**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

*Teaching: 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 IEEE Transactions on Visualization & Computer Graphics (Proc.* **InfoVis 2012 / TVCG***), 18(2):2639-2648.* Dec 2012

[Acceptance rate : 24% (44/178)]

 [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 / TVCG***), 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, 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**

[C14] S. Santosa, F. Chevalier, R. Balakrishnan and K. Singh. Direct Space-Time Trajectory Control for Visual Media Editing, in *Proceedings of the SIGCHI conference on Human Factors in computing systems* (**CHI'13**)*, to appear.* 2013

[Acceptance rate : 20% (TBD/1963)]

[C13\*] F. Chevalier, P. Dragicevic and C. Hurter. Histomages: Fully Synchronized Views for Image Editing, in *Proceedings of the ACM Symposium on User Interface Software and Technology* (**UIST ’12**)*, pp. 281-286.* 2012

[Acceptance rate : 22% (62/288)]

[C11] N. Banovic, F. Chevalier, T. Grossman and G. Fitzmaurice. Triggering Triggers and Burying Barriers to Customizing Softwares, in *Proceedings of the SIGCHI conference on Human Factors in computing systems* (**CHI ’12**)*, 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, in *Proceedings of the International Conference on Advanced Visual Interfaces* (**AVI ’12**)*, pp. 365-372.* 2012

[C9\*] P. Dragicevic, S. Huot and F. Chevalier. Gliimpse: Animating from Markup Code to Rendered Documents and Vice-Versa, in *Proceedings of the ACM Symposium on User Interface Software and Technology* (**UIST ’11**)*, 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, in *Proceedings of the SIGCHI conference on Human Factors in computing systems* (**CHI ’11**)*, 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,in *Proceedings of the IEEE Symposium on Visual Analytics Science and Technology* (**VAST**)*, 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, in *Proceedings of the International Conference on Advanced Visual Interfaces* (**AVI ’10**)*, 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, in *Proceedings of the SIGCHI conference on Human Factors in computing systems* (**CHI ’10**)*, 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, in*Proceedings of the IEEE Pacific Visualization Symposium* (**PacificVis**)*, 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, in *Actes de la Conférence Internationale Francophone en Extraction et Gestion des Connaissances* (**EGC**)*, 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, in*Proceedings of the SIGCHI conference on Human Factors in computing systems* (**CHI ’09**)*, 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, in *ACM Proceedings of the Designing Interactive Systems Conference* (**DIS ’12**)*, 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, in *ACM Proceedings of the SIGCHI conference Extended Abstracts on Human Factors in Computing Systems* (**CHI ’12**)*, pp. 1493-1498.* 2012

[S5] D. Freeman, F. Chevalier, E. Westecott, K. Duffield, K. Hartman and D. Reilly. Tweetris: Play with me, in *Proceedings of the International Conference on Tangible, Embedded and Embodied Interaction - Art Exploration* (**TEI ’12**)*, 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, in *IEEE VisWeek 2010 Discovery Exhibition* (**VisWeek**)*.* 2010

[S3\*] F. Chevalier, M. Delest and J.P. Domenger. Recherche de motifs quasi-similaires dans des graphes, in *Actes de la Conférence Internationale Francophone en Extraction et Gestion des Connaissances* (**EGC**)*, pp. 1-14.* 2008

[S2] F. Chevalier, D. Auber and A. Telea. Structural Analysis and Visualization of C++ Code Evolution using Syntax Trees, in *Proceedings of the International Workshop on Principles of Software Evolution* (**IWPSE ’07**)*, 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, in *Proceedings of International Workshop on Content-Based Multimedia Indexing* (**CBMI**)*, 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

**Upcoming: CSC428 – Human-Computer Interaction** (Winter 2013) – Instructor

24h lectures + 12h tutorial, University of Toronto cross-listed graduate/undergraduate students

**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

For all classes, 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.

**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 Students Experience

Students that have been working on research projects (leading to publication) under my direction.

**PhD Students**

* Jian Zhao ***–*** *PhD student in Computer Science at the dgp lab, University of Toronto* (see [J4,J5,C7]),
* Dustin Freeman **-***dgp lab, University of Toronto* (see [S5])

**Graduate Students**

* Nikola Banovic ***–*** *dgp lab, University of Toronto / Research Assistant at Autodesk Research* (see [C11])
* Stephanie Santosa **-** *dgp lab, University of Toronto* (see [C14])

**Undergraduate Students**

* Symon Oliver and Guia Camille **-** *OCAD University / Research Assistants at the Centre for Innovation in Information Visualization and Data-Driven Design* (see [S6,S7]).

Public Talks

 (These do not include ~30 semi-formal talks and demos given internally to INRIA Bordeaux and Paris, OCAD and dgp)

**Guest keynote speaker**

 [T7] Diffamation: Using Text Animated Transitions to Support Navigation in Document Histories.*Plenary session of the Ubuntu Developer Summit in Brussels*, Belgium. May 2010.

**Guest panelist**

 [T6] On direct manipulation (discussing Bret Victor's *Inventing on Principle*). *Festival of Ideas*, Toronto. Nov. 2012.

 [T5] Using Text Animated Transitions to Support Navigation in Document Histories. *“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. November 2010.

**Guest speaker**

 [T4] Designing Interactive Visual Interfaces. Design Department, [Universidade de Brasília](http://www.unb.br/), Brasil, Dec. 2012.

 [T3] The use of smooth animated transitions and simple interactions in InfoVis to support rich visual exploration. [Autodesk](http://en.autodesk.ca/) Research, Toronto, March 2011.

 [T2] The use of smooth animated transitions and simple interactions in InfoVis to support rich visual exploration. University of Ontario Institute of Technology ([UOIT](http://www.uoit.ca/)), Oshawa, Nov. 2010.

 [T1] Diffamation: Using Text Animated Transitions to Support Navigation in Document Histories. [*dgp Lab*](http://www.dgp.toronto.edu/)*, University of Toronto*. March 2010.

Research-Related Activities

***Workshop*: Data Visualization – University of Brasilia (Nov 23-28, 2013)**

Co-leader and organizer of a 5 day long workshop aiming at going through the entire design cycle for deploying data visualization tools. The audience includes biomedical engineers and designers from the University of Brasília.

***Workshop*: Introduction to Information Visualization – OCAD U / York University (May 25, 2010)**

 Co-leader and organizer of a workshop aiming at introducing Information Visualization and Visual Analytics at the Centre for Innovation in Information Visualization and Data Driven Design. The audience includes researchers in biology, Computer Science, Fine Art and Design.

**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 Committee**

* ACM UIST 2013
* ACM CHI Work in Progress 2011, 2012 & 2013
* Technique et Science Informatique (TSI) special issue on big data visualization (Jan 2013)

**Organisation Committee**

* Fast-forward chair at the IEEE Visweek Conference (InfoVis, Vis, VAST) 2010, 2011, 2012 & 2013
* Tutorials and Workshops chair at IHM Conference 2013 (HCI French-speaking international conference)
* 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, 2011, 2012, 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, 2013

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 [S1]).

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 20 months

* OCAD University Post-doctoral Fellowship

$20,000 per year, held in 2012 for 20 months / $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