

# Craig A. Shue

## Contact Information

Lindley Hall 215  
150 S. Woodlawn Ave.  
Bloomington, IN 47405-7104

Email: [cshue \(at cs.indiana.edu\)](mailto:cshue@cs.indiana.edu)  
Web: <http://www.cs.indiana.edu/~cshue/>

## Objective

I am interested in computer networking, security, and distributed systems. I am interested in gaining commercial research experience in these areas.

## Education

Currently	Ph.D. Candidate in Computer Science Indiana University, Bloomington, IN
May 2006	M.S. in Computer Science Indiana University, Bloomington, IN
June 2004	B.S. in Computer Science, Mathematics Minor Cum Laude Ohio University, Athens, OH

## Peer Reviewed Journals

- **Craig A. Shue**, Minaxi Gupta, Matthew P. Davy, "Packet Forwarding with Source Verification," *Computer Networks*, vol. 52, issue 8, pages 1567-1582, 2008.

## Peer Reviewed Conferences and Workshops

- **Craig A. Shue**, Andrew J. Kalafut, Minaxi Gupta, "The Web is Smaller Than it Seems," ACM/USENIX Internet Measurement Conference (IMC), Oct. 2007. Acceptance rate: 28.8%.
- **Craig A. Shue**, Minaxi Gupta, "Projecting IPv6 Forwarding Characteristics Under Internet-wide Deployment," ACM SIGCOMM 2007 IPv6 Workshop, Aug. 2007. Acceptance rate: 29.7%.
- **Craig A. Shue**, Minaxi Gupta, Steven A. Myers, "IPSec: Performance Analysis and Enhancements," IEEE International Conference on Communications, June 2007.
- **Craig A. Shue**, Minaxi Gupta, "On the Feasibility of Name-based Routing," IEEE Global Internet Symposium, May 2007.
- **Craig A. Shue**, Youngsang Shin, Minaxi Gupta, Jong Youl Choi, "Analysis of IPSec Overheads for VPN Servers," Workshop on Secure Network Protocols (**NPsec**) held in conjunction with IEEE International Conference on Networking Protocols (**ICNP**), Nov. 2005.
- **Craig A. Shue**, Minaxi Gupta, "Spoofing Resistant Packet Routing", Poster at IEEE International Conference on Networking Protocols (**ICNP**), Nov. 2005.

## Invited Conferences and Workshops

- **Craig A. Shue**, Minaxi Gupta, "Examining SSL Usage on the Web," Poster at Midwest Security Workshop, Apr. 2008.
- Andrew J. Kalafut, **Craig A. Shue**, Minaxi Gupta, "Security Implications of DNS Configuration and Contents," Midwest Security Workshop, Apr. 2008.

- Jonathan Mills, Matt Parker, Bryce Himebaugh, **Craig A. Shue**, Brian Kopecky, Chris Weilemann, “‘Empty Space’ Computes: The Evolution of an Unconventional Supercomputer,” Invited Paper at ACM International Conference on Computing Frontiers, May 2006.

## Book Chapters

- Minaxi Gupta, **Craig A. Shue**, “Spoofing and Countermeasures,” Book chapter in Phishing and Countermeasures: Understanding the Increasing Problem of Electronic Identity Theft, edited by Jakobsson and Myers, published by Wiley, ISBN: 0-471-78245-9, 2006.

## Technical Reports

- **Craig A. Shue**, Joshua Hursey, Arun Chauhan, “MPI over Scripting Languages: Usability and Performance Tradeoffs,” IUCS Technical Report TR631, Feb. 2006.
- **Craig A. Shue**, Brian Kopecky, Chris Weilemann, “Denial of Service Attack Detection Using Extended Analog Computers,” IUCS Technical Report TR624, Jan. 2006.

## Work Experience

8/2004 - Present	<b>Associate Instructor</b>	Indiana University	Bloomington, IN
	<i>Computer Networks</i>		
	Assisted with grading and project planning for this graduate course.		
	<i>Mastering the World Wide Web</i>		
	Taught CGI, PHP, MySQL, JSP, and Javascript.		
	<i>Network Technologies and System Administration</i>		
	Taught basic networking protocols and diagnostic approaches.		
	<i>Introduction to Computers and Computing</i>		
	Taught HTML and Microsoft Access, Excel, PowerPoint, and Word.		
5/2008 - 8/2008	<b>Research Assistant</b>	Indiana University	Bloomington, IN
	Conducted Internet measurement research under the direction of Professor Minaxi Gupta.		
5/2007 - 8/2007	<b>Research Assistant</b>	Indiana University	Bloomington, IN
	Conducted research on new Internet architectures under the direction of Professor Minaxi Gupta.		
5/2006 - 8/2006	<b>Summer Intern</b>	IBM Cryptographic Development	Charlotte, NC
	Developed cryptographic firmware for IBM’s secure co-processors.		
5/2005 - 8/2005	<b>Research Assistant</b>	Indiana University	Bloomington, IN
	Conducted research on IPSec performance and spoofing prevention techniques under the direction of Professor Minaxi Gupta.		

## Professional Activities

- Reviewer, IEEE Workshop on Local and Metropolitan Area Networks (LANMAN), 2008.
- Reviewer, IEEE Communications Magazine, 2007.
- Reviewer, IEEE INFOCOM Conference, 2007.
- Reviewer, International Conference on Parallel and Distributed Systems (ICPADS), 2007.

- Reviewer, State Key Laboratory of Information Security (SKLOIS) Conference on Information Security and Cryptology (Inscrypt), 2006.
- Reviewer, International Conference on Communications (ICC) Computer and Communications Network Security Symposium, 2006.
- Reviewer, Computer Networks, an Elsevier Journal, 2006.

## Service

- Volunteer, Computer Science and Informatics Graduate Research Symposium, Indiana University, 2008.
- Committee member, Strategic Committee for Graduate Education, School of Informatics, Indiana University, 2007-2008.
- Committee member, Graduate Education Committee, Computer Science Department, Indiana University, 2007-2008.
- Board member, Student Academic Appointees Board of Review, Indiana University, 2007 - 2008.
- President, Computer Science Graduate Student Association, Indiana University, 2006 - 2007.
- Committee member, Student Academic Appointees Affairs Committee, Indiana University, 2006 - 2007.
- Event Coordinator, Computer Science and Informatics Graduate Research Symposium, Indiana University, 2007.
- Presenter, Just Be (a technology out-reach program for K-12 students), Indiana University, 2006-2008.
- Board member, Associate Instructor Board of Review, Indiana University, 2005 - 2006.
- Web master, Computer Science Graduate Student Association, Indiana University, 2005 - 2006.

## Selected Honors and Awards

- Honorable Mention, Computer Science and Informatics Graduate Research Symposium, Indiana University, 2008.
- Student Travel Grant Award, IEEE ICNP Conference, 2005.
- Student Travel Grant Award, ACM SIGCOMM Conference, 2005.
- Dean's Scholar scholarship, Ohio University, 2003-2004.
- University Scholars scholarship, Ohio University, 2001-2004.
- Best Demonstration Award, Software Design and Development course, Ohio University, 2003.
- National Merit Commended Student, 2001.

## Milestones

- Entered Ph.D. Candidacy in Computer Science at Indiana University, November 2006.
- Passed both Indiana University Computer Science written qualifying examinations, August 2004.
- Graduated with a B.S. in Computer Science from Ohio University after only 3 years, June 2004.

## Affiliations

Association for Computing Machinery  
Institute of Electrical and Electronics Engineers

Iota Nu Phi Honor Society  
Upsilon Pi Epsilon Honor Society

## References

Available upon request.