



**FORM 100**  
**Personal Data Form**  
**PART I**

Date

2013/06/13

Family name <b>Tory</b>	Given name <b>Melanie</b>	Initial(s) of all given names <b>MK</b>	Personal identification no. (PIN) <b>Valid 194526</b>
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☐ I hold a faculty position at an eligible Canadian college  
(complete Appendices B1 and C)

☐ I do not or will not hold an academic appointment at a  
Canadian postsecondary institution

Place of employment other than a Canadian postsecondary  
Institution (give address in Appendix A)

**APPOINTMENT AT A POSTSECONDARY INSTITUTION**

Title of position <b>Associate Professor</b>	Tenured or tenure-track academic appointment	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Department <b>Computer Science</b>	Part-time appointment <input type="checkbox"/>	Full-time appointment <input checked="" type="checkbox"/>
Campus	<ul style="list-style-type: none"><li>For all non-tenured or non tenure-track academic appointment and Emeritus Professors, complete Appendices B &amp; C</li><li>For life-time Emeritus Professor and part-time positions, complete Appendix C</li></ul>	
Canadian postsecondary institution <b>Victoria</b>		

**ACADEMIC BACKGROUND**

Degree	Name of discipline	Institution	Country	Date yyyy/mm
Bachelor's	Microbiology and Immunology	British Columbia	CANADA	1999 / 05
Doctorate	Computer Science	Simon Fraser	CANADA	2004 / 08

**TRAINING OF HIGHLY QUALIFIED PERSONNEL**

Indicate the number of students, fellows and other research personnel that you:

	Currently		Over the past six years (excluding the current year)		Total
	Supervised	Co-supervised	Supervised	Co-supervised	
Undergraduate			3	3	6
Master's	4	1	5	1	11
Doctoral	6		1		7
Postdoctoral	1				1
Others					
Total	11	1	9	4	25

Personal identification no. (PIN)

**Valid** 194526

Family name

Tory

**ACADEMIC, RESEARCH AND INDUSTRIAL EXPERIENCE (use one additional page if necessary)**

Position held (begin with current)	Organization	Department	Period (yyyy/mm to yyyy/mm)
Associate Professor	Victoria	Computer Science	2006/04
Post-doctoral Fellow	University of British Columbia	Computer Science	2004/09 to 2006/03
Sessional Instructor	Simon Fraser University	Computing Science	2002/09 to 2002/12
PhD candidate	Simon Fraser University	Computing Science	1999/09 to 2004/08
Teaching Assistant	Simon Fraser University	Computing Science	1999/09 to 2001/04
Quality Assurance Engineer	Seagate Software	Quality Assurance	1998/05 to 1999/08
Laboratory Technician (Co-op)	Kinetek Pharmaceuticals	Research and Development	1997/01 to 1997/08
Laboratory Technician (Summer position)	Marine BioProducts	Quality Control	1996/05 to 1996/08
NSERC Undergraduate Research Assistant	University of British Columbia	Chemistry	1995/05 to 1995/08

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**RESEARCH SUPPORT**Family name and initial(s)  
of applicantTitle of proposal, funding source and program,  
and time commitment (hours/month)Amount  
per yearYears of  
tenure  
(yyyy)

List all sources of support (including NSERC grants and university start-up funds) held as an applicant or a co-applicant: a) support held in the past four (4) years but now completed; b) support currently held, and c) support applied for. For group grants, indicate the percentage of the funding directly applicable to your research. Use additional pages as required.

**a) Support held in the past 4 years**

Melanie Tory

Visualization Design: Supporting Human Needs  
and Capabilities  
University of Victoria start-up funds

52,500

2006

Melanie Tory

Display Technology for Collaborative  
Visualization  
NSERC  
RTI

55,702(100%)

2006

Melanie Tory

Supporting Co-located Collaborative  
Visualization  
NSERC  
Discovery Grant

21,000

2006

21,000

2007

21,000

2008

80 hours/month

Melanie Tory

Fraud Visualization  
Cogneto Development

20,000

2007

Personal identification no. (PIN)		Family name	
Valid 194526		Tory	
<b>RESEARCH SUPPORT</b>			
Family name and initial(s) of applicant	Title of proposal, funding source and program, and time commitment (hours/month)	Amount per year	Years of tenure (yyyy)
List all sources of support (including NSERC grants and university start-up funds) held as an applicant or a co-applicant: a) support held in the past four (4) years but now completed; b) support currently held, and c) support applied for. For group grants, indicate the percentage of the funding directly applicable to your research. Use additional pages as required.			
<b>a) Support held in the past 4 years</b>			
Melanie Tory	Large Screen Visualization Laboratory CFI / BCKDF New Opportunities Fund	147,884	2008
Melanie Tory	Visualization of Eye Tracking Video Data MITACS / Locarna Systems Accelerate BC Internships	15,000	2009
<b>b) Support currently held</b>			
Sheryl Staub-French and 3 others	ARTIFACT: Advanced Research, Techniques, and Informatics for Future Advantages in Construction Technology NSERC Strategic Projects  30 hours/month	147,500 (25%)	2006
		147,500 (25%)	2007
		0 (25%)	2008
		147,500 (25%)	2009
Torsten Moeller and 3 others	Visually Enhanced Exploration of High-Dimensional Data NSERC Strategic Projects  20 hours/month	163,216 (25%)	2007
		163,216 (25%)	2008
		163,216 (25%)	2009

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**RESEARCH SUPPORT**

Family name and initial(s) of applicant	Title of proposal, funding source and program, and time commitment (hours/month)	Amount per year	Years of tenure (yyyy)
List all sources of support (including NSERC grants and university start-up funds) held as an applicant or a co-applicant: a) support held in the past four (4) years but now completed; b) support currently held, and c) support applied for. For group grants, indicate the percentage of the funding directly applicable to your research. Use additional pages as required.			
<b>b) Support currently held</b>			
Melanie Tory	Empirical examination of design issues in multidimensional visualization NSERC Discovery Grants 80 hours/month	35,000 35,000 35,000 35,000 35,000	2009 2010 2011 2012 2013
Melanie Tory	Collaborative Visualization for Business Intelligence NSERC Collaborative Research and Development 30 hours/month	51,000 65,500 47,000	2009 2010 2011
Melanie Tory	Multi-Touch Interfaces for Business Intelligence Applications SAP Business Objects ARC Fellowships	35,000 35,000 35,000	2009 2010 2011
Cristina Conati and 3 others	Advanced Tools for User-Adaptive Visualization NSERC Strategic Projects 20 hours/month	136,806 (25%) 176,456 (25%) 115,500 (25%)	2010 2011 2012

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**RESEARCH SUPPORT**Family name and initial(s)  
of applicantTitle of proposal, funding source and program,  
and time commitment (hours/month)Amount  
per yearYears of  
tenure  
(yyyy)

List all sources of support (including NSERC grants and university start-up funds) held as an applicant or a co-applicant: a) support held in the past four (4) years but now completed; b) support currently held, and c) support applied for. For group grants, indicate the percentage of the funding directly applicable to your research. Use additional pages as required.

**b) Support currently held**

Melanie Tory and 8 others

Personal Visual Analytics  
US VACCINE Center / GRAND PEAKS  
Workshop funding: VACCINE seed grants /  
GRAND PEAKS  
0 hours/month

12,000 (0%)

2012

Melanie Tory and Kirstie  
Hawkey

Personal Visual Analytics for Personal Finance  
and Time  
Management  
SAP / MITACS  
Mitacs Accelerate  
0 hours/month

30,000 (50%)

2012

## Highly Qualified Personnel (HQP)

Provide personal data about the HQP that you currently, or over the past six years, have supervised or co-supervised.

			Personal identification no. (PIN) <b>Valid 194526</b>	Family name <b>Tory</b>
Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Amir Hossein Hajizadeh	Master's (In Progress)	Supervised 2011 -	Brushing in Collaborative Visualization	MSc student
Dandan Huang	Doctoral (In Progress)	Supervised 2011 -	Visualization of Home Energy Use	PhD student
Di Lu	Master's (In Progress)	Supervised 2011 -	TBD	MSc student
James (Derek)	Doctoral (In Progress)	Co-supervised 2011 -	Biological Visualization	PhD student
Sanaz Tavakkol	Master's (In Progress)	Supervised 2011 -	Personal Visual Analytics of Time Management Data	MSc student
Ali Sarvghad	Doctoral (In Progress)	Supervised 2009 -	Histories for Business Intelligence Visualization	PhD student
Veronika Irvine	Doctoral (In Progress)	Supervised 2009 -	Mathematics education through art	PhD student
Narges Mahyar	Doctoral (In Progress)	Supervised 2008 -	Collaborative Visualization for Business Intelligence	PhD student
Keyun Hu	Master's (In Progress)	Supervised 2007 -	Visualization of a Construction Artifact Archive	Software engineer, RIM
Aras Balali Moghaddam	Master's (In Progress)	Co-supervised 2010 - 2012	Near Touch Interactions: Understanding Grab and Release	MSc student
Kedar Shirkhande	Doctoral (Not Completed)	Supervised 2007 - 2011	Adaptive Visualization for CAD Training	Left program for medical reasons
Subhanil Chakrabarty	Master's (Completed)	Supervised 2007 - 2011	Tabletop displays for construction design meetings	Employed in industry
David Sprague	Doctoral (Completed)	Supervised 2006 - 2011	Exploring Information Visualization Use Patterns in	Employed in industry
Derek Jacoby	Master's (Completed)	Co-supervised 2009 - 2010	Annotations to Improve the Utility of Recorded Meetings	PhD student
Hoi Ying Tsang	Master's (Completed)	Supervised 2008 - 2010	Visualization of Eyetracking Video Data	Employed in industry
Javier Diaz Ruvalcaba	Master's (Completed)	Supervised 2008 - 2010	Visualization of dimensionally reduced data	Employed in industry
(Name withheld)	Undergraduate (Completed)	Co-supervised 2009 - 2009	User study for collaborative software engineering design	undergraduate student
Dandan Huang	Master's (Completed)	Supervised 2007 - 2009	Visualization techniques for schedule comparison	PhD student
Fuqu Wu	Master's (Completed)	Supervised 2006 - 2009	Visualization of Construction Photo Archives	Employed in industry
Rebecca Dreezer	Undergraduate (Completed)	Co-supervised 2008 - 2008	User studies for multidimensional visualization	Undergraduate student

## Highly Qualified Personnel (HQP)

Provide personal data about the HQP that you currently, or over the past six years, have supervised or co-supervised.

			Personal identification no. (PIN) <b>Valid</b> 194526	Family name <b>Tory</b>
Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Yu-Ling Chang	Undergraduate (Completed)	Supervised 2007 - 2007	Schedule visualization development	PhD student at University of Waterloo
(Name withheld)	Undergraduate (Completed)	Supervised 2006 - 2007	Perception experiment	Unknown
(Name withheld)	Undergraduate (Completed)	Co-supervised 2006 - 2006	Video coding to obtain field study data	Unknown

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Personal information collected on this form and appendices will be stored in the Personal Information Bank for the appropriate program.

Version française disponible

**Canada**

**PROTECTED WHEN COMPLETED**



# Contributions

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## 1. Most Significant Contributions to Research and/or to Practical Applications

### 2.1 Visualizing High Dimensional Data

Visualizing high-dimensional data is challenging because data sets are typically too large and complex to show all of the data in full detail at one time. In [13] and [9], I conducted experiments to compare point-based and landscape visual representations of multidimensional data that had been mapped to 2D space using dimensionality reduction. These types of visualizations provide a high-level overview. I found that point-based representations were far superior to 2D and 3D landscapes, suggesting that the current common use of landscapes may lead to non-optimal human performance. I also demonstrated that using physical interfaces such as sliders to control visualization parameters enables users to focus more directly on the data rather than on the interface [10, 34]. More recently, I contributed to the design of a tool that provides visual guidance for the use of dimension reduction algorithms [24], aimed at supporting analysts with limited knowledge of the algorithms' internal mechanisms. I also contributed to a data study to identify factors that influence whether people can perceive clusters in plots of dimensionally reduced data [2].

### 2.2 Eye Tracking for Evaluating Visualizations

In [37], I used eye tracking methods to compare and evaluate user strategies with various visualization designs. In [10], I extended this work to examine how physical versus graphical interfaces affect a user's ability to maintain attention on a graphic visualization. These experiments introduced eye tracking methods to the visualization community, who previously used eye tracking rarely, if at all. By tracking the user's gaze, I was able to identify users with consistent gaze patterns and those with inconsistent patterns, evaluate visual ergonomics of different visual display designs, and determine the extent to which different components of each display were used. Challenges in identifying ordered gaze patterns in this early work led to the later development of a novel technique for visualizing eye tracking data [8].

### 2.3 Collaborative Visualization

I have also examined how people use visualization tools collaboratively. In [12], I conducted a field study examining how design information was used during architectural design development meetings, to determine how new technology might improve workflow and decision quality. The study highlighted the need to provide very fast and simple data transfer and navigation methods for meeting situations. In earlier work [36], we presented results of how groups collaborate over a large screen tabletop display with visualizations of spatial maps and abstract networks. A later observational study [4, 25] emphasized the need to help users keep records of their activity (e.g. notes and artifacts); my group is now building tools to better support these activities (e.g., [18]).

### 2.4 Visualization of Spatial Data

My PhD work involved integrating 2D and 3D display techniques for visualizing 3D spatial data such as medical images and CAD models. More recent experiments examined how static combinations of 2D and 3D views compare to interactive 3D views. These experiments revealed that for some types of data and tasks, a rotatable 3D view is superior to a combination of 2D and 3D views [26, 22]. These

experimental results provide useful knowledge about the choice and design of views for CAD systems, medical image viewers, and similar applications.

### 2.5 Empirical Methods for Visualization Research

I am well known for my experience with many different empirical research methods. I began conducting quantitative experiments with human subjects when such work was rare in my field (now these studies are commonplace and expected), and have now also conducted numerous structured qualitative studies, which are becoming more widely accepted. Although these research methods are commonly used in other fields, many visualization researchers are not familiar with them and applying them to visualization for the first time is non-trivial. I am frequently approached by unknown people at conferences with the question, “I developed a new visualization tool. How should I evaluate it?”

### 2. Research Contributions and Practical Applications (over last 6 years)

In cases where I am the primary contributor to joint publications, my name appears first. For student-led work, my name is often last. Student names are in bold font when permission has been granted.

#### Articles in Refereed Publications

1. M. Tory, S. Staub-French, **D. Huang**, **Y.-L. Chang**, C. Swindells, and R. Pottinger, "Comparative visualization of construction schedules", *Automation in Construction*, vol. 29, 68-82, Jan. 2013.
2. M. Sedlmair, A. Tatu, T. Munzner, and M. Tory, "A Taxonomy of Visual Cluster Separation Factors", *Computer Graphics Forum (Proc. EuroVis)*, vol. 31, no.3, 1335-1344, 2012.
3. **B. Potvin**, C. Swindells, M. Tory, and M.A. Storey, "Comparing Horizontal and Vertical Surfaces for a Collaborative Design Task", *Advances in Human-Computer Interaction*, vol. 2012, Article ID 137686, 10 pages, 2012.
4. **N. Mahyar**, **A. Sarvghad**, and M. Tory, "Note Taking in Co-located Collaborative Visual analytics: Analysis of an Observational Study", *Information Visualization*, vol. 11, no. 3, 190-204, July 2012.
5. **D. Sprague** and M. Tory, "Exploring How and Why People Use Visualizations in Casual Contexts: Modeling User Goals and Regulated Motivations", *Information Visualization*, vol. 11, no. 2, pp. 106-123, April 2012.
6. J. Zhang, A. Webster, M. Lawrence, M. Nepal, R. Pottinger, S. Staub-French, and M. Tory, "Improving the usability of standard schemas", *Information Systems*, vol. 36, no. 2, pp. 209-221, Apr. 2011.
7. L. Grammel, M. Tory, and M.A. Storey, "How information visualization novices construct visualizations," *IEEE Transactions on Visualization and Computer Graphics (Proc. Information Visualization '10)*, vol. 16, no. 6, pp. 943-952, Nov./Dec. 2010, (26% acceptance rate).
8. **H.Y. Tsang**, M. Tory, and C. Swindells, "eSeeTrack –visualizing sequential fixation patterns," *IEEE Transactions on Visualization and Computer Graphics (Proc. Information Visualization '10)*, vol. 16, no. 6, pp. 953-962, Nov./Dec. 2010, (26% acceptance rate).
9. M. Tory, C. Swindells, and **R. Dreezer**, "Comparing Dot and Landscape Spatializations for Visual Memory Differences", *IEEE Trans. Visualization and Computer Graphics (Proc. Information Visualization 2009)*, vol. 15, no. 6, pp. 1033-1039, Nov./Dec. 2009. (26% acceptance rate).
10. C. Swindells, M. Tory, and **R. Dreezer**, "Comparing Parameter Manipulation with Mouse, Pen, and Slider User Interfaces", *Computer Graphics Forum (Proc. EuroVis 2009)*, pp. 919-926. (29% acceptance rate).

11. **D. Huang**, M. Tory, S. Staub-French, and R. Pottinger, “Visualization Techniques for Schedule Comparison”, *Computer Graphics Forum (Proc. EuroVis 2009)*, pp. 951-958. (29% acceptance rate).
12. M. Tory, S. Staub-French, B. Po, and **F. Wu**, “Physical and Digital Artifact-Mediated Coordination in Building Design”, *J. Computer Supported Cooperative Work*, vol. 17, no. 4, August 2008, pp. 311-351.
13. M. Tory, **D.W. Sprague**, **F. Wu**, W.Y. So, and T. Munzner, “Spatialization Design: Comparing Points and Landscapes”, *IEEE Trans. Visualization and Computer Graphics (Proc. Information Visualization 2007)*, vol. 13, no. 6, Nov./Dec. 2007, pp. 1262-1269. (23% acceptance rate)
14. M. Tory, A.E. Kirkpatrick, M.S. Atkins, and T. Möller, “Visualization Task Performance with 2D, 3D, and Combination Displays”, *IEEE Trans. Visualization and Computer Graphics*, vol. 12, no. 1, Jan./Feb. 2006, pp. 2-13.
15. S. Bergner, T. Möller, M. Tory, and M.S. Drew, “A Practical Approach to Spectral Volume Rendering”, *IEEE Trans. Visualization and Computer Graphics*, vol. 11, no. 2, Mar./Apr. 2005, pp. 207-216.
16. M. Tory, S. Potts, and T. Möller, “A Parallel Coordinates Style Interface for Exploratory Volume Visualization”, *IEEE Trans. Visualization and Computer Graphics*, vol. 11, no. 1, Jan./Feb. 2005, pp. 71-80.

### Other Refereed Contributions

17. L. Grammel, C. Bennett, M. Tory, and M.-A. Storey, "A Survey of Visualization Construction User Interfaces", *EuroVis*, June 2013 (in press).
18. **N. Mahyar**, **A. Sarvghad**, M. Tory, and **T. Weeres**, "Observations of Record-Keeping in Co-located Collaborative Analysis", *HICSS 2013*, Jan. 2013.
19. C. Gat, H. Zhang, D.M. German and M. Tory, “gamutHeatMap: Visualizing the Colour Shift of Rendering Intent Transformations”, *Intl. Symp. Computational Aesthetics in Graphics, Visualization, and Imaging*, pp. 81-88, Aug. 2011 (42% acceptance rate).
20. **A. Balali Moghaddam**, J. Svendsen, M. Tory, and A. Branzan Albu, “Integrating Touch and Near Touch Interactions for Information Visualizations”, *Works-in-Progress at ACM Conf. on Human Factors in Computing Systems (CHI’11)*, 6 pages, May 2011.
21. **V. Irvine** and M. Tory, “Math Education: A Creative Approach,” *Child Computer Interaction Workshop*, held in conjunction with the ACM Conf. on Human Factors in Computing Systems (CHI’11), 4 pages, May 2011.
22. T. Sando, M. Tory, and P. Irani, “Impact of Group Size on Spatial Structure Understanding Tasks,” *IEEE Pacific Visualization*, pp. 107-114, Mar. 2011.
23. F. Mason-Blakley, J. Jahnke-Weber, M. Tory, and C. McCollum, “Visual coder: clinical coding in translational research,” *ACM Int. Health Informatics Symp. (IHI’10)*, 4 pages, Nov. 2010.
24. S. Ingram, T. Munzner, **V. Irvine**, S. Bergner, M. Tory, and T. Möller, “DimStiller: workflows for dimensional analysis and reduction,” *IEEE Conf. Visual Analytics Science and Technology (VAST’10)*, pp. 3-10, 2010, (28% acceptance rate).
25. **N. Mahyar**, **A. Sarvghad**, and M. Tory, “A closer look at note taking in the co-located collaborative visual analytics process,” *IEEE Conf. Visual Analytics Science and Technology (VAST’10)*, pp. 171-178, 2010, (28% acceptance rate).

26. T. Sando, M. Tory, and P. Irani, “Effects of animation, user-controlled interactions, and multiple static views in understanding 3D structures”, *Symp. Applied Perception in Graphics and Visualization 2009*, pp. 69-76. (~ 30-40% acceptance rate).
27. **N. Mahyar**, **A. Sarvghad**, and M. Tory, “Roles of notes in co-located collaborative visualization”, *Workshop on Collaborative Visualization on Interactive Surfaces (CoVis) 2009*, 4 pages.
28. **A. Sarvghad**, **N. Mahyar**, and M. Tory, “History tools for collaborative visualization”, *Workshop on Collaborative Visualization on Interactive Surfaces (CoVis) 2009*, 3 pages.
29. **J.D. Ruvalcaba**, **K. Hu**, and M. Tory, “An Exploratory Study of Tag-based Visual Interfaces for Searching Folksonomies”, *BCS HCI 2009*, pp. 410-417.
30. **F. Wu** and M. Tory, “PhotoScope: Visualizing Spatiotemporal Coverage of Photos for Construction Management”, *CHI 2009, ACM Conf. Human Factors in Computing Systems, CHI Letters*, pp. 1103-1112, 2009, (24.5% acceptance rate).
31. **D.W. Sprague** and M. Tory, “Motivation and procrastination: methods for evaluating pragmatic casual information visualizations”, *IEEE Computer Graphics and Applications*, vol. 29, no. 4, pp. 86-91, July/Aug. 2009, (invited article).
32. **D.W. Sprague**, **F. Wu**, and M. Tory, “Music Selection Using the PartyVote Democratic Jukebox,” *Advanced Visual Interfaces 2008*, pp. 433-436.
33. M. Tory and S. Staub-French, “Qualitative Evaluation of Visualization: A Building Design Field Study,” *BELIV 2008, Workshop held in conjunction with ACM CHI 2008*.
34. M. Crider, S. Bergner, T.N. Smyth, T. Möller, M. Tory, A.E. Kirkpatrick, and D. Weiskopf, “A Mixing Board Interface for Graphics and Visualization Software”, *Graphics Interface 2007*, pp. 87-94. (40% acceptance rate)
35. M. Golparvar Fard, S. Staub-French, B. Po, and M. Tory, “Requirements for a Mobile Interactive Workspace to Support Design Development and Coordination”, *Intl. Conf. Computing in Civil and Building Engineering*, June 2006.
36. A. Tang, M. Tory, B. Po, P. Neumann, and S. Carpendale, “Collaborative Coupling over Tabletop Displays”, *CHI 2006, ACM Conf. on Human Factors in Computing Systems, CHI Letters*, pp. 1181-1190, Apr. 2006. (23% acceptance rate)
37. M. Tory, M.S. Atkins, A.E. Kirkpatrick, M. Nicolauo, and G.-Z. Yang, “Eyegaze Analysis of Displays with Combined 2D and 3D Views”, *IEEE Visualization 2005*, pp. 519-526, Oct. 2005. (33% acceptance rate)
38. M. Tory and T. Möller, “Evaluating Visualizations: Do Expert Reviews Work?”, *IEEE Computer Graphics and Applications*, vol. 25, no. 5, Sept./Oct. 2005, pp. 8-11.

### 3. Other Evidence of Impact and Contributions

#### Awards

NSERC University Faculty Award (2006-2011)

#### Conference Organization, Program Committees, and Grant Reviewing

NSERC RTI Computer Science Ad Hoc Review Committee (2010-11)

Program Committees:

ACM CHI (2014)

EuroVis (2010-11)

## **Melanie Tory (PIN: 194526) – Contributions**

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IEEE Tabletops and Interactive Surfaces (2009)  
IEEE Visualization Conference (2008)  
IEEE Information Visualization Conference (2005-2007, 2009-2011, 2012-2013)  
PacificVis (2006-2007)  
Graphics Interface (2007-2009)  
International Symposium on Visual Computing (2007)  
Posters Co-Chair – IEEE Information Visualization (2012-2013)  
Papers Co-Chair – IEEE Information Visualization (2014-2015)  
Associate Editor, Advances in HCI (2010-11)  
Co-Chair — Graphics Interface (2009)  
Doctoral Colloquium Co-Chair — IEEE Visualization Conference (2008-2009)  
Posters Chair — Graphics Interface (2007)

### **Reviewing**

IEEE Trans. Visualization and Computer Graphics, J. Information Visualization, IEEE Computer Graphics and Applications, IEEE Visualization Conference, IEEE Symp. Information Visualization, ACM CHI, SPIE Conf. Visualization and Data Analysis, Graphics Interface, EuroVis, PacificVis.

### **University Committees**

I regularly serve on numerous university committees including graduate studies, equity, and outreach.

### **Invited Talks**

I have given invited talks at numerous universities and companies including University of Calgary, University of Waterloo, University of Victoria, University of Saskatchewan, Simon Fraser University, and Adapx.

### **4. Delays in Research Activity**

None.

### **5. Contributions to the Training of Highly Qualified Personnel (HQP)**

I am highly dedicated to training of HQP, and take great enjoyment in working closely with graduate and undergraduate students on research. In fact, I conduct nearly all of my research by supervising graduate and undergraduate student projects and theses. This can be observed in the fact that the majority of my recent publications are co-authored by students. I lead a large group (currently 3 M.Sc. and 5 Ph.D. students), and have graduated an additional 6 M.Sc. students and 1 Ph.D. student. I have also supervised several undergraduate students conducting short-term research projects. Students in my research group lead their own research projects, but support each other through group research activities and discussions. Most participate in some interdisciplinary collaboration, usually involving more than one institution. I also encourage them to engage in industrial internships and collaborations. For example, three of my graduate students have done internships with SAP. I also fund my students to attend conferences so they can gain experience in presenting their research at an international level.

Note that many of my graduate students may appear to take longer than normal to graduate. This is because UVic offers a graduate co-operative education program that most of my M.Sc. students participate in. This typically adds 8 months to their completion time, and is time spent working in industry rather than on their courses and thesis research.



**APPENDIX A  
Personal Data  
(Form 100)**

Complete this appendix (i) if you are an applicant or co-applicant applying for the first time; (ii) if you need to update information submitted with a previous application; or (iii) if you do not hold an appointment at a Canadian postsecondary institution. For updates, include only the revised information in addition to the date, your name and your PIN.

This information will be used by NSERC primarily to contact applicants and award holders. It may also be used to identify prospective reviewers and committee members, and to generate statistics. It will not be seen or used in the adjudication process.

Date <b>2013/06/13</b>			
Family name <b>Tory</b>	Given name <b>Melanie</b>	Initial(s) of all given names <b>MK</b>	Personal identification no. (PIN) <b>Valid 194526</b>
Position and complete mailing address if your primary place of employment is not a Canadian postsecondary institution or if your current mailing address is temporary  <b>ECS Room 504 PO Box 3055, STN CSC Victoria BC V8W3P6</b>			If address is temporary, indicate:  Starting date  Leaving date
Telephone number <b>1 (250) 4725798</b>	Facsimile number <b>(250) 4725708</b>	E-mail address <b>mtory@cs.uvic.ca</b>	
Telephone number (alternate)  Give an alternate telephone number only if you can be reached at that number during business hours.	Gender (completion optional) <input type="checkbox"/> Male <input checked="" type="checkbox"/> Female		
<b>LANGUAGE CAPABILITY</b>			
<b>English</b>	Read <input checked="" type="checkbox"/>	Write <input checked="" type="checkbox"/>	Speak <input checked="" type="checkbox"/>
<b>French</b>	Read <input checked="" type="checkbox"/>	Write <input type="checkbox"/>	Speak <input type="checkbox"/>
I wish to receive my correspondence:		in English <input checked="" type="checkbox"/>	in French <input type="checkbox"/>
<b>AREA(S) OF EXPERTISE</b>			
Provide a maximum of 10 key words that describe your area(s) of expertise. Use commas to separate them. If you have expertise with particular instruments and techniques, specify which one(s).  <b>visualization, human-computer interaction, visual perception, cognition, eyegaze tracking, collaboration, empirical research methods, visual analytics</b>			Research subject code(s)  Primary <b>2700</b>  Secondary <b>2710</b>



### Appendix D (Form 100) Consent to Provide Limited Personal Information About Highly Qualified Personnel (HQP) to NSERC

NSERC applicants are required to describe their contributions to the training or supervision of highly qualified personnel (HQP) by providing certain details about the individuals they have trained or supervised during the six years prior to their current application. HQP information must be entered on the Personal Data Form (Form 100). This information includes the trainee's name, type of HQP training (e.g., undergraduate, master's, technical etc.) and status (completed, in-progress, incomplete), years supervised or co-supervised, title of the project or thesis, and the individual's present position.

Based on the federal *Privacy Act* rules governing the collection of personal information, applicants are asked to obtain consent from the individuals they have supervised before providing personal data about them to NSERC. In seeking this consent, the NSERC applicant must inform these individuals what data will be supplied, and assure them that it will only be used by NSERC for the purpose of assessing the applicant's contribution to HQP training. To reduce seeking consent for multiple applications, applicants will only need to seek consent one time for a six-year period. If the trainee provides consent by e-mail, the response must include confirmation that they have read and agree to the text of the consent form.

When consent cannot be obtained, applicants are asked to not provide names, or other combinations of data, that would identify those supervised. However, they may still provide the type of HQP training and status, years supervised or co-supervised, a general description of the project or thesis, and a general indication of the individual's present position if known.

#### An example of entering HQP information on Form 100 (with and without consent):

Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
<b>Consent Received from Marie Roy</b>				
Roy, Marie	Undergraduate (Completed)	Supervised 1994 - 1997	Isotope geochemistry in petroleum engineering	V-P (Research), Earth Analytics Inc., Calgary, Alberta
<b>Consent Not Obtained from Marie Roy</b>				
(name withheld)	Undergraduate (Completed)	Supervised 1994 - 1997	Isotope geochemistry	research executive in petroleum industry - western Canada

### Consent Form

Name of Trainee	
Applicant Information	
Name Tory, Melanie MK	
Department Computer Science	Postsecondary Institution Victoria
I hereby allow the above-named applicant to include limited personal data about me in grant applications submitted for consideration to NSERC for the next six years. This limited data will only include my name, type of HQP training and status, years supervised or co-supervised, title of the project or thesis and, to the best of the applicant's knowledge, my position title and company or organization at the time the application is submitted. I understand that NSERC will protect this data in accordance with the <i>Privacy Act</i> , and that it will only be used in processes that assess the applicant's contributions to the training of highly qualified personnel (HQP), including confidential peer review.	
_____ Trainee's signature	_____ Date
Note: This form must be retained by the applicant and made available to NSERC upon request.	