Fanny Chevalier

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Nationality: French
Date of birth: April 3rd, 1981
Marital status: Single, no child

Education

2004-2007   **Ph.D. in Computer Science, LaBRI (Laboratoire Bordelais de Recherche en Informatique)**
Recognition of Quasi-Similar Patterns in Graphs: Heuristic and Applications
INRIA Bordeaux (research project-team Gravité)
Bordeaux, France
Thesis Advisors: Maylis Delest and Jean-Philippe Domenger

2003-2004   **DEA (equivalent to a M.Sc.) in Computer Science (Multimedia), Université de Bordeaux 1**
Object Recognition in very Low-resolution Video
Internship at LaBRI (Laboratoire Bordelais de Recherche en Informatique)
Bordeaux, France
Thesis Advisor : Jenny Benois-Pineau

Experience

Since Jan. 2007   **Postdoctoral Fellow, Microsoft-INRIA Joint Center**
Information Visualization and Human-Computer Interaction for collaborative working awareness
INRIA Saclay (research project-team Aviz)
Advisor: Jean-Daniel Fekete

2006-2007   **Attaché Temporaire d'Enseignement et de Recherche (equivalent of Assistant Professor), Université Bordeaux 1**
Visualization of evolving data
INRIA Bordeaux (research project-team Gravité)

2006-2007   **Ph.D. applicant, LaBRI (Laboratoire Bordelais de Recherche en Informatique)**
Graph comparison, content-based image/video retrieval,visualization of evolving data
Université Bordeaux 1

Publications (see details page 2)

Refereed Papers in International Journals -- 2 papers
Refereed Papers in International Conference Proceedings -- 4 papers
Refereed Papers in International French-speaking Conference Proceedings -- 2 papers
Scientific popularization – 1 paper
Other publications -- 1 thesis
Press – 1 radio interview

Collective Responsabilities (see details page 4)

Reviewing -- 4 journals, 3 international conferences
Workshop and seminar organization – 1 organization committee member, 1 co-founder and organizer

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Teaching (see details page 4)

Lecturer / Assistant professor -- 30h lectures, 200h guided class

Publications

Refereed Papers in International Journals

- F. Chevalier, J.P. Domenger, J. Benois-Pineau and M. Delest **Retrieval of objects in video by similarity based on graph matching** *Pattern Recognition Letter, Vol. 28(8), pages 939--949 - jun 2007*

- F. Chevalier, M. Delest and J.P. Domenger **A heuristic for the retrieval of objects in video in the framework of the rough indexing paradigm** *Signal Processing: Image Communication (SPIC), Vol. 22, pages 622-634 – 2007*

Refereed Papers in International Conference Proceedings

- F. Chevalier, S, Huot and J.D. Fekete **WikipediaViz: Conveying Article Quality for Casual Wikipedia Readers** *PacificVis'10: Proceedings of the IEEE Pacific Visualization Symposium, 10 pages, March 2010, Taipei, Taiwan* (*)

  Acceptance rate : N/A

- T. Moscovich, F. Chevalier, N. Henry, E. Pietriga and J.D. Fekete **Topology-Aware Navigation in Large Networks** *CHI '09: Proceedings of the SIGCHI conference on Human Factors in computing systems, pages 2319-2328, April 2009, Boston, USA* (*)

  Acceptance rate : 24%

- F. Chevalier, D. Auber and A. Telea **Structural Analysis and Visualization of C++ Code Evolution using Syntax Trees** *IWPSE '07: Proceedings of the International Workshop on Principles of Software Evolution, pages 90-97, Dubrovnik, Croatia, 2007*

  Acceptance rate : 23%

- F. Chevalier, M. Delest and J.P. Domenger **A heuristic for the retrieval of objects in low resolution video** *CBMI '07: Proceedings of International Workshop on Content-Based Multimedia Indexing, pages 144-151, Bordeaux, France, 2007,* **Best student paper award** (*)

  Acceptance rate: 22%

Refereed Papers in International French-speaking Conference Proceedings

- F. Chevalier, S, Huot and J.D. Fekete Visualisations de measures agrégées pour l'estimation de la qualité des articles Wikipedia *EGC'10 : Actes de la Conférence Internationale Francophone en Extraction et Gestion des Conaissances, 12 pages, January 2010, Hammamet, Tunisia (To appear)* (*)

  Acceptance rate : 23%

- F. Chevalier, M. Delest and J.P. Domenger **Recherche de motifs quasi-similaires dans des graphes** *EGC '08: Extraction et Gestion des Connaissances - Actes de l'Atelier Visualisation et extraction de connaissances, pages 1-14, Sophia Antipolis, France, 2008* (*)

Scientific Popularization

- F. Chevalier, S. Huot and J.D. Fekete **Comprendre et Interpréter la Qualité des Articles Wikipedia** *Découverte, La revue du Palais de la découverte*, 2010 (*To appear*)

Other Publications

- F. Chevalier **Reconnaissance de motifs quasi-similaires dans des graphes : heuristique et applications** - *PhD thesis, Université Bordeaux 1, 2007*

Press

- I have been interviewed by France Info (Info Science) on graph navigation techniques http://www.aviz.fr/audio/fanny-franceinfo.mp3 (in French)

(*) I gave the associated talk for this article.

Ongoing research projects

Diffamation: Keep track of Document Evolution by Animating Diff

An important activity in collaborative writing is communicating about changes to text. The current tools we have at our disposal of to keep track of changes between two versions of a document are either based on side-by-side views of the two versions highlighting the differences between them; or present a visual merging of the two document versions, highlighting the diff edit operations using colors or other visual indicators (e.g. text that has been removed is in red or crossed on). Such tools are very effective when comparing two revisions of a document but they fail to represent the history of edits for more than two steps. In this project, we propose an animation technique for smoothly transitioning between different text revisions. The transition system for retracing editing process we called Diffamation. Diffamation supports rapid exploration of revision histories by combining text animated transitions with simple navigation and visualization tools.

A System for Exploring Multivariate Social Networks

Social networks collected by historians or sociologists typically have a large number of actors and attributes. Applying analysis algorithms to these networks produces additional attributes such as degree, centrality, and clustering coefficients. Understanding the effects of this plethora of attributes is one of the main challenges in multivariate social network analysis. We propose a system to facilitate multivariate social network analysis space based on the ScatterDice[1] tool. Our system is designed to be a simple visualization tool, based around a comprehensive approach to visualize attributes. We support a large set of social analysis tasks by proposing several intuitive interactions to help in exploring the social network.

[1] N. Elmqvist, P. Dragicevic and J.D. Fekete **Rolling the Dice: Multidimensional Visual Exploration using Scatterplot Matrix Navigation**. INFOVIS'08

WikipediaViz: **Conveying Article Quality for Casual Wikipedia Readers**

As Wikipedia became one of the most used knowledge base worldwide, the problem of the trustworthiness of the information it disseminates has become central, especially when considering casual readers that may not be aware of the online encyclopedia principle (anyone can edit, volatile information, etc.). With WikipediaViz, we introduce five thumbnail visualizations that aim to keep casual Wikipedia readers aware of important information about the articles they read and to raise potential quality issues.

To appear:

- F. Chevalier, S, Huot and J.D. Fekete **WikipediaViz: Conveying Article Quality for Casual Wikipedia Readers** *PacificVis'10: Proceedings of the IEEE Pacific Visualization Symposium, 10 pages, March 2010, Taipei, Taiwan*
- F. Chevalier, S, Huot and J.D. Fekete **Visualisations de measures agrégées pour l'estimation de la qualité des articles Wikipedia** *EGC'10 : Actes de la Conférence Internationale Francophone en Extraction et Gestion des Conaissances, 12 pages, January 2010, Hammamet, Tunisia*

An Infrastructure to Compute and Maintain Aggregated Information for Group Awareness in Wikipedia

Wikipedia fails to provide simple ways to gather information about the evolution of the encyclopedia: people are spending a lot of time in gathering information she needs to keep track of the editing process. The goal of this project is to provide a software infrastructure to compute and maintain aggregated information required to inform Wikipedians about contributors and articles. The situation of Wikipedia is quite specific, due to the explicit lack of hierarchy in Wikipedia and the openness of the system. However, similar situations will arise soon in other domains such as biology and chemistry where very large databases are maintained and enriched by organizations that can no longer keep with the pace of changes.

Other projects

I am currently working in the VisMaster project, composing a video for promoting Visual Analytics. I am a co-scenarist, a co-director and the main visualization developer for making of the video.
http://www.vismaster.eu

Reviewing

International Journals
- IEEE Transactions on Visualization and Computer Graphics (TVCG)
- International Journal of Human-Computer Studies, Elsevier Science
- Signal Processing: Image Communication on Content-Based Multimedia Indexing (SPIC), Elsevier Science
- Information Sciences, Elsevier Science

International Conferences
- ACM CHI 2010
- IEEE PacificVis 2010
- IEEE EUROVIS 2009

Workshop and Seminar organization

- Co-founder and main organizer of the seminar on Information Visualization and Human-Computer Interaction in Paris (Since Dec. 2008)
  Guests : *Jeffrey Heer, Ben Shneiderman, Alex Telea, Neva Cherniavski, Frank Van Ham, Mary Beth Rosson, Nicolas Roussel, Petra Isenberg, Tobias Isenberg, Nicolas Garcia Belmonte.*
  Video showcase*: HCI and Infovis video showcase.*
  http://www.lri.fr/~chevalie/visuhciseminar.html

- Organization Committee member of PariSTIC Workshop, Bordeaux, 2003
  http://pari-stic.labri.fr/index.html

Teaching

Monitrice de l'Enseignement Supérieur 2004-2007 (equivalent of Lecturer),
Attachée Temporaire d'Enseignement et de Recherche 2007-2008 (equivalent of Assistant Professor)
Institut Universitaire Technologique, dept Computer Sciences, Bordeaux.

- **Computer Graphics** (2006-2008)
  10h lectures + 10h guided classes, 3rd year Licence spe. Multimedia
  12h lectures + 12h guided classes, 2nd year Diploma of higher education
- **Advanced databases** (2006-2007)
  32h guided classes, 2nd year Diploma of higher education
- **Graphs and algorithms** (2005-2007)
  8h lectures + 16h guided classes, 2nd year Diploma of higher education
- **Initiation to algorithmic and programming** (2004-2006)
  130h guided classes, 1st year Diploma of higher education

References

References available on request.