

CURRICULUM VITAE
François Guimbretière

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1. PERSONAL INFORMATION

a. Name and rank

François Victor Jacques Jérôme Guimbretière, Assistant professor

b. Educational background

Stanford University, Stanford, California, 9/94 – 4/02.

Ph. D. in Computer Science, 4/02, Research advisor: Terry Winograd.

M.S. in Computer Science, 6/97.

Ecole Supérieure d'Electricité, Gif-sur-Yvette, France, 9/87 – 6/90

Diploma in Electrical Engineering, major in Artificial Intelligence, 6/90.

University of Nantes, Nantes, France, 9/85 – 6/87

Diploma of Associate of Science, 6/87.

c. Employment background

Assistant professor, Computer science department with joint appointment in UMIACS,
University of Maryland, College Park, 08/02 – present.

Visiting Scholar, Microsoft Research, 06/03 – 07/03 (Host: Mary Czerwinski).

Research assistant, Human computer interaction group, Stanford University, 09/97 – 04/02
(Research advisor: Terry Winograd).

Research assistant, Program analysis and verification group, Stanford University, 01/95 – 08/97
(Research advisors: John Mitchell and David Luckham).

Intern at Rail Transportation Systems, New York, New York, 06/92 – 09/93.

Researcher at the SNCF (French railways) research center, Paris, 09/91 – 05/92.

Developer at Betel Ingenierie (now part of CSC Europe), Toulouse, 09/90 – 08/91.

Intern at the CNES (French National Space Agency), Toulouse, 05/90 – 06/90.

Intern at Dassault Electronique, Saint Quentin en Yvelines, 07/89 – 08/89.

2. RESEARCH, SCHOLARLY AND CREATIVE ACTIVITY

a. Articles in Refereed Journals

Tamara Munzner, François Guimbretière, Serdar Tasiran, Li Zhang, and Yunhong Zhou.
TreeJuxtaposer: Scalable Tree Comparison using Focus+Context with Guaranteed
Visibility, ACM Transaction on Graphics 22(3), pp. 453 – 462, 2003.

- Juan Pablo Hourcade, Benjamin B. Bederson, Allison Druin, and François Guimbretière. Differences in pointing task performance between preschool children and adults using mice. *ACM Transactions on Computer-Human Interaction* **11**(4), pp 357 – 386, 2004.
- François Guimbretière, Andrew Martin, and Terry Winograd. Benefits of Merging Command Selection and Direct Manipulation. *ACM Transactions on Human-Computer Interaction*, **12**(3), pp 460 – 476, 2005.
- Chunyuan Liao[†], François Guimbretière, Ken Hinckley, and Jim Hollan. PapierCraft: A Gesture-Based Command System for Interactive Paper. *ACM Transactions on Human-Computer Interaction*, (In press).

b. Articles under review in Refereed Journals

- Nicholas Chen[†], François Guimbretière, Liyang Sun, Mary Czerwinski, Gian Pangaro, and Steven Bathiche. Hardware Support for Navigating Large Digital Documents. Submitted to the International Journal of Human Computer Interaction.
- Nicholas Chen[†], François Guimbretière, and Corinna Loeckenhoff. Relative Role of Merging and Two Handed Operation on Command Selection Speed. Submitted to the International Journal of Human-Computer Studies.
- Georg Aptsiz[†], François Guimbretière, and Shumin Zhai. Foundations for designing and evaluating user interfaces based on the crossing paradigm. Submitted to ACM transactions on Human-Computer Interaction.
- Hyunyoung Song[†], François Guimbretière, Chang Hu, and Hod Lipson. ModelCraft Framework: Capturing Freehand An-notations and Edits to facilitate the Design Process using Digital Pen. Submitted to ACM transactions on Human-Computer Interaction.

c. Talks, Abstracts and Other Professional Papers Presented

i. Refereed Conference Proceedings

- Terry Winograd and François Guimbretière. Visual Instruments for an Interactive Mural. *Proceedings of CHI 1999, Extended Abstracts*, pp. 234 – 235.
- Tamara Munzner, François Guimbretière, and George Robertson. Constellation: A Visualization Tool For Linguistic Queries from MindNet. *Proceedings of the 1999 IEEE Symposium on Information Visualization*, pp. 132 –135, 154. (40% acceptance rate)
- François Guimbretière and Terry Winograd. FlowMenu: Combining Command, Text and Parameter Entry. *Proceedings of UIST 2000*, pp. 213 – 216. (16% acceptance rate)
- François Guimbretière, Maureen Stone and Terry Winograd. Fluid Interaction with High-resolution Wall-size Displays. *Proceedings of UIST 2001*, pp. 21 – 30. (19% acceptance rate)
- François Guimbretière. Paper Augmented Digital Documents. *Proceedings of UIST 2003*, pp. 51 – 60. (22% acceptance rate)
- Ken Hinckley, Gonzalo Ramos, François Guimbretière, Patrick Baudisch, and Marc Smith. Stitching: Pen Gestures that Span Multiple Displays. *Proceedings of AVI 2004*, pp. 23 – 31. (26% acceptance rate)
- Georg Aptsiz[†] and François Guimbretière. CrossY: A Crossing-Based Drawing Application. *Proceedings of UIST 2004*, pp. 3 – 12. (Best Paper Award, 21% acceptance rate)

[†] Student under my supervision.

- Liyang Sun[†] and François Guimbretière. Flipper: a New Method for Digital Document Navigation. *Proceedings of CHI 2005 (Extended Abstract)*, pp. 2001 – 2004.
- Ken Hinckley, Patrick Baudisch, Gonzalo Ramos, and François Guimbretière. Design and Analysis of Delimiters for Selection-Action Pen Gesture Phrases in Scriboli. *Proceedings of CHI 2005*, pp. 453 – 460. (25% acceptance rate)
- Chunyu Liao[†], François Guimbretière, and Ken Hinckley. PapierCraft: A Command System for Interactive Paper. *Proceedings of UIST 2005*, pp. 241 – 244. (19% acceptance rate)
- Ken Hinckley, François Guimbretière, Patrick Baudisch, Raman Sarin, and Maneesh Agrawala. The Springboard: Multiple Modes in One Spring-loaded Control. *Proceedings of CHI 2006*, pp. 181 – 190. (23% acceptance rate)
- Ron B. Yeh, Chunyu Liao[†], Scott Klemmer, François Guimbretière, Brian Lee, Boyko Kakaradov, Jeannie Stamberger, and Andreas Paepcke. ButterflyNet: A Mobile Capture and Access System for Field Biology Research. *Proceedings of CHI 2006*, pp. 571 – 580. (23% acceptance rate)
- Dmitry Nekrasovski, Adam Bodnar, Joanna McGrenere, François Guimbretière, and Tamara Munzner. An Evaluation of Pan & Zoom and Rubber Sheet Navigation with and without an Overview. *Proceedings of CHI 2006*, pp. 11 – 20. (23% acceptance rate)
- Ken Hinckley, François Guimbretière, Maneesh Agrawala, Georg Apitz[†], and Nicholas Chen[†]. Phrasing Techniques for Multi-Stroke Selection Gestures. *Proceedings of GI 2006*, pp. 147 – 154. (33% acceptance rate)
- Hyunyoung Song[†], François Guimbretière, Hod Lipson, and Chang Hu[†]. Capturing Freehand Annotations and Edits on Physical 3D Models. *Proceedings of UIST 2006*, pp. 13 – 22. (23% acceptance rate)
- Chunyu Liao[†], François Guimbretière, and Corinna Loeckenhoff. Pen-top feedback for paper-based interfaces. *Proceedings of UIST 2006*, pp. 201 – 220. (23% acceptance rate)
- François Guimbretière, Morgan Dixon[†], and Ken Hinckley. ExperiScope: An Analysis Tool for Interaction Data. *Proceedings of CHI 2007*, pp 1333 – 1342. (22% acceptance rate)
- Hyunyoung Song[†], François Guimbretière, Michael A. Ambrose, and Carl Lostritto. CubeExplorer: An Evaluation of Interaction Techniques in Architectural Education. *Proceedings of INTERACT 2007*, pp 43 – 56. (33% acceptance rate)
- Chunyu Liao[†], François Guimbretière, Richard Anderson, Natalie Linnell, Craig Prince, and Valentin Razmov. PaperCP: Exploring the Integration of Physical and Digital Affordances for Active Learning. *Proceedings of INTERACT 2007*, pp 15 – 28. (33% acceptance rate)
- Morgan Dixon[†], François Guimbretière and Nick Chen[†]. Maximizing Efficiency in Crossing-Based Dialog Boxes. *Proceedings of CHI 2008*, in press. (22% acceptance rate)
- Nick Chen[†], François Guimbretière, Morgan Dixon[†], Cassandra Lewis[†] and Maneesh Agrawala. Navigation Techniques for Dual-Display E-Book Readers. *Proceedings of CHI 2008*, in press. (22% acceptance rate)

ii. Refereed workshop

- Measuring the Utility of Gaze Detection for Task Modeling: A Preliminary Study. Penelope Brooks, Khoo Yit Phang, Rachael Bradley, Douglas Oard, Ryen White and François Guimbretière. *Proceedings of the Workshop on Intelligent Interfaces for Intelligence Analysis 2006*.

iii. Invited Abstract

- Georg Apitz[†] and François Guimbretière. CrossY: A Crossing-Based Drawing Application. *Proceedings of SigGraph 2005*, pp. 930 – 930.

iv. Invited talks

- Stanford Interactive Mural
AT&T labs, Florham Park, J, 10/99
- Stick it on the Wall: A Metaphor for Interaction with Large Displays
CHI 2001 workshop on Tools, Conceptual Frameworks, and Empirical Studies for Early Stages of Design, Seattle, WA, 04/01
- Fluid Interaction with High-resolution Wall-size Displays
People Computer and Design seminar, Stanford University, Stanford University, CA, 06/01
FX Palo Alto Laboratory, Palo Alto, CA, 06/01
University of Maryland, College Park, MD, 12/01
Mitsubishi Electric Research Laboratories, Cambridge, MA, 12/01
IBM Almaden Research center, Almaden, CA, 01/02
Imperial College London, London, 02/02
University of Washington, Seattle, WA, 03/02
Microsoft Research, Seattle, WA, 04/02
Sun Microsystems Laboratories, Burlington, MA, 01/03
- People, Paper, and Computers
First Anoto developer conference, University of Pennsylvania, Philadelphia, PA, 01/03
Cognitive Psychology Seminar, University of Maryland, College Park, MD, 09/03
Pixar interactions group, Emeryville, CA, 12/03
People, Computer and Computer seminar, Stanford University, Stanford, CA, 12/03
Distributed Cognition and HCI Laboratory, University of California at San Diego, San Diego CA, 02/04
Graphics group, Princeton University, Princeton, PA, 12/04
- CrossY: A Crossing-Based Drawing Application.
Tablet PC workshop, University of Washington, Seattle, WA, 07/05
- People, Pens, and Computers
Microsoft Faculty summit co-presented with Ken Hinckley (MSR), Redmond, WA, 07/05
Microsoft Research, Redmond, WA, 07/05
Microsoft Research, Redmond, WA, 06/06
Panel member at the Microsoft Faculty summit 07/06
GVU Center at the Georgia Institute of Technology, Atlanta, GA, 04/07
HCII at Carnegie Mellon University, Pittsburgh PA, 04/07

d. Videos

- François Guimbretière and Tamara Munzner. FlowMenu: Combining Command, Text, and Parameter Entry, 2000.
- François Guimbretière, Brad Johanson, and Maureen Stone. Fluid Interaction with High-resolution Wall-size Displays, 2001.
- François Guimbretière and Tamara Munzner. TreeJuxtaposer: Scalable Tree Comparison using Focus+Context with Guaranteed Visibility, 2003.

e. Demonstration

- Kevin Convoy[†], Dave Levin[†], François Guimbretière. ProofRite : A Paper-Augmented Word Processor. *UIST 2004 Demonstration*.
- Nicholas Chen, François Guimbretière, Cassandra Lewis, Maneesh Agrawala. Enhancing Document Navigation Tasks With a Dual-Display Electronic Reader. *UIST 2007 demonstration*.

f. Original Designs and patents

François Guimbretière and Maureen Stone. Stanford Interactive Mural, 1999 – 2002.

Steven Bathiche, François Guimbretière, and Gian Pangaro. Tactile Device for Scrolling. **Filed** US Patent.

Ken P. Hinckley, Patrick M. Baudisch, Gonzalo A. Ramos, and François Guimbretière. Delimiters for Selection-Action Pen Gesture Phrases. **Filed** US Patent.

Ken Hinckley, François Guimbretière, Georg Apitz, Nicholas Chen, Maneesh Agrawala and Raman Sarin. Phrasing Extensions and Multiple Modes in One Spring-loaded controls. **Filed** US Patent.

g. Contracts and Grants

Towards Better Command Selection Mechanisms for GUIs, 2004 - 2008. (NSF grant, \$422,000, PI)

People, Paper, and Computers, 2005 - 2010. (NSF CAREER grant, \$400,000, PI)

Towards Better Command Selection Mechanisms for GUIs, 2006. (NSF REU grant, \$6,000, PI)

Towards Better Command Selection Mechanisms for GUIs, 2007. (NSF REU grant, \$7,000, PI)

People, Paper, and Computers, 2007. (NSF REU grant, \$7,000, PI)

Capturing Freehand Annotations and Edits on Physical 3D Models, 2007 - 2008. (NSF SGER grant, \$100 000, PI)

h. Fellowships, Prizes, and Awards

InfoVis 2003 contest: First place overall: TreeJuxtaposer: James Slack, Tamara Munzner, University of British Columbia, and François Guimbretière, University of Maryland.

UIST 2004: Best Paper Award: Georg Apitz. and François Guimbretière. CrossY: A Crossing-Based Drawing Application.

3. TEACHING AND ADVISING

a. Courses taught

i. General

Introduction to HCI (CMSC 434)

Fall 2002, assistant professor, 50 students

Introduction to HCI (CMSC 434)

Fall 2003, assistant professor, 50 students

Introduction to HCI for graduate students (CMSC 828F)

Fall 2004, assistant professor, 9 students

Introduction to HCI (CMSC 434)

Spring 2005, assistant professor, 37 students

Introduction to HCI for graduate students (CMSC 838G, now CMSC634)

Fall 2005, assistant professor, 7 students

Introduction to HCI (CMSC 434)

Spring 2006, assistant professor, 30 students

ii. Specialized

Advanced Usability (CMSC 838G): People, Paper, and Computers

Spring 2003, 9 students

Advanced Usability (CMSC 838G): New Devices for New Interactions
Spring 2004, 3 students

Advanced Usability (CMSC 838G): Introduction to Rapid Prototyping Techniques
Fall 2006, 10 students

Introduction to Rapid Prototyping Techniques (CMSC 498D)
Spring 2007, 15 students

iii. Guest lectures

Advanced Usability (CMSC 838S): Creativity Support Tools, Fall 2002.

Introduction to research (Fall seminar, 2004 - present).

Human Computer Interaction (UCSD CogSci120), Winter 2004.

Introduction to HCI (CMSC 434): Empirical evaluation, Fall 2006.

b. Advising

i. Undergraduate

Kevin Convoy, (senior honors student), 2003 – 2004, graduated with honors.

Liyang Sun, (independent study), Spring – Summer 2004.

Pramit Mohapatra, (independent study), Spring 2004.

Jooyong Lee, (independent study), 2004 – 2005.

Bong Kim, (independent study), Summer 2005.

Wayne Wang, (independent study), Summer – Fall 2005.

Morgan Dixon, (independent study, REU Summer 2006), Spring 2006 – present.

Chip Hulseberg, (independent study), Fall 2006 – Spring 2007.

Cassandra Lewis, (independent study), Spring 2007 – present.

ii. Graduate

Ph. D. Graduate Committee member, Juan Pablo Hourcade, *User interface Technologies and Guidelines to Support Children's Creativity, Collaboration, and Learning*, 2003.

Ph. D. Graduate Committee member, Haixa Zhao, *Interactive Sonification of Abstract Data Design Space, Evaluation, and User Tool*, Spring 2006.

Ph. D. Graduate Committee member, Seungjoon Lee, *WISE Abstraction Framework for Wireless Networks*, Summer 2006.

Ph. D. Graduate Committee member, Alejandro Rodrigue, *Guided Self-Organizing Particle Systems for Basic Problem Solving*, Fall 2006.

Ph. D. Advisor, Chunyuan Liao, 2004 – present (Anticipated graduation date: Winter 08).

Ph. D. Advisor, Nicholas Chen, 2004 – present.

Ph. D. Advisor, Hyun Young Song, 2006 – present.

4. SERVICE

a. Professional

Reviewer for CHI, Graphic Interfaces, International Journal of Human-Computer Studies, SigGraph, Transaction of Computer Human Interaction (ToCHI), UIST.

Reviewer for the Intel Science Talent Search, Fall 2003.

Program committee member, IEEE Symposium on information visualization (InfoVis), 2003 – 2004, EuroGraphics 2005, CHI 2006, UIST 2006, SigGraph 2006 Sketches Jury.

Reviewer, panelist and workshop participant for NSF.

b. Campus

i. Department

Member of the “Evaluating University Service Courses” committee, Fall 2003.

Member of the “Women and Minority Recruitment and Retention” committee, Fall 2003.

Friday Faculty Lunch Coordinator (organizing a weekly informal lunch for faculty), Fall 2003 – Spring 2007.

Member of the Laboratory committee (Fall 2003 – Spring 2005).

Member of the Admission committee, Spring 2007.

ii. UMIACS

Member of APT committee Fall 2005 – Fall 2006.