Nathalie Henry

INRIA Saclay
Bat 490. University of Paris-Sud
91405 Orsay Cedex
France

nathalie.henry@lri.fr
Ph: +33 (0)1 6915 6499
Fax: +33 (0)1 7485 4242
`http://www.aviz.fr/~nhenry`

last update: november 2008

RESEARCH INTERESTS

I conduct my research in the general field of human-computer interaction, with a primary interest in information visualization. My dissertation research deals with the visual exploration of large social networks, bridging graph theory, social network analysis, information visualization and human-computer interaction. I aim at designing, implementing and evaluating novel interactive visualization techniques.

I recently graduated and received a joint Ph. D. in Computer Science in France and in Australia. My co-advisors were Pr. Jean-Daniel Fekete (INRIA, France) and Pr. Peter Eades (University of Sydney, Australia). I started my Ph.D. research in october 2004 and defended on the 3rd july 2008, receiving my Ph.D. with honors.

EDUCATION

2004-2008   **Cotutelle Ph.D. (double doctoral degree scheme) in Computer Science**
started october 2004, graduated july 2008 with honors
Exploring large social networks with matrix-based representations
Co-advised by Pr. Jean-Daniel Fekete and Pr. Peter Eades
INRIA & University of Paris-Sud
University of Sydney

2003-2004   **Research Master in Computer Science**
Document, Images and Communicating Information Systems
University of Lyon1, National Institute of Applied Science (INSA), Lyon, France

2001-2004   **Engineering Diploma in Computer Science**
National Institute of Applied Science (INSA), Lyon, France

1999-2001   **Bachelor Degree in Computer Science (DUT)**
University Institute of Technology, University of Paris-Sud, France

1998-1999   **First year in Computer Science (University Studies Diploma : DEUG)**
University of Paris-Sud, France

1998   **High School Diploma in Science**
Sens, France

AWARDS AND GRANTS

2007   Brian Shackel award (Best paper award), International conference Interact'07

2008   INRIA-Microsoft Research, 7 month position
2004-2007   French government Ph.D. grant: $70,000 over 3 years
2003   French government international internship (USA) grant: $700
2001   French government international internship (UK) grant: $700

EMPLOYMENT AND INTERNSHIPS

2008 **Postdoctoral fellow**
ReActivity project, Microsoft Research-INRIA, Orsay, France

2004-2007 **Ph. D. Student**
Autograph project, INRIA, Orsay, France

2005-2006 **1-week Internship each year**
Scientific Research Communication on Graphs Visualization
Palais de la decouverte (Museum on Scientific Discovery), Paris, France

jan-jun 2004 **Research Master Internship in Computer Graphics**
Realistic Aging of 3D Natural Scenes
LIRIS, Computer Graphics Lab., University of Lyon 1, France

2003 **Computer Science Engineering Project over 1 year**
Living Pictures. Introduction to research in Bio-inspired Computer Science, Articifial Intelligence, Genetic Algorithms
LIRIS, National Institute of Applied Science, University of Lyon 1, France

mar-sep 2003 **Second year Engineering Internship**
Introduction to research in Information Visualization, Visual Languages and Computer Graphics.
`http://jbeanstudio.sourceforge.net`
VisLab., University of Sydney, Australia

may-sep 2002 **First year Engineering Internship**
Automatic web site genereation using Java DOM, XML and Enhydra server
Leader Of The Dot Inc., Baltimore, MD, USA

apr-jun 2001 **Degree Internship**
Design and Programmation of a Dynamic Web Site Section. Analysis and Design using UML, Programmation using Php-MySQL
SSDMV Research Group., Napier University, Edinburgh, Scotland

RESEARCH ACTIVITIES

Positions in professional societies

2009 **Proceedings publication co-chair**
ACM CHI 2009 Conference on Human Factors in Computing Systems

Program comittee member
IEEE Information Visualization conference
IUI workshop on collaborative informationvisualization

Volunteering

2007 **Interact'07 doctoral consortium**
Rio de janeiro, Brazil

2006 **Student volunteer at Vis/Infovis/VAST'06**
Baltimore, MD, USA

2004 **Information Visualization Summer School**
Computer Science Research Lab. of Bordeaux(LaBri), Bordeaux, France

2003 **Student Volunteer at AIED'03**
Artificial Intelligence in EDucation Conference
Sydney, Australia

Article reviewing

2009 IEEE Transaction on Visualization and Computer Graphics
    IEEE PacificVis'09

2008 IEEE Transaction on Visualization and Computer Graphics
    ACM CSCW'08, Conference on Computer Supported Cooperative Work
    ACM UIST'08, Symposium on User Interface Software and Technology
    ACM CHI'08, Conference on Human Factors in Computing Systems
    ACM CHI'08 workshop: BELIV'08
    Eurographics'08
    ACM Transactions on Computer-Human Interaction (TOCHI), 2008
    IEEE Infovis'08, Conference on Information Visualization
    IEEE VAST'08, Symposium on Visual Analytics Science and Technology

2007 IEEE Infovis'07, Conference on Information Visualization
    IEEE VAST'07, Symposium on Visual Analytics Science and Technology
    ACM UIST'07, Symposium on User Interface Software and Technology
    ACM CHI'07, Conference on Human Factors in Computing Systems
    International journal on Human-Computer Interaction (IJHCI), 2007

2006 IEEE Infovis'06, Symposium on Information Visualization
    AVI'06 workshop: BELIV'06

REFEREED PUBLICATIONS

Journal Publications

11. **N. Henry**, H. Goodell, N. Elmqvist and J-D. Fekete
  20 years of 4 HCI conference: a visual exploration
  In *International Journal of Human-Computer Interface – Special issue in honor of Ben Shneiderman's 60th birthday: Reflections on Human-Computer Interaction*, 23(3), pp239-285, December 2007.

Conference Publications (Long papers)

10. **N. Henry**, A. Bezerianos and J-D. Fekete
  Improving the Readability of Clustered Social Networks by Node Duplication
  In *IEEE Transactions on Visualization and Computer Graphics (Proceedings of Visualization/Information Visualization 2008)*, 14(6), pages 1317-1324, November/December 2008. IEEE Press.
  [Acceptance rate 26%]

9. N. Elmqvist, **N. Henry**, Y. Riche and J-D. Fekete
  Mélange: space folding for multi-focus interaction
  In *Proceedings of the ACM CHI 2008 Conference on Human Factors in Computing Systems*, pages 1333-1342, April 2008. ACM Press.
  [Acceptance rate 22%]

8. N. Elmqvist, T-N. Do, H. Goodell, **N. Henry** and J-D. Fekete.
  ZAME: interactive large-scale graph visualization.
  In *Proceedings of IEEE Pacific Visualization Symposium 2008*, pages 215-222, March 2008. IEEE Press.
  [Acceptance rate 30%]

7. **N. Henry**, J-D. Fekete and M. McGuffin
  NodeTrix : Hybrid Representation for Analyzing Social Networks
  In *IEEE Transactions on Visualization and Computer Graphics (Proceedings of IEEE InfoVis'07)*, 13(6), pp 1302-1309, November 2007. IEEE Press.
  [Acceptance rate 23%]

6. **N. Henry** and J-D. Fekete
MatLink : Enhanced Matrix Visualization for Analyzing Social Networks
In *Proceedings of the 11th IFIP TC13 International Conference on Human-Computer Interaction (Interact'07)*, LNCS 4663, pp 288-302, Springer, Rio de Janeiro, Brazil, September 2007. Springer.
[Acceptance rate 33%]
Brian Shakel award (best paper award)

5. **N. Henry** and J-D. Fekete
MatrixExplorer : A Dual-Representation System to Explore Social Networks
In *IEEE Transactions on Visualization and Computer Graphics (Proceedings of IEEE InfoVis'06)*, 12(5), pp 677-684, October 2006. IEEE Press.
[Acceptance rate 24%]

4. **N. Henry** and J-D. Fekete
MatrixExplorer : Un systeme pour l'analyse des réseaux sociaux
In *Proceedings of the 18th French Speaking Conference on Human Computer Interaction (IHM'06)*, pages 67-74, April 2006. International Conference Proceedings Series, ACM Press
[Acceptance rate 41%]

Workshop Publications and Short Papers

3. **N. Henry**
Visually Exploring Large Social Networks
In *Proceedings of the 11th IFIC TC13 International Conference on Human-Computer Interaction (Interact'07)*, LNCS 4663, pp 604-610, Rio de Janeiro, Brazil, September 2007.
Doctoral consortium paper

2. **N. Henry** and J-D. Fekete
Evaluating Visual Table Data Understanding
In *Proceedings of BEyond time and errors: novel evaLuation methods for Information Visualization (BELIV'06)*, AVI'06 Workshop, ACM Press, Venice, Italy, May 2006.

1. C. Plaisant, B. Lee, C.S. Parr, J-D Fekete and **N. Henry**
Task Taxonomy for Graph Visualization
In *Proceedings of BEyond time and errors: novel evaLuation methods for Information Visualization (BELIV'06)*, AVI'06 Workshop, ACM Press, Venice, Italy, May 2006.

OTHER PUBLICATIONS AND THESES

4. **N. Henry**, N. Elmqvist and J-D. Fekete
A Methodological Note on Setting Up Logging and Replay Mechanisms
In *BEyond time and errors: novel evaLuation methods for Information Visualization (BELIV'08)*, CHI'08 Workshop
Position paper

3. J-D. Fekete, N. Elmqvist, T-N. Do, H. Goodell and **N. Henry**
Navigating Wikipedia with the Zoomable Adjacency Matrix Explorer
INRIA Reseach Report, No.RR:00141168

2. **N. Henry**
Exploring Large Social Networks with Matrix-based Representations
Ph. D. thesis, co-advised by Pr. Jean-Daniel Fekete and Pr. Peter Eades.
INRIA/Universit Paris-Sud, University of Sydney

1. **N. Henry**
Modélisation d'environnements naturels complexes: les forêts
Master thesis, advised by Dr. Eric Galin.
LIRIS/CNRS, University of Lyon 1, France

PRESENTATIONS AND DEMONSTRATIONS

13. **Conference Presentation:** Improving the Readability of Clustered Social Networks by Node Duplication
    IEEE InfoVis'08, October 2008
    Colombus, OH, USA

12. **Ph. D. Defense:** Exploring Large Social Networks with Matrix-based Representations
    INRIA/Universite Paris-Sud, July 2008
    Orsay, France

11. **Invited Demonstration:** Interactive Visualization of Social Networks
    Workshop on online social networks, December 2007
    `http://research.microsoft.com/~thomkar/osn.htm`
    MSR Research, Cambridge, UK

10. **Conference Presentation:** NodeTrix, Hybrid Representation of Social Networks
    IEEE InfoVis'07, October 2007
    Sacramento, CA, USA

9. **Poster:** 20 years of UIST collaboration
    Displayed during UIST'07 for UIST's 20th birthday
    ACM UIST'07, October 2007
    Newport, RI, USA

8. **Invited Talk:** Visually Exploring Social Networks
    Seminar during a research lab. visit, September 2007
    UFRGS, Porto Allegre, Brazil

7. **Conference Presentation:** MatLink, Augmenting Matrix-based Representations
    Interact'07, September 2007
    Rio de Janeiro, Brazil

6. **Invited Talk:** Exploring Social Networks using Matrices
    Seminar during a research lab. visit, September 2007
    MSR Research, Seattle, WA, USA

5. **Invited Talk:** Exploring Social Networks using Matrix-Based Representations
    Social Networks Analysis Workshop: Helping Users Make Sense of Social Networks, June 2006
    `http://www.cs.umd.edu/hcil/sna-workshop`
    HCIL, University of Maryland, MD, USA

4. **Conference Presentation:** MatrixExplorer, a Dual-Representation System to Explore Social Networks
    IEEE InfoVis'06, October 2006
    Baltimore, MD, USA

3. **Invited Talk:** Exploratory Visualization of Networks
    Seminar on Graphic Representations of Networks, May 2006
    University of Queensland, Brisbane, Australia

2. **Invited Talk:** Exploratory Visualization of Graphs using Matrices
    Seminar on Graphic Representations of Networks, December 2005
    National Institute of Demographic Studies (INED), Paris, France

1. **Invited Talk:** Visualizing Social Networks using Matrices
    Social Network Anlysis and Visualization Workshop, September 2005
    Graph Drawing Conference (GD'05), Limerick, Ireland

Teaching Activities

2007-2008	**Introduction to Software Engineering: Philosophy and Methodologies.** Adult Formation for SNCF employees (French National Railway Company), 8h Duties included planning, creating and delivering lectures. *University Institute of Technology, University of Paris-Sud, France*
Summer 2007	**Supervision of Ludovic Hauchemaille** 3 months final year undergraduate Internship Initiation to research in Information Visualization Topic: EmailVis, an extension for Thunderbird
2004-2007	**Teaching position for 3 years (64 to 96 hours/year)** *University Institute of Technology, University of Paris-Sud, France*
2006-2007	**EmalVis: Visualizing Email Flow** Undergraduate Final Project, 48h + full week, 14 students. Initiation to Information Visualization. I was solely responsible for the project. Duties included planning, creating and delivering lectures, defining the content, dividing the project in 7 teams of 2 students, preparing final written and oral exams (counting as a third the final degree grade). Result of the project available at `http://emailvis.sourceforget.net` *University Institute of Technology, University of Paris-Sud, France* **Introduction to XML** Undergraduate course, 13h *University Institute of Technology, University of Paris-Sud, France* **Introduction to Software Engineering: Philosophy and Methodologies.** Adult Formation for SNCF employees (French National Railway Company), 11h (see above) *University Institute of Technology, University of Paris-Sud, France*
2005-2006	**Designing Information Systems with UML** Undergraduate tutorials & practicals, 64h Duties included planning and delivery of weekly tutorials, creating part of the assignments and their marking schemes *University Institute of Technology, University of Paris-Sud, France* **Introduction to Software Engineering: Philosophy and Methodologies.** Adult Formation for SNCF employees (French National Railway Company), 5h (see above) *University Institute of Technology, University of Paris-Sud, France*
2004-2005	**Designing Information Systems with UML** Undergraduate tutorials & practicals, 64h (see above) *University Institute of Technology, University of Paris-Sud, France*
2002-2003	**Member of the association: Tomorrow Engineers?** Presentation of our curriculum and carreer choices in high schools and fora *National Institute of Applied Science (INSA), Lyon, France*

References

Research	**Pr. Jean-Daniel Fekete** *Research director of the AVIZ team* *INRIA, France* +33 (0)1 6915 6494 jean-daniel.fekete@inria.fr `http://www.aviz.fr/~fekete`

Pr. Peter Eades
Research director of the HxI team, NICTA, Australia
Full Professor, school of IT, Univ. of Sydney, Australia
+61 (0)2 8374 5550
peter.eades@nicta.com.au
`http://www.cs.usyd.edu.au/~peter/`

Additional references available upon request

Teaching Dr. Francoise Schlienger
Associate Professor
Department of Computer science, university of Paris-Sud
francoise.schlienger@u-psud.fr

HOBBIES

Plastic Arts	Acrylic Paintings & Charcoals Member of the Plastic Arts Studies Department at INSA (3-year course)
Music	Piano for ˜10 years Cello for 8 months
Sport	Horse Riding (english, american and australian style) Skuba Diving, PADI Advanced Diver certification