

CURRICULUM VITAE

**NICHOLAS A. DIAKOPOULOS**

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**EDUCATION**

- Ph.D. in Computer Science** August 2009  
Georgia Institute of Technology, Atlanta, GA  
Advisor: Dr. Irfan Essa  
Emphasis on Human Computer Interaction (HCI) and computational media  
Dissertation Title: "Collaborative Annotation, Analysis, and Presentation Interfaces for Digital Video"
- M.S. in Computer Science** December 2005  
Georgia Institute of Technology, Atlanta, GA  
Research project involved designing novel interfaces to support photo collage authoring.
- Sc.B. (B.S.) in Computer Engineering: Multimedia Signal Processing** May 2002  
Brown University, Providence, RI

**ACADEMIC EXPERIENCE**

- Post Doctoral Research Associate – Rutgers University** 11/2009 – present  
School of Communication and Information, Department of Library and Information Science  
Research is investigating computational journalism and its relation to commenting systems and the social media context of news and other events.
- Visiting Assistant Professor – University of Bergen** 8/2009 – 10/2009  
Department of Information and Media Studies  
Lectured and taught seminars and masters classes on the topics of computational journalism and collaborative production and authorship of media.
- Graduate Research Assistant – Georgia Tech** 2003 – 2009  
Advisor: Irfan Essa  
Research encompassed designing and building media authoring, tagging, and visualization interfaces to support enhanced media analysis and creation in image and video domains.
- Co-Instructor – Georgia Tech** Spring 2007, 2008  
Course Title: Computational Journalism  
Course Owner: Irfan Essa  
Designed new course syllabus including class structure and schedule, topics, and readings; designed assignments, critiques, and group projects for students; lectured and led discussion in class
- TI:GER – Technological Innovation: Generating Economic Results** Fall 2007 – Spring 2009  
TI:GER is an interdisciplinary entrepreneurship program involving MBA and Ph.D. students from Georgia Tech and JD students from Emory. Each team works on the Ph.D.'s research project to understand the market and business potential of the technology. The program includes an NSF IGERT fellowship for the Ph.D. student.
- Research Assistant – Graphics Lab: Exploratories Group – Brown University** 1/2000 – 1/2001  
Advisor: Andries van Dam  
Wrote applets using Java3D to illustrate and teach concepts involved with radiosity algorithms
- Undergraduate Teaching Assistant – Brown University** Fall 2000  
Course Title: Introduction to Computer Graphics

Course Owner: Andries van Dam  
Held office hours; graded C++ programs; helped write lecture slides

**Undergraduate Teaching Assistant – Brown University**

Spring 1999

Course Title: Introduction to Scientific Computing  
Course Owner: John Savage  
Held office hours; graded C programs; designed and maintained course website

## WORK EXPERIENCE

**AAAS Mass Media Fellow, Sacramento Bee**

Summer 2009

Sacramento, CA  
Host: Scott Lebar, Assistant Managing Editor  
Reported on science topics of interest in the Sacramento region including both writing stories and programming interactive simulations and graphics

**Research Intern, Fuji-Xerox Palo Alto Laboratory (FXPAL)**

Summer 2006

Palo Alto, CA  
Host: Patrick Chiu  
Designed and evaluated a collaborative game for tagging images on a tabletop computer; Presented research and helped write paper and patent application

**Guest Researcher, Joanneum Research IIS**

Summer 2004

Graz, Austria  
Host: Georg Thallinger  
Conducted an extensive literature review on automatic object recognition algorithms; Prototyped and evaluated algorithms for a broadcast video object recognition system

**Guest Researcher, Fraunhofer IGD**

Summer 2001, 8/2002 – 6/2003

Darmstadt, Germany  
Host: Stephan Volmer  
Developed video processing technology for content based video retrieval and tracking; Presented results of research and wrote and published papers; Worked with students on various research projects

**Student Researcher, Fraunhofer CRCG**

12/2000 – 5/2002

Providence, RI  
Advisor: Peter Stephenson  
Helped develop a new, efficient, and patented algorithm for line antialiasing; Helped write and publish the results of line antialiasing work; Researched more efficient ray-tracing methods as they relate to volume rendering

**Software Engineering Intern, Avid Technology: Film and Video Effects Group**

Summer 2000

Tewksbury, MA  
Cross platform development (NT and Mac) of a real time audio effects subsystem for the avid video editor; Large scale software engineering and re-engineering using design patterns

**Programming Intern, Astro-Med Inc.**

6/1997 – 8/1999

West Warwick, RI  
Programmed Windows user applications and extensible ActiveX components in MFC; Worked with other designers on various GUIs for a label design program

## AWARDS AND HONORS

### Postgraduate

Computing Innovation (CI) Fellow (NSF; 2009,2010 – 11% acceptance rate) – \$267,500 award

### Graduate

AAAS Mass Media Fellow (AAAS, 2009 – 10% acceptance rate)

NSF IGERT Fellow (Integrative Graduate Education and Research Traineeship) 2007 – 2009

PhD Student Research Excellence Commendation (SIC, Georgia Tech, 2008)

Foley Scholars Finalist (GVU Center, Georgia Tech, 2008)

Presidential Fellowship recipient (Georgia Tech, 2003 – 2008)

NSF Graduate Research Fellowship Honorable Mention (2002, 2004)

### Undergraduate

Graduated Magna Cum Laude (top 20% Brown University, 2002)

Outstanding Student Award in Computer Engineering (Brown University, 2002)

## PUBLICATIONS AND PATENTS

### Refereed Conference Papers

1. N. Diakopoulos, M. Naaman, F. Kivran-Swaine. Diamonds in the Rough: Social Media Visual Analytics for Journalistic Inquiry. Conference on Visual Analytics Science and Technology (VAST). October, 2010. (27.7% acceptance rate)
2. N. Diakopoulos and D. A. Shamma. Characterizing Debate Performance via Aggregated Twitter Sentiment. *Conference on Human Factors in Computing Systems (CHI)*. Atlanta, USA, April 2010. (22% acceptance rate)
3. K. Luther, N. Diakopoulos, A. Bruckman. Edits & Credits: Exploring Integration and Attribution in Online Creative Collaboration. Conference on Human Factors in Computing Systems (CHI) alt.chi. April, 2010.
4. N. Diakopoulos, S. Goldenberg, I. Essa. Videolyzer: Quality Analysis of Online Informational Video for Bloggers and Journalists. Conference on Human Factors in Computing Systems (CHI). Boston, USA, April 2009. (24.5% acceptance rate)
5. N. Diakopoulos, K. Luther, I. Essa. Audio Puzzler: Piecing Together Time-Stamped Speech Transcripts with a Puzzle Game. In Proceedings of ACM Conference on Multimedia. Vancouver, Canada, October, 2008.
6. N. Diakopoulos, I. Essa. An Annotation Model for Making Sense of Information Quality in Online Video. International Conference on the Pragmatic Web (ICPW). Uppsala, Sweden, September, 2008.
7. N. Diakopoulos, K. Luther, Y. Medynskiy, I. Essa. The Evolution of Authorship in a Remix Society. In Proceedings of Hypertext and Hypermedia. Manchester, UK, September 2007. (29% acceptance rate)
8. N. Diakopoulos, I. Essa. Videotater: An Approach for Pen-Based Digital Video Segmentation and Tagging. In Proceedings of User Interface Software and Technology (UIST). Montreux, Switzerland, October 2006 (23% acceptance rate)
9. N. Diakopoulos, I. Essa. Mediating Photo Collage Authoring. In Proceedings of User Interface Software and Technology (UIST). Seattle, USA, October 2005. (19% acceptance rate)
10. N. Diakopoulos, I. Essa, and R. Jain. Content Based Image Synthesis. Conference on Image and Video Retrieval (CIVR) 2004, Dublin, Ireland, July 2004. pp 299-307. (17% acceptance rate)

11. S. Volmer and N. Diakopoulos. Contextually Meaningful Representation of Color for the Description of Visual Content. 6th International Conference on Visual Information Systems, Miami, USA, September 2003.

### **Refereed Posters, Extended Abstracts, Demonstrations, and Videos**

12. N. Diakopoulos. Game-y Information Graphics. Conference on Human Factors in Computing Systems (CHI) Works in Progress. April, 2010.
13. N. Diakopoulos, P. Chiu. PhotoPlay: A Collocated Collaborative Photo Tagging Game on a Horizontal Display. In Proceedings addendum of User Interface Software Technology (UIST). Newport, Rhode Island, October 2007.
14. A. St. Clair, M. Fong, N. Diakopoulos, I. Essa. NARC: The News Article Revision Comparator. In Proceedings addendum of User Interface Software Technology (UIST). Newport, Rhode Island, October 2007.
15. P. Chiu, J. Huang, M. Back, N. Diakopoulos, J. Doherty, W. Polak, X. Sun. mTable: Browsing Photos and Videos on a Tabletop System. ACM Multimedia Video Program. 2008.

### **Workshop Papers**

16. N. Diakopoulos, I. Essa. Modulating Video Credibility via Visualization of Quality Evaluations. WWW Workshop on Information Credibility on the Web (WICOW). April, 2010.
17. S. Yardi, K. Luther, N. Diakopoulos, A. Bruckman. Opening The Black Box: Four Views of Transparency in Remix Culture. CSCW Workshop on Tinkering, Tailoring, & Mashing: The Social and Collaborative Practices of the Read-Write Web. San Diego, November, 2008.
18. K. Luther and N. Diakopoulos. Distributed Creativity. Creativity and Cognition Workshop on Supporting Creative Acts Beyond Dissemination. June 2007.
19. N. Diakopoulos, I. Essa. Supporting Personal Media Authoring . ACM Multimedia workshop on Multimedia for Human Communication (MHC). Singapore, November 2005.
20. H. Rehatschek, N. Diakopoulos, G. Kienast, V. Hahn, T. Declerck. DIRECT-INFO: A Distributed Multimodal Analysis System for Media Monitoring Applications. European Workshop on the Integration of Knowledge, Semantics and Digital Media Technology (EWIMT 2004), London, UK, November 2004.
21. N. Diakopoulos and S. Volmer. Temporally Tolerant Video Matching. SIG IR Multimedia Information Retrieval Workshop 2003, Toronto, Canada, August 2003.

### **Journal Papers**

22. N. Diakopoulos, P. Stephenson. Anti-Aliased Lines Using Run-Masks. Computer Graphics Forum, vol. 24, no. 2, 2005, pp 165-172.

### **Patents**

23. Peter Stephenson, Bruce Litow, and Nicholas Diakopoulos. Using line structure information to enhance line drawing in digital systems. US Patent # WO03052733. July 26, 2003
24. Nicholas Diakopoulos, Patrick Chiu. Photoplay: A Video Game for Tagging Photos on a Tabletop Display. Patent Pending. Submitted Jan. 10<sup>th</sup>, 2007.

### **PRESENTATIONS AND INVITED TALKS**

1. N. Diakopoulos. Social Media Visual Analytics for Journalistic Inquiry. Invited Talk at to the Journalism Research Group, University of Bergen, Bergen, Norway, May, 2010
2. N. Diakopoulos. Computational Journalism: Visual Analytics for Journalistic Inquiry. Invited Talk at American Public Media / Minnesota Public Radio, St. Paul, MN, May, 2010
3. N. Diakopoulos. Computational Journalism: Visual Analytics for Journalistic Inquiry. Invited Talk at IBM Research, Cambridge, MA, April, 2010

4. N. Diakopoulos. Computational Journalism: Visual Analytics for Journalistic Inquiry. Invited Lecture to Computational Journalism Class, Georgia Tech, Atlanta, GA, April 2010
5. N. Diakopoulos. Computational Journalism: Commenting on the News. Invited Talk at University of Michigan, Ann Arbor, MI, March 2010.
6. N. Diakopoulos. Computational Journalism: Commenting on the News. Invited Talk at Michigan State University (MSU), East Lansing, MI, February 2010.
7. N. Diakopoulos. Computational Journalism: Commenting on the News. LIS Lunch Talk at Rutgers University, New Brunswick, NJ, February 2010.
8. N. Diakopoulos. Commenting on the News. Invited Talk to the Norwegian Online News Association (NONA), Bergen, Norway, October 2009.
9. N. Diakopoulos. Computational Media: Annotation, Interaction, Communication. Invited Talk at Fuji Xerox Palo Alto Laboratory (FXPAL), Palo Alto, CA, July 2009.
10. B. Stenger and N. Diakopoulos. Computational Journalism: Content, Interfaces, Services, Business Models. Presentation at OSCON, San Jose, CA, July 2009.
11. N. Diakopoulos. Computational Media: Annotation, Interaction, Communication. Invited Talk at Yahoo! Research, Sunnyvale, CA, May 2009.
12. N. Diakopoulos. Computational Media: Annotation, Interaction, Communication. Invited Talk at Telefónica Investigación y Desarrollo (TID), Barcelona, Spain, May 2009.
13. N. Diakopoulos. Computational Journalism. Presentation at The New York Times, New York, NY, April 2009.

## **PROFESSIONAL AND ACADEMIC SERVICE**

### **Program Committees**

Symposium on User Interface Software and Technology (UIST), 2010  
 Symposium on Computation and Journalism (Program Co-Chair), 2008  
 Workshop on Search in Social Media (SSM) at the Conference on Information and Knowledge Management, 2008

### **Conference Reviewer**

SIGCHI Conference on Human Factors in Computing Systems (CHI), 2006 – 2010  
 Symposium on User Interface Software and Technology (UIST), 2004 – 2010  
 Computer Supported Cooperative Work (CSCW), 2008, 2010  
 International Conference on Intelligent User Interfaces (IUI), 2010  
 International World Wide Web Conference (WWW), 2010  
 Symposium on Visual Analytics Science and Technology (VAST), 2010  
 IEEE Information Visualization Conference (InfoVis), 2010  
 ICMI International Conference on Multimodal Interfaces, 2007  
 ACM SIGGRAPH, 2007 - 2008

### **Memberships**

Association for Computing Machinery (ACM), 2006 – present  
 Institute of Electrical and Electronics Engineers (IEEE), 2002 – present  
 National Association of Science Writers (NASW), 2009  
*Tau Beta Pi* national engineering honor society  
*Phi Beta Kappa* national honor society

### **University**

Intel Opportunity Scholars Mentor (Georgia Tech, 2003 – 2008)

Graduate Student Council Faculty Recruiting Liaison (Georgia Tech, 2007)  
Graduate Student Council CS Ph.D. Recruiting Liaison (Georgia Tech, 2008)

## **STUDENT MENTORING**

Spring 2010

Eirik Stavelin – Computational Journalism

Fall 2009 – Spring 2010

Ian Jablonowski – Framework for human computation

Fall 2008

Sweta Vajjhala – Interfaces for organizing blog and news comments

Summer 2007

Michael Hansen – CityState: a facebook application for citizen journalism

Fall 2006 – Spring 2007

Aaron St. Claire and Matthew Fong (visualizing news change over time – UROC 3<sup>rd</sup> place winner)

Fall 2006

James Gaines – ambient visualization of videos from YouTube

Fall 2005 – Spring 2006

Dana Van Devender and Aaron St. Claire – gas price visualization (IOS poster contest winner)

Fall 2004 – Spring 2005

Dana Van Devender, Daniel Hernandez, and Aaron St. Claire – video collages

Spring 2004

Gina Lee and Dana Van Devender – proceduralized video editing

## **PERSONAL INTERESTS AND HOBBIES**

Latin dancing and performance (Salsa, Merengue, Bachata), Photography, Improv Theater, Travel

## **LANGUAGES**

Native English, Conversational German (written and spoken), Intermediate Spanish (written and spoken), dabbler in Greek, Arabic, French, Norwegian

## **CITIZENSHIP**

United States of America