare and Midway) to Newark. Used various statistical programs to identify diurnal patterns and provide recommendations for change.
- Performed on-site research at Chicago (Arora) Air Route Traffic Control Center
- Designed early concept for multi-fix/airport Ground Delay Program.
- Wrote Java code to support analysis efforts for various R&D projects. Worked closely with analysts to support ongoing efforts and provide IT-enabled/cost-effective solutions for large analysis efforts.
- Created, designed, and implemented Metron Aviation knowledge management initiative. Implemented monthly brown bags discussions and peer group dialogues among employees.
- Created multimedia computer based training for FAA operational software.
- Facilitated instructional classes on proprietary software for FAA and airline users
- Developed software tool to measure accuracy of Monitor Alert Tool. Discovered algorithmic flaw in processing due to program results.
- Examined new ways of group decision making to solicit better outcomes in traffic flow management.

### **May 2000 - Apr 2001**

#### **Metron Inc., Software Analyst, Reston, VA**

- Developed software [C++/Java] for FAA related projects.
- Assisted with CMM/CMMi related issues and provided on-site user support and follow up analysis for FAA Air Traffic Control System Command Center specialists.

### **Sep 1999 - Present**

#### **George Mason University, Lecturer, Fairfax, VA**

- Taught classes in Multimedia Research, Internet literacy, presentation skills and Hip-Hop culture for the College of Arts and Sciences. [Classes listed below under [Teaching Experience](#)]

### **Sep 1999 - May 2000**

#### **George Mason University, Academic Advisor, Fairfax, VA**

- Provided students with academic and career guidance.

### **Sep 1998 - Sep 1999**

#### **IBM Corporation, I/T Specialist, Bethesda, MD**

- Provided end-user support in OS/2 environment for contracts operation division.
- Assisted in troubleshooting issues arising from Windows 95 migration and for coordinating monthly technology assistance days.

- Created on-line IT Guide and facilitated workshops on effective computer usage.

**Summer 1998**

**IBM Corporation, Poughkeepsie, NY**

- Created Lotus Approach Database to inherit VM legacy data for 15,000 tape library Also added modern functionality for a user-friendly GUI interface.

**Sep 1997 - May 1998**

**Lockheed Martin Control Systems, Co-op, Johnson City, NY**

- Responsible for Signal Processing code on engine control system for a JAS-39 Swedish jetfighter. Coded in ADA, worked along with a team of 20 programmers to integrate the effort for this high profile project.
- Worked on logic tables and ran unit tests on General Electric 90 747 turbo-fan engine.

**Mar 1997 - Sep 1997**

**Lockheed Martin Federal Systems, Co-op, Owego, NY**

- Assisted in programming operating system for Small Parcel Bundle Sorter for United States Postal Service \$1 billion project.
- Created Access database to track work package statistics for billing appropriations.
- Enhanced external homepage for Postal Engineering department to attract new customers.

**TEACHING EXPERIENCE**

**Fall 2005, University of the District of Columbia**

**Department of Urban Affairs, Social Sciences & Social Work**

***SOCI 395 Politics, Policy, and Hip-Hop***

Politics, Policy and Hip-Hop will explore the history of Hip-Hop culture, from its roots in the late 1960s to its political activism of the 2004 election. Issues such as urban renewal (red-lining, gentrification), education, welfare, leadership, cultural representation (in the media/TV), law enforcement, and judicial sentencing will be investigated and used as backdrop to create a realistic context to study Hip-Hop culture.

**Summer 2005, George Mason University, College of Arts and Sciences**

***NCLC 375 –Hip-Hop Literacies***

An online (1/3 of the class sessions will be via the web) writing/technology intensive course, will explore the written expressions of Hip-Hop (graffiti, rap, and spoken word/slam poetry) culture and deconstruct their meaning and impact. This course will indoctrinate students to Hip-Hop culture (1974-1996) and then revisit each literacy for critical inquiry. Utilizing a combination of text, multimedia (film clips, music, pictures distributed via DVD), and intellectual dialogue, we will explore each literacy in proper space and context.

**Spring 2005, University of the District of Columbia**

**Department of Urban Affairs, Social Sciences & Social Work**

***SOCI 111 – Introduction to Sociology***

Taught Introductory Sociology course with urban/pop culture slant. This three credit course equipped students to critically assess how society is structured in order to better understand the social world. Students develop a “sociological imagination” to understand how their lives fit into the larger social structure.

**Spring 2005, George Mason University, College of Arts and Sciences**

***NCLC 449 -- Multimedia Research and Project Development\*\****

Taught four credit, senior practicum course on multimedia research and project development. Course combined software and systems engineering, and applied it to web development. Students also wrote 5000 word, professional quality, research paper on some aspect of multimedia. Also taught course Spring 2001.

**Fall 2004, George Mason University, College of Arts and Sciences,**

***BIS 491 – Senior Project Presentation***

Taught 400 level presentation skills class. Course prepares students for final research presentation which is mandatory for all graduating seniors.

**Fall 2004, George Mason University, College of Arts and Sciences**

***NCLC 244 -- Beats, Rhyme, and Culture\*\* (previously taught as NCLC 275)***

**Summer 2004, George Mason University, College of Arts and Sciences**

***NCC 275 -- Beats, Rhyme, and Culture (adopted as NCLC 244)***

**Spring 2004, George Mason University, College of Arts and Sciences**

***NCLC 375 -- Black Voices in Hip-Hop \*\****

**Fall 2003, George Mason University, New Century College**

***NCLC 275 -- Beats, Rhyme, and Culture\*\* (adopted as NCLC 244)***

**Spring 2003, George Mason University, New Century College**

***NCLC 275 -- Beats, Rhyme, and Culture\*\* (adopted NCLC 244)***

**Fall 2002, George Mason University, New Century College**

***NCLC 275 -- Beats, Rhyme, and Culture\*\* (adopted as NCLC 244)***

**Summer 2002, George Mason University, New Century College**

***NCLC 249 -- Internet Literacy***

Taught four credit introductory course on the Internet. Course taught basic web page skills while focusing on the socio-economic impact of the Internet on society. Topics examined included: digital divide, education, and copyright issues and the Internet.

**Spring 2002, George Mason University, New Century College**

***NCLC 195 -- Beats, Rhyme, and Culture\*\****

Taught one credit course on Hip-Hop culture. Course introduced the four elements of Hip-Hop and provided foundation for upcoming (Fall 2002) four credit course. Students receive 2 music CD's to expand their understanding of rap music.

**Spring 2002, George Mason University, New Century College**

***NCLC 475 -- Multimedia Research and Project Development***

***\*\* (adopted as NCLC 449)***

**Summer 2001, George Mason University, College of Arts and Sciences**

***NCLC 249, New Century College 249 -- Internet Literacy***

**Spring 2001, George Mason University, New Century College**

***NCLC 249 -- Internet Literacy***

**Spring 2001, George Mason University, New Century College**

***NCLC 475 -- Multimedia Research and Project Development\*\****

***\*\* (adopted as NCLC 449)***

**Fall 2000 , George Mason University, New Century College**

***New Century College 249 -- Internet Literacy***

***Summer/Spring 1999 -- George Mason University  
School of Information Technology and Engineering***

***CS 112 – Computer Science I***

Instructed C++ laboratory sessions for sixty students. Responsible for all grading and programming related questions. Lectured to students periodically.

***Fall 1999, George Mason University, New Century College***

***New Century College 121-- Statistics***

Taught eight credits in interdisciplinary learning course. Course met four hours a day, four days a week. Responsible for primary instruction in statistics as well as communications and biology work. Acted as Teacher's Assistant for this course in Fall 1998.

***Spring 1999 -- George Mason University***

***School of Information Technology and Engineering***

Instructed lab for sixty students for Introduction to Computing class. Course consisted of instruction in word processing, spreadsheets, databases, graphics and networks.

\*\* Indicates courses that were proposed and accepted into GMU course catalog by Andrew J. Ryan.

*References available upon request.*

*Teacher evaluation reports also available upon request.*