**Fanny Chevalier**

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*Canada* **e-mail:** fanny@dgp.toronto.edu

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*Department of Computer Science*

*University of Toronto* **Nationality:** French

*10 King’s College Road – Room BA5181* **Languages:** French and English

*Toronto, ON M5S 3G4* **Date of birth:** April 3rd, 1981

*Canada* **Marital status:** Single, no child

**Current Position**

*January 2012 -* **Postdoctoral Fellow, Dynamics Graphics Project Lab, University of Toronto**

*present**Interactive visual interfaces, Interaction techniques*

Advisors: Pr. Ravin Balakrishnan and Pr. Karan Singh

*January 2010 -* **Postdoctoral Fellow, Ontario College of Art and Design University**

*present**Information Visualization, User and data-driven design, Text mining*

Advisor: Dr. Sara Diamond

**Working Experience**

*September 2011 -* **Lecturer, Digital Futures Initiative, OCAD University**

*December 2011 Courses: Data visualization, Digital Sketching*

DFI graduate program

*January 2008 -* **Postdoctoral Fellow, Microsoft-INRIA Joint Center**

*December 2009 Interactive visual Interfaces, Information Visualization and Human-Computer Interaction techniques*

Research project-team Aviz (Visual Analytics Project)

Advisor: Pr. Jean-Daniel Fekete

*September 2007 -* **Attaché Temporaire d’Enseignement et de Recherche (equivalent to Teaching Assistant),**

*December 2007*  **University Institutes for Technology, Université Bordeaux 1**

*Visualization of temporal data*

Research project-team Gravité (Graph Visualization, Graph Mining, Information Visualization)

Advisor: Pr. Maylis Delest

*Courses: Computer Graphics, Databases, Programming, Graph theory*

Department of Computer Science

**Education**

*2004-2007* **Ph.D. in Computer Science, Université Bordeaux 1**

*Recognition of Quasi-Similar Patterns in Graphs: Heuristic and Applications*

INRIA Bordeaux (research project-team Gravité)

Advisors: Pr. Maylis Delest and Pr. Jean-Philippe Domenger

*2003-2004* **DEA (equivalent to a M.Sc.) in Computer Science (Multimedia), Université Bordeaux 1**

*Object Recognition in very Low-resolution Video*

Internship at LaBRI (Laboratoire Bordelais de Recherche en Informatique)

Advisor: Pr. Jenny Benois-Pineau

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

**Refereed Papers in International Journals**

 [J5-C12] J. Zhao, F. Chevalier, C. Collins and R. Balakrishnan **Facilitating Discourse Analysis with Interactive Visualization** *In EEE Transactions on Visualization & Computer Graphics (Proc. InfoVis 2012), 10 pages, 2012*

 [J4-C8] J. Zhao, F. Chevalier, E. Pietriga and R. Balakrishnan **Exploratory Analysis of Time-series with ChronoLenses** *In EEE Transactions on Visualization & Computer Graphics (Proc. InfoVis 2011), 17(12):2422-2431, 2011*

**[Acceptance rate : 26% (44/172)]**

 [J3-C5\*] A. Bezerianos, F. Chevalier, P. Dragicevic, N. Elmqvist and J.D. Fekete **GraphDice: A System for Exploring Multivariate Social Networks** *In Computer Graphics Forum (Proc. EuroVis 2010), 29(3):863-872, 2010*

**[Acceptance rate : 29% (48/164)]**

[J2] 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), 22:622-634, 2007*

[J1] 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, 28(8):939-949 - Jun 2007*

**Refereed Full-Length Papers in International Conference Proceedings**

[C13\*] F. Chevalier, P. Dragicevic and C. Hurter **Histomages: Fully Synchronized Views for Image Editing**, *UIST’12: ACM Symposium on User Interface Software and Technology, 2012* (In press)

[C11] N. Banovic, F. Chevalier, T. Grossman and G. Fitzmaurice **Triggering Triggers and Burying Barriers to Cutomizing Softwares**, *CHI'12: Proceedings of the SIGCHI conference on Human Factors in computing systems, pp. 2717-2726, 2012*

**[Acceptance rate : 23% (370/1577)]**

[C10] S. Zhao, F. Chevalier, W.T. Ooi, C.Y. Lee and A. Agrawala **AutoComPaste: Auto-Completing Text as an Alternative to Copy-Paste**, *AVI'12: Proceedings of the International Conference on Advanced Visual Interfaces, pp. 365-372, 2012*

[C9\*] P. Dragicevic, S. Huot and F. Chevalier **Gliimpse: Animating from Markup Code to Rendered Documents and Vice-Versa**, *UIST'11: ACM Symposium on User Interface Software and Technology, pp. 257-262, 2011*

**[Acceptance rate : 25%]**

[C7] J. Zhao, F. Chevalier and R. Balakrishnan **KronoMiner: Using Multi-Foci Navigation for the Visual Exploration of Time-Series Data**, *CHI'11: Proceedings of the SIGCHI conference on Human Factors in computing systems, pp. 1737-1746, 2011*

**[Acceptance rate : 26% (400/1540)]**

[C6] N. Boukelifa, F. Chevalier and J.D. Fekete **Real-time Aggregation of Wikipedia Data for Visual Analytics** *VAST'10: Proceedings of the IEEE Symposium on Visual Analytics Science and Technology, pp. 147-154, 2010*

**[Acceptance rate : 22% (26/94)]**

[C5] N. Riche, B. Lee and F. Chevalier **iChase: Supporting Exploration and Awareness of Editing Activities on Wikipedia** *AVI '10: Proceedings of AVI 2010, pp.59-66 , 2010*

**[Acceptance rate : 20% (27/133)]**

[C4\*] F. Chevalier, P. Dragicevic, A. Bezerianos and J.D. Fekete **Using Text Animated Transitions to Support Navigation in Document Histories** *CHI '10: Proceedings of the SIGCHI conference on Human Factors in computing systems, pp. 683-692, 2010*

**[Acceptance rate : 22% (302/1346)]**

[C3\*] 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, pp. 215-222, 2010*

**[Acceptance rate : 31%]**

[C2\*] 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 Connaissances, pp. 351-362, 2010*

[**Acceptance rate : 23%]**

 [C1\*] 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, pp. 2319-2328, 2009*

**[Acceptance rate : 24% (277/1130)]**

**Refereed Short-Length Papers, Technical Notes, Posters in International Conference Proceedings**

[S7] S. Oliver, G. Gali, F. Chevalier and S. Diamond **Discursive Navigation of Online News,** *DIS’12: ACM Proceedings of the Designing Interactive Systems Conference, pp. 82-85, 2012*

**[Acceptance rate : 20% (90/449)]**

[S6] G. Gali, S. Oliver, S. Diamond and F. Chevalier **Visualizing Sentiments in Business-Customer Relations with Metaphors** *CHI EA’12: ACM Proceedings of the SIGCHI conference Extended Abstracts on Human Factors in Computing Systems, pp. 1493-1498, 2012*

[S5] D. Freeman, F. Chevalier, E. Westecott, K. Duffield, K. Hartman and D. Reilly **Tweetris: Play with me** *TEI’12: Proceedings of the International Conference on Tangible, Embedded and Embodied Interaction - Art Exploration, pp. 319-320, 2012*

[S4\*] F. Chevalier and S. Diamond **The Use of Real Data in Fine Arts for Insight and Discovery: Case Studies in Text Analysis** *IEEE VisWeek 2010 Discovery Exhibition, 2010*

[S3\*] F. Chevalier, M. Delest and J.P. Domenger **Recherche de motifs quasi-similaires dans des graphes** *EGC '08: Extraction et Gestion des Connaissances, pp. 1-14, 2008*

[S2] 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, pp. 90-97, 2007*

**[Acceptance rate : 23%]**

[S1] 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, pp. 144-151, 2007.* **Best student paper award**

[**Acceptance rate: 22%]**

**Other Publications**

 [Thesis] 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)

**Teaching Experience**

***Lecturer*** University of Toronto / Ontario College of Art and Design University, Toronto, Ontario

**DIGF 6B07 – Data Visualization** (Fall 2011) – Co-instructor

20h lectures + 16h guided class, Digital Futures Innovations graduate students

**DIGF 6B13/CSC 2521 – Digital Sketching: Interaction, modeling and perception** (Fall 2011) – Co-instructor

20h lectures + 16h guided class, Digital Futures Innovations graduate students

The two above classes are Digital Futures Innovation electives. As a co-instructor, I had responsibility of creating and delivering lectures, setting and grading assignments and examinations.

***Lecturer / Teaching Assistant*** University Institutes for Technology, Dep. Of Computer Sciences, Bordeaux, France

**Computer Graphics** (2006-2008) – Instructor (\*)

10h lecture + 10h guided class, 3rd year Undergraduate (Licence spe. Multimedia)

12h lecture + 12h guided class, 2nd year Undergraduate (2nd year Diploma of higher education)

**Advanced databases** (2006-2007) – Teaching Assistant

32h guided class, 2nd year Undergraduate (2nd year Diploma of higher education)

**Graphs and algorithms** (2005-2007) – Instructor (\*)

8h lecture + 16h guided class, 2nd year Undergraduate (2nd year Diploma of higher education)

**Initiation to algorithmic and programming** (2004-2006) – Teaching Assistant

130h guided class, 1st year Undergraduate (1st year Diploma of higher education)

 (\*) As instructor for the course, I had full responsibility for all aspects of the course: preparing and delivering lectures, setting and grading assignments and examinations, and maintaining course material and website.

As a *Monitrice de l’Enseignement Supérieur 2004-2007 (equivalent to* ***Lecturer****),* and *Attachée Temporaire d’Enseignement et de Recherche 2007-2008 (equivalent to* ***Teaching Assistant****)*, I took active part of the discussions about the student hiring process as well as course restructuring. I was also involved in the creation of the Professional License in Multimedia, and was one of the pioneer instructors of the new program.

***Invited Guest Lecturer*** *(2010-2011)* Ontario College of Art and Design University, Toronto, Ontario

**Animated Transition in Information Visualization** (June 2010)

3h lecture, in the GDES 3B91 “Special Topic: Introduction To Data Visualization”

*Public*: all year Undergraduate students in art and design.

**Interactive Visualizations – Introduction to Information Visualization and Human-Computer Interaction** (Jan 2011)

3h lecture, in the SOSC 3B27 “Human Factors for Designers”

*Public*: all year Undergraduate students in art and design.

***Science Fair Animator*** *(Dec. 2008)* Université Paris Sud, France

**Awareness campaign for youth and the general public – Visualizing Harry Potter’s social network** (Jan 2008)

One full day of activities and games surrounding the social network of Harry Potter: Manipulation of tangible graphs, use of collocated-collaborative network visualization tool on a large display [1].

*Public*: 8 to 12 years old kids, and general public.

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[1] P. Isenberg et al. **CoCoNutTrix: Collaborative Retrofitting for Information Visualization**. Computer Graphics and Applications: Special Issue on Collaborative Visualization, 29(5):44–57, September/October 2009.

**Mentoring Student Experience**

Students that have been working on research projects under my direction.

**PhD Students**

* ***Jian Zhao –*** *PhD student in Computer Science at the dgp lab, University of Toronto*

Visual interfaces for time-series data (see [J4,C7]), and discourse analysis (see [J5])

* **Dustin Freeman -***dgp lab, University of Toronto*

Study of whole-body interaction in an art exhibit (see [S5,P2])

**Graduate Students**

* **Nikola Banovic *–*** *dgp lab, University of Toronto / Research Assistant at Autodesk Research*

Study on the customization habits of users on graphic interfaces (see [C11])

* **Michael Glueck -** *dgp lab, University of Toronto / Research scientist at Autodesk Research*

Advanced scrollbars interaction and visualization

* **Stephanie Santosa -** *dgp lab, University of Toronto*

Digital painting on videos

* **Harjot Bal, Slavica Ceperkovic, Maayan Cohen, Reena Merchant, Gabe Sawhney, Phouphet Sihavong,** and **Navaneethan Sivabalaviknarajah –** *Digital Futures Initiative, OCAD University / Research Assistants at the Centre for Innovation in Information Visualization and Data-Driven Design*

**Undergraduate Students**

I have been mentoring over 10 undergraduate students in Computer Science and Graphic Design. Below, I list only the ones whose whom I have co-authored publications.

* **Symon Oliver** and **Guia Camille -** *OCAD University / Research Assistants at the Centre for Innovation in Information Visualization and Data-Driven Design*

Interactive visual interfaces for the visualization of emotions in social media (see [S6,US1]).

**Public talks**

 (These do not include some 10-15 semi-formal talks and demos given internally to INRIA Bordeaux and Paris, OCAD and dgp between 2004-2012)

**The use of smooth animated transitions and simple interactions in InfoVis to support rich visual exploration**

 [T4] November 17, 2010 (invited talk): University of Ontario Institute of Technology (UOIT), Oshawa, Ontario.

**Diffamation: Using Text Animated Transitions to Support Navigation in Document Histories**

 [T3] November 3, 2010 (invited panelist) “Centre on Innovation for Information Visualization and Data Driven Design - Information Visualization for Text Analysis” panel, part of the CASCON 2010 conference, Centre for Advanced Studies Research, IBM Canada Software Laboratory, Markham, Ontario.

 [T2] May 11, 2010 (**invited keynote speaker**) plenary session of the Ubuntu Developer Summit in Brussels, Belgium.

**Introduction to Information Visualization**

 [T1] May 25, 2010 (workshop co-leader): Centre for Innovation in Information Visualization and Data Driven Design, OCAD-University, Toronto, Ontario.

**Research-Related Activities**

**Vismaster European Project**

Co-scenarist, co-director and the main visualization developer of a short movie promoting Visual Analytics realized for the European project VisMaster and featuring the 131-megapixel display from the WILD project.

<http://www.vismaster.eu>

**Service to the Research Community**

**Program and Organization Committee**

* Fast-forward chair, at the IEEE Visweek Conference (InfoVis, Vis, VAST), 2010, 2011, 2012.
* Program Committee Member of Work In Progress of the ACM CHI Conference, 2011, 2012, 2013.
* Co-founder, organizer and webmaster of the Parisian Seminar on Information Visualization and Human-Computer Interaction (2008-2010)

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>

**Paper reviewing**

* ACM CHI 2010 (notes), 2011 (papers and notes, WiP, alt.chi), 2012 (papers and notes, WiP), 2013
* ACM UIST 2012
* IEEE Visweek (InfoVis, VAST, Vis/SciVis) 2009, 2010, 2011, 2012
* Eurographics/IEEE Eurovis 2009, 2010, 2011, 2012
* ACM NordiCHI 2012
* ACM-SIGCHI AVI 2010, 2011
* IEEE PacificVis 2010, 2011
* Graphics Interface 2011
* INTERACT 2011
* ACM Interactive Tabletops and Surfaces 2011
* IHM 2010, 2011 (French-speaking conference)
* IEEE Transactions on Visualization and Computer Graphics (TVCG), since 2008
* International Journal of Human-Computer Studies (Elsevier), since 2010
* Information Visualization, since 2011
* Journal of Real-Time Image Processing (Springer), since 2011
* Signal Processing: Image Communication on Content-Based Multimedia Indexing (Elsevier), since 2007

**Awards**

* Best student paper award for paper presented at CBMI, Bordeaux, 2007 (see [W1]).

**Funding**

* Centre for Innovation for Information Visualization and Data Driven Design – 2 Funded Research Projects

$20,000 per project, held for 6 months

* University of Toronto Post-doctoral Fellowship

$20,000 per year, held in 2012 for 1 year

* OCAD University Post-doctoral Fellowship

$20,000 per year, held in 2012 for 1 year / $50.000 per year, held in 2010 for 2 years

* INRIA-Microsoft Post-doctoral Fellowship

~ $45.000 per year, held in 2008 for 2 years

* University Institutes for Technology (IUT Bordeaux 1) ATER (equiv. Teaching Assistant) Fellowship

~ $20.000, held in 2007

* University of Bordeaux 1 MENRT Scholarship (French governmental Graduate Scholarship)

 ~ $15.000 per year, held 3 years consecutively, 2004-2006

* University of Bordeaux 1 Moniteur d’Initiation à l’Enseignement Supérieur Scholarship
* (French governmental fellowship for selected Lecturers)

~ $ 4.000 per year, held 3 years consecutively, 2004-2006

* Undergraduate Scholarship (merit-based French governmental Scholarship)

~ $ 4.000, held in 2003