

**David H. Gotz**  
Research Staff Member  
IBM T. J. Watson Research Center  
19 Skyline Drive  
Hawthorne, NY 10570  
(914) 486-1296  
Email: [dave@gotzfamily.org](mailto:dave@gotzfamily.org)  
WWW: <http://www.gotzfamily.org/~gotz/>

## **CURRENT EMPLOYMENT**

Research Staff Member  
2006 - Present  
T. J. Watson Research Center at IBM Research

Research areas of focus: visual analytics, medical informatics, intelligent user interfaces, and information visualization.

## **EDUCATION**

University of North Carolina at Chapel Hill  
Ph.D. in Computer Science, 2005  
Dissertation Title: Scalable and Adaptive Streaming for Non-Linear Media  
M.S. in Computer Science, 2001

Georgia Institute of Technology  
B.S. in Computer Science, 1999, with Highest Honors  
Certificate in Economics

## **RESEARCH AREAS OF INTEREST**

Computer Graphics  
Computer Networking  
Information Visualization  
Intelligent User Interfaces  
Multimedia Computing  
Visual Analytics

## **PREVIOUS EMPLOYMENT**

Post-Doctoral Research Scientist  
2005 – 2006  
T. J. Watson Research Center at IBM Research, Intelligent Multimedia Interaction Group

Research Assistant  
2001 – 2005  
UNC-Chapel Hill Computer Science Department, Multimedia Research

Research Intern  
Summer 2001  
Bell Labs, Multimedia Communications Research Lab

Research Assistant  
1999 – 2001  
UNC-Chapel Hill Computer Science Department, Office of the Future Group  
(Visualization and Computer Graphics Research)

Research Intern  
Summer 1999  
Naval Research Labs, Virtual Reality Lab

Research Intern  
Summer 1998  
Bell Labs, Multimedia Communications Research Lab

Undergraduate Research Assistant  
1997 – 1999  
Georgia Institute of Technology, Virtual Environments Group

Intern  
Summers 1995, 1996, 1997  
Bell Communications Research

## **REFEREED CONFERENCE PUBLICATIONS**

Shahram Ebadollahi, Jimeng Sun, David Gotz, Jianying Hu, Daby Sow, and Chalapathy Neti. Predicting Patient's Trajectory of Physiological Data using Temporal Trends in Similar Patients: A System for Near-Term Prognostics. *American Medical Informatics Association Annual Symposium* (2010), Washington, DC.

Nan Cao, Jimeng Sun, Yu-Ru Lin, David Gotz, Shixia Liu and Huamin Qu. FacetAtlas: Multi-facet Visualization for Rich Text Corpora. *IEEE Information Visualization* (2010), Salt Lake City, Utah.

Jimeng Sun, David Gotz, Nan Cao. DiseaseAtlas: Multi-facet Visual Analytics for Online Disease Articles. *International Conference of the IEEE Engineering in Medicine and Biology Society* (2010), Buenos Aires, Argentina.

David Gotz, Zhen Wen, Jie Lu, Peter Kissa, Nan Cao, Wei Hong Qian, Shi Xia Liu, Michelle X. Zhou. HARVEST: An Intelligent Visual Analytic Tool for the Masses.

*Proceedings of the First International Workshop on Intelligent Visual Interfaces for Text Analysis* (2010), Hong Kong, China.

Yedendra Shrinivasan, David Gotz. Connecting the Dots in Visual Analysis. *Proceedings of IEEE Visual Analytics Science and Technology* (2009), Atlantic City, New Jersey.

Yedendra Shrinivasan, David Gotz. Connecting the Dots with Related Notes. *Proceedings of ACM CHI Extended Abstracts* (2009), Boston, Massachusetts.

David Gotz, Zhen Wen. Behavior-Driven Visualization Recommendation. *Proceedings of ACM Intelligent User Interfaces* (2009), Sanibel, Florida.

Wen-Huang Cheng, David Gotz. Context-Based Page Unit Recommendation for Web-Based Sensemaking Tasks. *Proceedings of ACM Intelligent User Interfaces* (2009), Sanibel, Florida.

David Gotz, Michelle X. Zhou. Characterizing Users' Visual Analytic Activity for Insight Provenance. *Proceedings of IEEE Visual Analytics Science and Technology* (2008), Columbus, Ohio.

David Gotz, Zhen Wen, Jie Lu, Peter Kissa, Michelle X. Zhou, Nan Cao, Wei Hong Qian, Shi Xia Lui. HARVEST – Visualization and Analysis for the Masses. *Proceedings of IEEE Information Visualization, Poster Program* (2008), Columbus, Ohio.

Wen-Huang Cheng, David Gotz. Context-Based Page Unit Recommendation for Web-Based Sensemaking Tasks. *Proceedings of the International World Wide Web Conference, Poster Program* (2008), Beijing, China.

David Gotz. The ScratchPad: Sensemaking Support for the Web. *Proceedings of the International World Wide Web Conference, Poster Program* (2007), Banff, Canada.

David Gotz. Scalable and Adaptive Streaming for Non-Linear Media. *Proceedings of ACM Multimedia* (2006), Santa Barbara, California.

David Gotz, Michelle X. Zhou, Vikram Aggarwal. Interactive Visual Synthesis of Analytic Knowledge. *Proceedings of IEEE Visual Analytics Science and Technology* (2006), Baltimore, Maryland.

David Gotz, Michelle X. Zhou, Zhen Wen. A Study of Information Gathering and Result Processing in Intelligence Analysis. *Proceedings of Workshop on Intelligent User Interfaces for Intelligence Analysis* (2006). Sydney, Australia.

David Gotz, Ketan Mayer-Patel. A General Framework for Multidimensional Adaptation. *Proceedings of ACM Multimedia* (2004). New York City, New York.

David Gotz. Supporting Adaptive Remote Access to Multiresolutional or Hierarchical Data for Large User Groups. *ACM Multimedia Doctoral Symposium* (2004). New York City, New York.

David Gotz, Ketan Mayer-Patel, Dinesh Manocha. IRW: An Incremental Representation for Image-Based Walkthroughs. *Proc. of ACM Multimedia* (2002). Juan-les-Pins, France.

Ruigang Yang, David Gotz, Justin Hensley, Herman Towles, Michael S. Brown. PixelFlex: A Reconfigurable Multi-Projector Display System. *Proc. of IEEE Visualization* (2001). San Diego, California.

Jarrell Pair, Carlos Jensen, Jeff Wilson, Larry Hodges, David Gotz, Julian Flores. The NAVE: Design and Implementation of a Non-Expensive Immersive Virtual Environment. *Presented at SIGGRAPH Sketches and Applications* (2000), New Orleans, Louisiana.

Larry Hodges, Barbara Rothbaum, Renato Alacron, David Ready, Fran Shahar, Ken Graap, Jarrell Pair, Philip Hebert, David Gotz, Brian Wills, David Baltzell. Virtual Vietnam: A Virtual Environment for the Treatment of Vietnam Veterans with Post-Traumatic Stress Disorder. *Proc. of the 8th International Conference on Artificial Reality & Tele-Existence* (1998). Tokyo, Japan.

## **REFEREED JOURNAL ARTICLES**

David Gotz, Michelle X. Zhou. Characterizing User's Visual Analytic Activity for Insight Provenance. *Information Visualization* (Volume 8, Number 1, 2009).

Ketan Mayer-Patel, David Gotz. Scalable and Adaptive Streaming for Non-Linear Media. *IEEE MultiMedia* (Volume 14, Number 3, 2007).

David Gotz, Ketan Mayer-Patel. A Framework for Scalable Delivery of Digitized Spaces. *International Journal on Digital Libraries* (Volume 5, Number 3, 2005).

Barbara Rothbaum, Larry Hodges, Renato Alacron, David Ready, Fran Shahar, Ken Graap, Jarrell Pair, Philip Hebert, David Gotz, Brian Wills, David Baltzell. Virtual Reality Exposure Therapy for PTSD Vietnam Veterans: A Case Study. *Journal of Traumatic Stress* (Volume 12, Issue 2, 1999).

Larry Hodges, Barbara Rothbaum, Renato Alacron, David Ready, Fran Shahar, Ken Graap, Jarrell Pair, Philip Hebert, David Gotz, Brian Wills, David Baltzell. A Virtual Environment for the Treatment of Chronic Combat-Related Post-Traumatic Stress Disorder. *CyberPsychology & Behavior* (Volume 2, Number 1, 1999).

## **TECHNICAL REPORTS**

David Gotz and Michelle X. Zhou. An Empirical Study of User Interaction Behavior During Visual Analysis. *IBM Research Technical Report RC24525* (2008).

David Gotz and Ketan Mayer-Patel. GAL: A Middleware Library for Multidimensional Adaptation. *UNC-CS Technical Report TR05-023* (2005).

David Gotz and Ketan Mayer-Patel. Scalable and Adaptive Streaming for Non-Linear Media. *UNC-CS Technical Report TR05-022* (2005).

Brian Begnoche, David Gotz, Ketan Mayer-Patel. The Design and Implementation of StrandCast. *UNC-CS Technical Report TR05-004* (2005).

David Gotz. The Design and Implementation of Pixel Flex: A Reconfigurable Multi-Projector Display System. *UNC-CS Technical Report TR01-025* (2001).

## **PhD COMMITTEES**

Yedendra Shrinivasan, Technische Universiteit Eindhoven (*Advisor: Jack van Wijk*)  
*Graduated June 2010. Now at IBM Research India.*

## **RESEARCH INTERNS SUPERVISED**

Nan Cao. Hong Kong University of Science and Technology. Summer 2010.

Yedendra Shrinivasan. Technische Universiteit Eindhoven. Summer 2008.  
*Now at IBM Research India*

Wen-Huang Cheng. National Taiwan University, Summer 2007.  
*Now at the Institute of Information Science, Academia Sinica*

## **TEACHING EXPERIENCE**

University of North Carolina at Chapel Hill  
*COMP 14: Introduction to Programming*

Georgia Institute of Technology  
*CS1501: Introduction to Computing (Teaching Assistant)*

## **PATENTS**

Recommending one or more concepts related to a current analytic activity of a user.  
*(Patent Pending, Filed 9/25/2009)*

Recommending one or more existing notes related to a current analytic activity of a user.  
*(Patent Pending, Filed 9/25/2009)*

Method and apparatus for intelligent exploratory visualization and analysis. (*Patent pending, Filed 2/6/2009*)

Methods and apparatus for obtaining visual insight provenance of a user. (*Patent Pending; Filed 8/27/2008*).

Methods and apparatus for visual recommendation based on user behavior. (*Patent Pending; Filed 8/20/2008*).

Context-based document unit recommendation for sensemaking tasks. (*Patent Pending; Filed 4/18/2008*).

Methods for organizing information accessed through a web browser. (*Patent Pending; Filed 7/20/2007*).

Techniques for organizing information accessed through a web browser. (*Patent Pending; Filed 7/20/2007*).

## **PROFESSIONAL SERVICE**

*2010*

Co-Chair, IEEE Workshop on Visual Analytics in Health Care  
Co-Chair, Tutorial Program for IEEE VisWeek  
Program Committee for ACM Multimedia  
Program Committee for the International Conference on Information  
Visualization Theory and Applications

*2009*

Program Committee for IEEE VAST  
Program Committee for ACM Multimedia  
Program Committee for the International Symposium on Visual Computing

*2008*

Co-Chair, Poster Program for IEEE VAST  
Program Committee for ACM Multimedia  
Program Committee for the International Symposium on Visual Computing

*2007*

Co-Chair, Poster Program for IEEE VAST  
Program Committee for ACM Multimedia

*2006*

Program Committee for ACM Multimedia  
Best Short Paper Award Committee Member for ACM Multimedia Conference

Reviewer for:

ACM Conference on Human Factors in Computing Systems (CHI)  
ACM Multimedia  
ACM Transactions on Multimedia Computing, Communications and Applications  
Eurographics  
IEEE Information Visualization (InfoVis)  
IEEE International Conference of Pervasive Computing and Communications  
IEEE MultiMedia Magazine  
IEEE Transactions on Circuits and Systems for Video Technology  
IEEE Visual Analytics Science and Technology (VAST)  
International Symposium on Visual Computing  
International Conference on Information Visualization Theory and Applications