# Conseil de recherches en sciences naturelles et en génie du Canada

	FORM 100 Personal Data Form PART I				Date 2013/0	6/14
Family name		Given name		Initial(s) of all given names	Personal identifica	ation no. (PIN)
Mould		David		DR	Valid 1	72623
	a faculty position at an eligible Ca plete Appendices B1 and C)	nadian college				
	ot or will not hold an academic app dian postsecondary institution	pointment at a		mployment other than a Car (give address in Appendix A	•	ary
	ENT AT A POSTSECONDARY	INSTITUTION				
Title of position Associate	n Professor		Tenured or tenure-track Yes X No Academic appointment			
Department			academic appointment			
	Science, School of		Part-time appointment Full-time appointment X			
Campus				n-tenured or non tenure-trac Professors, complete Apper		tment and
Canadian post Carleton	secondary institution		For life-time Emeritus Professor and part-time positions, complete Appendix C			
ACADEMIC	BACKGROUND					
Degree	Name of discipline	Insti	tution	Co	ountry	Date yyyy/mm
Bachelor's	Physics and Computer Science	British Columbia CANAD		CANADA		1994 / 05
Master's	Computer Science	Saskatchewan		CANADA	CANADA 1	
Doctorate	Computer Science	Toronto		CANADA		2002 / 11

#### 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)		
	Supervised	Co-supervised	Supervised	Co-supervised	Total
Undergraduate	1		33		34
Master's	3		6	2	11
Doctoral	3		2	1	6
Postdoctoral					
Others					
Total	7		41	3	51



Personal identification no. (PIN)

**Valid** 172623

Family name

Mould

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	Carleton	Computer Science, School of	2009/07		
Assistant Professor	Carleton University	Computer Science	2008/07 to 2009/07		
Assistant Professor	University of Saskatchewan	Computer Science	2003/06 to 2008/06		
Assistant Professor (term)	University of Saskatchewan	Computer Science	2002/06 to 2003/05		
Webmaster	WISEonline		1999/05 to 2002/05		

Personal identification no. (PIN)

Family name

**Valid** 172623

Mould

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.					
a) Support held in the past 4 ye	ars				
David Mould	Stylization of Virtual Scenery NSERC 80 hours/month	14,000 14,000 14,000 14,000 14,000	2007 2008 2009 2010 2011		
David Mould	Scenery, stylization, and computer games Carleton University Startup funds 20 hours/month	45,000	2008		
b) Support currently held					
David Mould	AFEVAL/BELIEVE/PROMO/SKETCH GRAND NCE (as Primary Network Investigator) NCE 80 hours/month	15,000 35,000 25,000 35,000	2009 2010 2011 2012		
David Mould	Sparse Primitives for Stylized Image Synthesis NSERC Discovery Grants 60 hours/month	23,000 23,000	2012 2013		

**RESEARCH SUPPORT** 

Personal identification no. (PIN) Family name

Valid 172623 Mould

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.						
c) Support applied for						
David Mould, Irina	The Embryo of All Possibilities	40,000 (50%)	2013			
Lyubchenko	GRAND/CCA	80,000 (50%)	2014			
	GRAND NCE Media Artist and Scientist					
	Collaboration					
	16 hours/month					

Form 100 (2009 W), page 3.1 of 4

Canada

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### **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)	Family name
			<b>Valid</b> 172623	Mould
Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Wei, Chujia	Master's (In Progress)	Supervised 2012 -	Coordinated particle sytems	MSc student, Carleton University
Ariyan, Maryam	Master's (In Progress)	Supervised 2011 -	Hybrid procedural and sketched terrain	d graduate student, Carleton University
Mundt, Lester	Master's (In Progress)	Supervised 2011 -	Non-photorealistic natural phenomena	MSc student, developer at SimFront
Caron, Jacquelin	Doctoral (In Progress)	Supervised 2010 -	Irregular cellular texture	PhD student
Carmichael, Gail	Doctoral (In Progress)	Supervised 2009 -	Nonlinear narrative in educatio games	nal PhD student
Xu, Ling	Doctoral (In Progress)	Supervised 2008 -	Natural phenomena modeling virregular graphs	with PhD student
Ahmed, Arslan	Undergraduate (Completed)	Supervised 2013 - 2013	Cell phone business card reade	r not known
(Name withheld)	Undergraduate (In Progress)	Supervised 2013 - 2013	Image filtering and recoloring	undergraduate student, Carleton University
Madill, Jamie	Master's (Completed)	Supervised 2009 - 2013	Shape matching in fluid simula	tion software developer, Google
Li, Hua	Doctoral (Completed)	Supervised 2003 - 2013	Priority-based methods for blac and white images	postdoctoral researcher, University of Ottawa
Wasson, Rajinder	Master's (Completed)	Supervised 2011 - 2012	A sketching game for art histor education	y software engineer, Fruition Partners
Ells, Benjamin	Undergraduate (Completed)	Supervised 2011 - 2011	Flexible real-time stroke-based rendering	developer, Cipher Prime
Hutchinson, Steven	Undergraduate (In Progress)	Supervised 2011 - 2011	Procedurally generated trees	developer, ZDirect
Ouellette, Evan	Undergraduate (Completed)	Supervised 2011 - 2011	Priority-based shock texture	
Regis, Jeffrey	Undergraduate (Completed)	Supervised 2011 - 2011	Effect of time pressure on exploration in role-playing gam	developer, Thales Canada
Solheim, Andrew	Undergraduate (Completed)	Supervised 2011 - 2011	Procedural spell effects	developer, Microsoft
Wallace, Andrew	Undergraduate (In Progress)	Supervised 2011 - 2011	Wordplay: a creativity enhancement toolkit	software developer, Electronic Arts
Erdeg, Andrew	Undergraduate (Completed)	Supervised 2010 - 2011	Story analysis algorithm and database	Jr. Technical Specialist, Shared Services Canada
Moffat, Brian	Undergraduate (Completed)	Supervised 2010 - 2011	Procedural generation of crack textures	software developer, Amazon.ca
Sullivan, David	Undergraduate (Completed)	Supervised 2010 - 2011	Coordination strategies in real-time strategy games	



### **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)	Family name	
		<b>Valid</b> 172623	Mould	
Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position	
Undergraduate (In Progress)	Supervised 2010 - 2011	Terrain synthesis and rendering	undergraduate student	
Doctoral (Completed)	Co-supervised 2003 - 2011	A cognition-analogous approach early-stage creative ideat	to Director of Digital Media Institute, University of Saskatche	
Undergraduate (Completed)	Supervised 2010 - 2010	Cellular texture	developer, Snowedin Studios	
Undergraduate (Completed)	Supervised 2010 - 2010	Heuristics for solving usability problems in video games	Software engineer, Avaya	
Undergraduate (Completed)	Supervised 2009 - 2010	Game balance in real-time strate games	gy Master's student, New York University	
Undergraduate (Completed)	Supervised 2009 - 2010	Applying learning concepts from video games	uI/UX lead, Gridpoint	
Master's (Completed)	Supervised 2007 - 2010	Accurate and discernible photocollages	developer and graphic designer, Hulomedia / Hulo Films	
Master's (Completed)	Co-supervised 2006 - 2010	Informative texture for rich embodiments	Research associate (contract), University of Saskatchewan	
Undergraduate (Completed)	Supervised 2008 - 2009	Terrain rendering	developer, Snowedin Studios	
Undergraduate (Completed)	Supervised 2008 - 2009	Touchless games in Processing	developer, Shopify	
Undergraduate (Completed)	Supervised 2008 - 2009	Queue rearrangement as game mechanic	CEO and co-founder, Select Start Studios	
Master's (Completed)	Co-supervised 2007 - 2009	Feature-rich distance-based terra synthesis	developer, Radical Entertainment	
Master's (In Progress)	Supervised 2005 - 2007	Modeling dendritic structures for artistic effects	PhD student, University of Victoria	
Master's (In Progress)	Supervised 2005 - 2007	Modeling dendritic shapes using path planning	PhD student, Carleton University	
Doctoral (In Progress)	Supervised 2003 - 2007	Automatic 3D model creation wivelocity-based surface defo	faculty member, UAM Azcopotzalco (Mexico City)	
Master's (In Progress)	Supervised 2003 - 2007	Modeling and animation of a jellyfish	developer, PhaseSpace Motion Capture	
Undergraduate (Completed)	Supervised 2006 - 2006	Nonlinear ray tracing	PhD student, University of Victoria	
Undergraduate (Completed)	Supervised 2006 - 2006	Non-euclidean distance metrics to cellular texture	for MSc student, University of Saskatchewan	
Undergraduate (In Progress)	Supervised 2006 - 2006	Texture synthesis using off-lattic Perlin noise	ce not known	
Undergraduate (Completed)	Supervised 2005 - 2006	Felt-based Rendering	PhD student, University of Toronto  be Version française disponible	
	Undergraduate (In Progress)  Doctoral (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Master's (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Master's (Completed)  Master's (In Progress)  Master's (In Progress)  Doctoral (In Progress)  Master's (In Progress)  Undergraduate (Completed)  Undergraduate (Completed)	Training and Status  Undergraduate (In Progress)  Doctoral (Co-supervised 2010 - 2011  Undergraduate (Completed)  Master's (Co-supervised 2007 - 2010  Undergraduate (Completed)  Supervised 2008 - 2009  Master's (In Progress)  Doctoral (In Progress)  Doctoral (In Progress)  Undergraduate (Completed)  Undergraduate (Completed)  Undergraduate (Completed)  Supervised 2003 - 2007  Undergraduate (Completed)  Undergraduate (Completed)	Type of HOP Training and Status  Undergraduate (In Progress)  Doctoral (Co-supervised (Completed)  Undergraduate (Completed)  Master's (Co-supervised 2005 - 2007  Master's (In Progress)  Master's (Supervised (In Progress)  Undergraduate (Completed)  Undergraduate	



### Contributions

In the following, citations of the form [DMxx] refer to items in my publications list.

### 1. Constructive path planning

Path planning is the problem of finding the least-cost path between two nodes in a weighted graph. Following some work in path planning acceleration in 2003 and 2004, I began to explore path planning as a source of structure for natural phenomena and artistic effects. The basic idea is to create a large graph, possibly simply a regular lattice, and assign weights to the edges. Endpoints are scattered around the graph, and paths are found from a single root node to all the endpoints. The resulting tree subset of the graph contains visible structure even when the weights are entirely random, and for an initial graph of sufficiently high resolution (say, 500 by 500 nodes) the paths visually resemble many naturally occurring forms, including cracks, tree roots and limbs, lightning, and other branching structures.

The idea has produced a body of work exploring the uses of path planning for natural phenomena and other applications, including trees [DM2, DM18, DM30], lightning [DM27], terrain synthesis [DM5], and image stylization [DM1, DM7, DM16]. The first paper to describe the idea in full [DM30] received the Best Paper award for GRAPP 2007.

### 2. Priority-based filtering

Halftoning is the problem of representing an input continuous-tone image with discrete tone levels (usually two), and has been studied extensively. Classic error diffusion algorithms process the image in a raster scanning order and suffer from noticeable artifacts. We made two observations that dramatically improved halftone quality: first, that output pixels should retain their predisposition towards darkness or lightness (for example, it should be more difficult to set a light pixel to black than to do the same to nearby dark pixel), and second, that easier decisions should be made before harder decisions: since earlier decisions affect later ones, and "hard decisions" in this context mean decisions which make little difference either way, we should first make the assignments in which we have most confidence.

Both elements of the policy articulated above were incorporated into an algorithm which outperformed then-current halftoning algorithms both in terms of speed and in terms of quality, as measured by the structural similarity (SSIM) image comparison metric. The work was published in Eurographics 2010 [DM4]. We believe that priority-based methods can be further generalized for other image processing tasks, and investigating this is an area of ongoing work.

We adapted the priority-based algorithm for image stylization: in particular, to artistic screening [DM31] and to stippling [DM21]. The latter paper received the Michael A. J. Sweeney award for best student paper (graphics) at GI 2011, with reviewers expressing amazement over the variety of effects and outstanding detail preservation in the stippled images.

## 3. Image stylization

In the past six years, I have contributed several techniques for image stylization, including algorithms for general filtering [DM1, DM16], stippling [DM21, DM28], black and white [DM26], and

unusual styles such as continuous lines [DM13]. Both stippling papers won best paper awards at the conferences in which they were presented (Computational Aesthetics 2007 and Graphics Interface 2011). On the strength of this body of work, I have been a regular program committee member for the Symposium on Non-Photorealistic Animation and Rendering (NPAR) and have also served on the program committee for Computational Aesthetics. I recently contributed a chapter to a book on non-photorealistic image processing, *Image and Video-Based Artistic Stylization*, edited by Paul Rosin and John Collomosse.

### 4. Structural organization for creativity enhancement

In a significant departure from my main work in computer graphics, I have spent some time on software assistance for early-stage creativity. With PhD student Jeffrey Smith and collaborator Mark Daley, I articulated premises for creativity enhancement [DM6] which were subsequently realized in a tool for music composition [T4]. The idea of "structural" organization, in which a graphical organization of large-scale components represents a nascent creative artifact. Complex structures can be realized with only a small number of nodes and edges, meaning that large-scale changes in the output can be effected by small changes to the structural encoding. One of the principles of creativity is "fast failure", where a large number of quite different ideas can be tested and rejected in a short time; by making it easy to generate a large number of plausible but dissimilar candidates, we facilitated creative exploration.

The initial direction of this work aimed at music composition, but the ideas are quite general, and currently form the basis of a project on nonlinear story creation software, funded by the GRAND NCE. An early prototype of the software was shown to a group of academics and game writers at the Workshop on Digital Narrative in Montreal in October 2011, to enthusiastic response. A version of the idea has been adapted to security applications [DM8], described in a paper to be presented at the New Paradigms in Security workshop in September 2013.

### **Publications**

#### Papers in Refereed Journals

[DM1] D. Mould. Image and video abstraction using cumulative range geodesic filtering. Computers & Graphics, 2013, to appear.

[DM2] L. Xu, D. Mould. A procedural method for irregular tree models. *Computers & Graphics*, 2012, **36** (8), 1036-1047.

[DM3] D. Mould, R. Mandryk, H. Li. Emotional response and visual attention to non-photorealistic images. *Computers & Graphics*, 2012, **36** (6), 658–672.

[DM4] H. Li, D. Mould. Contrast-aware halftoning. Computer Graphics Forum, 2010, 29(2), 273–280.

[DM5] B. Rusnell, D. Mould, M. Eramian. Feature-rich distance-based terrain synthesis. *The Visual Computer*, 2009, **25**(5–7), 573–579.

[DM6] J. Smith, D. Mould, M. Daley. Constructures: supporting human ingenuity in software. *Digital Creativity*, 2009, **20**(1), 79–94.

 $[\mathrm{DM7}] \ \mathrm{J.\ Long,\ D.\ Mould.\ Dendritic\ stylization.} \ \ \mathit{The\ Visual\ Computer},\ 2009,\ \mathbf{25}(3),\ 241-253.$ 

#### Papers in Fully Refereed Conference Proceedings

- [DM8] A. Somayaji, D. Mould, C. Brown. Towards narrative authentication. *New Security Paradigms Workshop*, 2013, to appear.
- [DM9] R. Wasson, D. Mould, R. Biddle, D. Martinez. A sketching game for art history instruction. Sketch-Based Interfaces and Modeling (SBIM) 2013, to appear.
- [DM10] J. Caron, D. Mould. Partition of unity parametrics for texture synthesis. *Proceedings of Graphics Interface 2013*, May 2013, Regina SK.
- [DM11] J. Madill, D. Mould. Target particle control of smoke simulation. *Proceedings of Graphics Interface 2013*, May 2013, Regina SK.
- [DM12] H. Li, D. Mould, J. Davies. Structure and aesthetics in non-photorealistic images. *Proceedings of Graphics Interface 2013*, May 2013, Regina SK.
- [DM13] H. Li, D. Mould. Continuous line drawings on dendrites. Sixth international conference on digital arts (ARTECH), November 2012, Faro Portugal, pp 97–106.
- [DM14] G. Carmichael, D. Mould, R. Biddle. Understanding the power of augmented reality for learning. World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education, September 2012, Montreal QC.
- [DM15] J. Miller, D. Mould. Accurate and discernible photocollages. *Proceedings of the Eighth Annual Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging*, June 2012, Annecy France, pp 115–124.
- [DM16] D. Mould. Texture-preserving abstraction. *Proceedings of the tenth annual Symposium on Non-Photorealistic Animation and Rendering*, June 2012, Annecy France, pp 75–82.
- [DM17] B. Wyvill, P. Kry, R. Seidel, D. Mould. Determining an aesthetic inscribed curve. *Proceedings of the Eighth Annual Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging*, June 2012, Annecy France, pp 63–70.
- [DM18] L. Xu, D. Mould. Synthetic tree models from iterated discrete graphs. *Proceedings of Graphics Interface 2012*, May 2012, Toronto ON, pp 149–156.
- [DM19] R. Mandryk, D. Mould, H. Li. Evaluation of emotional response to non-photorealistic images. *Proceedings of the ninth annual Symposium on Non-Photorealistic Animation and Rendering*, August 2011, Vancouver BC, pp 7–16.
- [DM20] H. Li, D. Mould. Artistic tessellations by growing curves. *Proceedings of the ninth annual Symposium on Non-Photorealistic Animation and Rendering*, August 2011, Vancouver BC, pp 125–134.
- [DM21] H. Li, D. Mould. Structure-preserving stippling by priority-based error diffusion. *Proceedings of Graphics Interface 2011*, May 2011, St. John's NL, pp 219–226.†
- †Received Michael A. J. Sweeney Award for Best Student Paper (Graphics) at Graphics Interface 2011.
- [DM22] L. Xu, D. Mould. Magnetic curves: curvature-controlled aesthetic curves using magnetic fields. *Computational Aesthetics 2009*, May 2009, Victoria BC, pp 1–10.
- [DM23] D. Rudolf, D. Mould. Interactive jellyfish animation using simulation. *GRAPP 2009: Fourth International Conference on Computer Graphics Theory and Applications*, Lisbon Portugal, pp 241-248.
- [DM24] K. Grant, D. Mould. Combining heuristic and landmark search for path planning. Future Play 2008, November 2008, Toronto ON.

- [DM25] K. Grant, D. Mould. LPI: approximating shortest paths using landmarks. *ECAI'08 Workshop on Artificial Intelligence in Games*, July 2008, Patras Greece, pp 45–49.
- [DM26] D. Mould, K. Grant. Stylized black and white images from photographs. *Proceedings of the sixth annual Symposium on Non-Photorealistic Animation and Rendering*, June 2008, Annecy France, pp 49–58.
- [DM27] L. Xu, D. Mould. Constructive path planning for natural phenomena modeling. *Eleventh International Conference on Computer Graphics and Artifical Intelligence*, May 2008, Athens Greece.
- [DM28] D. Mould. Stipple placement using distance in a weighted graph. *Proceedings of the Eurographics Workshop on Computational Aesthetics in Graphics, Visualization, and Imaging*, June 2007, Banff AB, pp 45–52.\*
  - \* Received one of two awards for best technical paper at Computational Aesthetics 2007.
- [DM29] J. Long, D. Mould. Improved image quilting. *Proceedings of Graphics Interface 2007*, May 2007, Montreal QC, pp 257–264.
- [DM30] L. Xu, D. Mould. Modeling dendritic shapes using path planning. *GRAPP 2007: Second International Conference on Computer Graphics Theory and Applications*, March 2007, Barcelona Spain, pp 29–38.\*\*
- \*\* Received the Best Paper award at GRAPP 2007. GRAPP 2007 received 136 submissions from 40 countries, accepting 36 as full papers, and gave out a Best Student Paper award and a Best Paper award.

#### Short Papers in Fully Refereed Conferences

- [DM31] H. Li, D. Mould. Content-sensitive screening in black and white. *GRAPP 2011: Proceedings of the International Conference on Computer Graphics Theory and Applications*, March 2011, Vilamoura Portugal, pp 166–172.
- [DM32] J. Mao, D. Mould, S. Subramanian. Background Subtraction for real-time tracking of a tennis ball. VISAPP 2007: Second International Conference on Computer Vision Theory and Applications, March 2007, Barcelona Spain, pp 427–434.

### Graduate Theses Supervised

- [T1] H. Li. Priority-aware image stylization. PhD thesis, Carleton U, 2013.
- [T2] J. Madill. Targeted smoke simulation combining control and turbulent flow. MCS thesis, Carleton U, 2013.
- [T3] R. Wasson. Sketch and Learn: a sketch based game framework for studying images. MSC thesis, Carleton U, 2012.
- [T4] J. Smith. A cognition-analogous approach to early-stage creative ideation support in music composition software. PhD thesis, U of Saskatchewan, 2011. Co-supervised by Dr. Mark Daley.
  - [T5] J. Miller. Accurate and discernible photocollages. MSc thesis, U of Saskatchewan, 2010.
- [T6] S. Dielschneider. Representing information using parametric visual effects on groupware avatars. MSc thesis, U of Saskatchewan, 2009. Co-supervised by Dr. Carl Gutwin.
- [T7] B. Rusnell. Feature-rich distance-based terrain synthesis. MSc thesis, U of Saskatchewan, 2009. Co-supervised by Dr. Mark Eramian.
- [T8] L. Xu. Modeling dendritic shapes using path planning. MSc thesis, U of Saskatchewan, 2008.

- [T9] J. Long. Modeling dendritic structures for artistic effects. MSc thesis, U of Saskatchewan, 2007.
- [T10] D. Rudolf. Animating jellyfish through numerical simulation and symmetry exploitation. MSc thesis, U of Saskatchewan, 2007.
- [T11] R. Rangel-Kuoppa. Automatic 3D model creation with velocity-based surface deformations. PhD thesis, U of Saskatchewan, 2007.

Remarks on publication list. Author order is uniformly in order of importance; whenever the work was part of a student's thesis research, the student is listed first.

In the list of theses, there are three co-supervisions. Of these, I was the primary supervisor in two cases (Brennan Rusnell and Jeff Smith), and in one case I was the secondary supervisor (Shane Dielschneider). The relative order of contributions towards the publications are reflected in the ordering of authors.

Conseil de recherches en sciences naturelles et en génie du Canada

#### 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 Date	
used to identify prospective reviewers an seen or used in the adjudication process	nd committee members, and to gen		Δ.	3/06/14
Family name	Given name	Initial(s) of all given	names Personal iden	tification no. (PIN)
Mould	David	DR	Valid	172623
Position and complete mailing address postsecondary institution or if your curre		nt is not a Canadian	If address is indicate:	emporary,
5302 Herzberg Laboratories	S			
1125 Colonel By Drive				
Ottawa ON K1S5B6				
CANADA				
			Starting date	
			Leaving date	
Telephone number	Facsimile number	E-mail address		
1 (613) 520-2600 8975		mould@scs.carlete	on.ca	
Telephone number (alternate)		phone number only if you c nber during business hours	an	pletion optional) Female
LANGUAGE CAPABILITY	·			
English Read X	Write	X	Speak X	
French Read	Write		Speak	
I wish to receive my correspondence	: in English	X	in French	
AREA(S) OF EXPERTISE	<u></u>			
Provide a maximum of 10 key words the to separate them. If you have expertise which one(s).			Research subject co	de(s)
computer graphics, natural pl	Primary			
analysis, non-photorealistic r procedural modeling, image		imulation,	2707	
			Secondary	
			2708	

Form 100, Appendix A (2009 W)

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#### 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 Recei</b>	Consent Received from Marie Roy				
Roy, Marie	Undergraduate (Completed)	Supervised 1994 - 1997	Isotope geochemistry in petroleum engineering	V-P (Research), Earth Analytics Inc., Calgary, Alberta	
<b>Consent Not O</b>	Consent Not Obtained from Marie Roy				
(name withheld)	Undergraduate (Completed)	Supervised 1994 - 1997	Isotope geochemistry	research executive in petroleum industry - western Canada	

#### **Consent Form**

Name of Trainee		
Applicant Information		
Name Mould, David DR		
Department	Postsecondary Institution	
Computer Science, School of	Carleton	
I hereby allow the above-named applicant to include limi consideration to NSERC for the next six years. This limit status, years supervised or co-supervised, title of the proposition title and company or organization at the time the this data in accordance with the <i>Privacy Act</i> , and that it contributions to the training of highly qualified personnel	ted data will only include my name, ty bject or thesis and, to the best of the a e application is submitted. I understar will only be used in processes that as	pe of HQP training and applicant's knowledge, my and that NSERC will protect sess the applicant's
Trainee's signature	Date	
Note: This form must be retained by the applicant and m		
Form 100, Appendix D (2009 W) PROTEC	TED WHEN COMPLETED	Version française disponible

