

# Benjamin A. Collins

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## RESEARCH & PROFESSIONAL INTERESTS

Distributed computing, parallel and distributed algorithms, high-performance clusters, real-time systems, digital communications & signal processing, mathematics, algorithms, operating systems.

## EDUCATION

- ❑ **Texas A&M University**, College Station, Texas
  - Master of Engineering, Computer Engineering, August 2005.
  - Bachelor of Science, Computer Science, December 2002.  
*Minors in: electrical engineering, mathematics*
- ❑ **American School in London**, London, U.K. 1997

## PROFESSIONAL EXPERIENCE

- ❑ **L-3 Communications Integrated Systems** Greenville, Texas  
*Software Engineering* May 2005 - present
  - Designed and maintained software for realtime, embedded multiprocessor DSP system.
  - Designed software for distributed, service-oriented network architecture.
  - Co-invented a patent-pending algorithm.
- ❑ **ThermoLab, LLC** Farmersville, Texas  
*Engineering Intern* May 2002 - August 2002
  - Performed programming tasks for realtime automotive test equipment
  - Light metal fabrication
  - Electrical component assembly
  - Ruggedized computer assembly
- ❑ **Microsoft Corporation** Redmond, Washington  
*Software Developer in Test Intern* May 2001 - August 2001
  - Wrote test software included in automated testing for WindowsXP™ Shell
  - Performed daily stress tests

## SKILLS & CORE COMPETENCIES

- ❑ Computer science & algorithms  
algorithms, complexity, programming languages, concurrency
- ❑ High-performance computing  
Distributed and shared memory systems, middleware, message passing, threads, synchronization
- ❑ Programming Languages  
C++, C, Java, POSIX shell, sed, PHP, Python, Ruby, Scheme, Matlab
- ❑ Operating Systems  
Linux, VxWorks, MCOS, Solaris, OpenBSD

## HONORS AND AWARDS

- ❑ Dwight Look College of Engineering Distinguished Student Award. 2000, 2001

Benjamin A. Collins

- ❑ Engineering Leadership Program participant, 2001
- ❑ Dwight Look Summer Research Grantee, 2000
- ❑ Eagle Scout, 1997

SUBMITTED  
PUBLICATIONS

B. Collins, Y. Li, and R. Mahapatra. ASEP: An application specific encryption processor. Submitted to *Microprocessors and Microsystems: Special Issue on Secure Computing Platforms. Summer 2004*

ACADEMIC  
EXPERIENCE

**Texas A&M University**, College Station, Texas

- ❑ *Graduate Study* January, 2003 - May, 2005
    - Masters Thesis research: link-layer anonymity in wireless networks
    - Research with network engineering group
  - ❑ *Graduate Assistantship*
    - Participated in lab research projects and course-related activities, including a graduate network security course and a research project on possible defenses against distributed denial of service attacks.
    - Developed “Web Access Exercise System” software; a distributed web application allowing a virtual “presence” for students in upper-level networking courses. Developed in Java using J2EE technology.
    - Lead an independent study course with undergraduate students, utilizing the WAES software.
    - Conducted testing and evaluation on vendor equipment and completed various programming and administration tasks.
  - ❑ *Peer Teacher*
    - Helped students learn lower-level computer science material outside of class.
    - Aided the graduate TA during lab period
- RELEVANT  
ELECTIVE  
COURSEWORK
- ❑ *Computer Science*
    - Advanced networking & security
    - Introduction to quantum computing
    - Algorithmic aspects of quantum computing
    - Codesign in embedded systems
  - ❑ *Electrical Engineering*
    - Digital communications (communication theory)
    - Digital signal processing
    - Multimedia and network security
  - ❑ *Mathematics*
    - Introduction to cryptography
    - Information, secrecy & authentication I