Natural Sciences and Engineering Research Council of Canada | Conseil de recherches en sciences naturelles et en génie du Canada

FORM 100
Personal Data Form
PART I

Date: 2012/10/25

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Bridson	Robert	RE	**Valid** 214193

☐ 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: Associate Professor

Department: Computer Science

Campus:

Canadian postsecondary institution: British Columbia

Tenured or tenure-track academic appointment — Yes [X] No [ ]

Part-time appointment [ ] Full-time appointment [X]

- For all non-tenured or non tenure-track academic appointment and Emeritus Professors, complete Appendices B & C
- For life-time Emeritus Professor and part-time positions, complete Appendix C

ACADEMIC BACKGROUND

Degree	Name of discipline	Institution	Country	Date yyyy/mm
Bachelor's	Joint Pure Mathematics and Computer Science	Waterloo	CANADA	1998 / 06
Master's	Computer Science	Waterloo	CANADA	1999 / 06
Doctorate	Scientific Computing & Computational Math	Stanford University	UNITED STATES	2003 / 06

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		4		5
Master's	1		8		9
Doctoral	5		2		7
Postdoctoral			1		1
Others					
Total	7		15		22

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

Version française disponible

Completed

Personal identification no. (PIN)	Family name
Valid 214193	Bridson

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	British Columbia	Computer Science	2010/07
Researcher/Software Architect (on contract with Autodesk)	n/a	n/a	2012/08 to 2013/08
Researcher (visiting on sabbatical)	Weta Digital	Research	2010/08 to 2011/04
Co-founder and Chief Scientist	Exotic Matter AB	n/a	2008/10 to 2012/08
Assistant Professor	University of British Columbia	Computer Science	2003/07 to 2010/06

PROTECTED WHEN COMPLETED

Personal identification no. (PIN)	Family name
Valid 214193	Bridson

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.

a) Support held in the past 4 years			
Dinesh Pai	Simulating Physics at Interactive Rates (SPIR) Mitacs Seed 4 hours/month	(0%) (0%) (0%)	2007 2008 2009
Sidney Fels	Dynamic Modeling of the Oral, Pharyngeal and Laryngeal Complex for Biomedical Applications NSERC Strategic Project 4 hours/month	197,400 (0%) 205,400 (0%) 203,900 (0%)	2008 2009 2010
Robert Bridson	Two-Phase Flow Simulation with FLIP GRAND NCE CAPSIM: From Capture to Simulation 10 hours/month	10,000	2010
b) Support currently held			
R. Bridson	Numerical Methods for Computational Physics in Animation NSERC Discovery Grant 80 hours/month	26,000 26,000 26,000 26,000 26,000	2008 2009 2010 2011 2012

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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) Support currently held			
Robert Bridson	Interactive Cinematic-Quality Fluid Animation NVIDIA Corporation NVIDIA Academic Hardware Donation 6 hours/month	600	2012
c) Support applied for			
Robert Bridson	GPU-Based Fast Fluids for Video Games Mitacs Accelerate internship 6 hours/month	30,000	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)	Family name
Valid 214193	Bridson

Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Chang, Athena	Undergraduate (In Progress)	Supervised 2012 -	Tetrahedral mesh generation for fracture simulation	Undergraduate, UBC
Doran, Crawford	Master's (In Progress)	Supervised 2012 -	Dynamic Boundary Element Fracture Mechanics	MSc, UBC
Keeler, Todd	Doctoral (In Progress)	Supervised 2012 -	Linear-Time Dynamics for Boundary-Based Fluid Simulation	PhD, UBC
Zhang, Xinxin	Doctoral (In Progress)	Supervised 2012 -	Surface tension dynamics for bubbles and foam	PhD, UBC
Zhu, Yufeng	Doctoral (In Progress)	Supervised 2012 -	Thin film dynamics with topology change	PhD, UBC
Edwards, Essex	Doctoral (In Progress)	Supervised 2010 -	Discontinuous Galerkin and Domain Decomposition methods...	PhD, UBC
Schechter, Hagit	Doctoral (In Progress)	Supervised 2006 -	Enhancing Particle Methods for Fluid Simulation in Graphics	PhD, UBC
Brochu, Tyson	Doctoral (Completed)	Supervised 2008 - 2012	Dynamic explicit surface meshes and applications	Consultant
Sutherland, Sean	Master's (Completed)	Supervised 2008 - 2012	Fiber Based Modeling of Wood Dynamics and Fracture	PhD, University of Toronto
(Name withheld)	Master's (Completed)	Supervised 2008 - 2012	Isometrically deforming cloth with simultaneous collisions	Developer, Industrial Light & Magic
Boyd, Landon	Master's (Completed)	Supervised 2008 - 2011	MultiFLIP for energetic two-phase fluid simulation	Developer, Tantalus
Wiebe, Mark	Master's (Not Completed)	Supervised 2008 - 2011	Extending Python/Numpy for Scientific Computing	Software Architect, Continuum Analytics
(Name withheld)	Undergraduate (Completed)	Supervised 2010 - 2010	Acute Tetrahedral Meshing	unknown
(Name withheld)	Undergraduate (Completed)	Supervised 2010 - 2010	Motion Blur and Anisotropic Image Reconstruction	unknown
Edwards, Essex	Master's (Completed)	Supervised 2008 - 2010	A high order accurate Particle in Cell method	PhD, UBC
Batty, Christopher	Doctoral (Completed)	Supervised 2005 - 2010	Simulating viscous incompressible fluids with embedded...	Banting postdoc, Columbia
Roosta-Khora Farbod	Undergraduate (Completed)	Supervised 2009 - 2009	Perceptually-modelled image reconstruction from unstructured	PhD, UBC
English, Elliot	Undergraduate (Completed)	Supervised 2007 - 2009	Animating developable surfaces using nonconforming elements	PhD, Stanford University
Williams, Brent	Master's (Completed)	Supervised 2007 - 2008	Fluid surface reconstruction from particles	Consultant
Bertails, Florence	Postdoctoral (Completed)	Supervised 2006 - 2007	Coupled solid-fluid simulation	Researcher, INRIA

Highly Qualified Personnel (HQP)

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

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Valid 214193	Bridson

Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Young, Herbert	Master's (Completed)	Supervised 2006 - 2007	Controllable, non-oscillatory damping for deformable objects	Software Engineer, Vineyard Networks
Bonner, Michael	Master's (Completed)	Supervised 2005 - 2007	Compressible subsonic flow on a staggered grid	unknown

Most Significant Contributions

The FLIP Algorithm for Incompressible Fluids [j4,j5,a3,a5,a6,a7,a8]

With my MSc student Yongning Zhu, I created the FLIP method for incompressible fluid flow, based on unstructured sampling/reconstruction unlike the original conservative FLIP for compressible flow. Our algorithm combines a simple implementation, robustness under large time steps and coarse grids, and excellent detail preservation, making it a perfect fit for computer animation. While it was published at SIGGRAPH in 2005 (*Animating Sand as a Liquid*), the industrial impact only really began in 2007, when my colleague Marcus Nordenstam and I created the FLIP-based *Squirt* fluid solver for visual effects studio Double Negative [a8]. It proved instrumental in their becoming one of the top studios worldwide, underlying effects in many films (I personally garnered a screen credit for *Inkheart* [a6]). Later we began a start-up company *Exotic Matter* [a7], selling a new highly scalable and flexible dynamics solver *Naiad* [a5], which brought FLIP to almost a hundred other facilities including nearly all the major studios (ILM, Weta, Pixar, Dreamworks, etc.), and featured in films such as *Avatar* (including the *Neytiri drinking* scene which won the Visual Effects Society's award for best single visual effect in 2009). While visiting Weta Digital I improved the transfer of particle data to the grid (velocity and level set surface description) in FLIP leading to another screen credit for *The Rise of the Planet of the Apes* [a3]. The other major software packages in this market, e.g. *Houdini*, soon followed suit in adopting FLIP, as have many in-house custom solvers. After growing to a profitable and vibrant company, and becoming one of the most talked-about start-ups in the effects industry, we were acquired by Autodesk in 2012 and are now building a next-generation effects platform to go even further.

We have also extended this variant of FLIP in several technical directions. Landon Boyd and I tackled two-phase flow [j4], such as an air-water system, replicating the glugging of water through a spout or the motion of a bubble underwater — some of the trickiest fluid effects to manage. Essex Edwards and I took the method to 4th order accuracy in time and space [j5] on a variety of PDEs including the vorticity form of Navier-Stokes, and showed it is competitive in terms of accuracy and efficiency with modern Eulerian methods for scientific computing.

Fluid Animation Workflow [j1,j6,j10,c3,c6,a2,a5,a10]

Apart from demanding high quality numerical methods, real-world fluid animation poses many artist workflow problems. Typically before an effects artist even begins work on a shot, the look has already been locked down according to a rough "previsualization" version which may be incompatible with the results of raw simulation, leading to laborious design iterations and manual manipulation/clean-up of output.

My invention of curl-noise [j10,a10] was a milestone in terms of easily and controllably synthesizing plausible turbulent detail, and is now pervasive throughout film and video game development; it also opened up a hot topic in animation research, turbulence modeling on top of base fluid simulations [c6], where extra detail is cheaply added to a successful low-resolution simulation without changing the broad motion.

Heavy ocean shots are some of the most difficult in terms of workflow. We pioneered matching physical models of waves up to previsualization manual animations to increase realism and allow derivation of compatible velocity fields for further processing [j1]. We also invented a means to guide a natural-looking simulation to stay close to a model or insert a full 3D simulation of a small region into a larger ocean model [j6], with accompanying work on constructing physi-

cally plausible 3D velocity fields from animated input [c3], seamlessly incorporated in my general design for flexible dynamics [a5]. This work saw fruition in the ocean scenes of *The Adventures of Tintin* [a2], with art-directed sand dunes transforming into storm swells, boats and characters interacting with 3D simulated water as part of an ocean out to the horizon, etc.

Surface Tracking with Triangle Meshes [j3,j8,a1,a4]

My student Tyson Brochu and I ignited interest in surface tracking using triangle meshes for computer graphics with a poster in 2006 at the ACM/Eurographics Symposium on Computer Animation. Compared to alternatives such as the level set method, triangle meshes offer major benefits in Lagrangian tracking (avoiding unwanted dissipation of sharp or thin features) and efficient representation of thin structures — but it comes at the apparent expense of drastically more complicated topological operations and potential for breakdown. Our breakthrough was to introduce an invariant, that the mesh is always the oriented boundary of an open set, with associated primitive operations which are rich enough to support high-quality evolution with topology change [j8]. We released our implementation open-source [a4], components of which are now widely used in film studios. A key ingredient is continuous collision detection (CCD): we recently invented the first exact CCD test for triangle meshes, also providing practical open-source software which will be of use for computational mechanics and geometry in general [j3,a1].

Mesh-Based Fluid Simulation [j7,c1,c2,c4,p2]

The chief goal of my efforts in surface tracking has been more effective fluid simulation; following my lead, mesh-based fluids are now arguably the hottest research area in fluid animation. My student Tyson Brochu who focused on much of this even co-taught a popular course on the subject at SIGGRAPH 2011.

My experience with production on films like *Avatar* and *The Dark Knight* showed that one of the biggest outstanding issues for smoke animation is disk and network capacity for tracking high-resolution smoke volumes (with particles or voxels), and so began looking at more efficient mesh-encodings of the boundary of the smoky region rather than its interior [p2]. This inspired a number of researchers to look at triangle meshes for smoke, including our own recent vortex-sheet-based simulation which is the first smoke solver and renderer to run in linear time and space w.r.t. the visible rendered detail (as opposed to the volume of the region simulated) [c2], a potential game-changer for gaming and interactive design!

Liquids are a more obvious application of surface tracking; I have pushed the envelope using just a surface mesh [j7], and also using a dynamic tetrahedralization of space in which the surface is embedded [c1,c2]. As noted industry fluid researcher Doug Roble put it at SIGGRAPH 2010, this may be "the end of the tyranny of the level set".

Numerical Boundary Conditions for Fluid Simulation [j2,j11,c5]

Boundary conditions are almost always the trickiest aspect of numerical methods for fluids. My group pioneered accurate no-stick solid boundaries for fixed and dynamically coupled irregular geometry on Cartesian grids [j11], which is now *de rigeur* in graphics. We also were the first to tackle the true nature of the free-surface boundary of a viscous fluid, responsible for the delicate buckling and coiling behaviour when pouring liquids such as honey [c5], which has seen significant use in visual effects for commercials (chocolate, shampoo, ...) for example. We took a similar

route to putting boundary conditions for pure particle simulations on a firm footing [j2], finally allowing these to replicate physical effects such as water adhering to the undersurface of a solid.

Research Contributions and Practical Applications

In all publications I took an active role in all aspects as the senior researcher, with the exception of [c2] where my role was limited to suggesting research directions and helping write. I use boldface only for students and postdocs whom I was directly supervising for the paper. Except where noted, my NSERC Discovery grant provided the sole funding.

ACM Transactions on Graphics is the top publication venue for computer graphics (now also encompassing SIGGRAPH proceedings, where most of my research is presented), the ACM/Eurographics Symposium on Computer Animation is the top publication venue specialized to computer animation, and Eurographics is the top general conference for graphics after SIGGRAPH. The SIAM Journal on Scientific Computing and the International Journal on Numerical Methods in Engineering are highly regarded for practical numerical algorithms.

Articles in Refereed Publications

[j1] M. B. Nielsen, A. Söderström, R.B., 2012, *Synthesizing waves from animated height fields*, ACM Trans. Graphics, accepted May 2012. [Weta Digital]

[j2] **H. Schechter**, R.B., 2012, *Ghost SPH for animating water*, ACM Trans. Graphics 31(4), 61:1-61:8

[j3] **T. Brochu**, **E. Edwards**, R.B., 2012, *Efficient geometrically exact continuous collision detection*, ACM Trans. Graphics 31(4), 96:1-96:7

[j4] **L. Boyd**, R.B., 2012, *MultiFLIP for energetic two-phase fluid simulation*, ACM Trans. Graphics 31(2), 16:1-16:12 [NSERC Discovery and GRAND CAPSIM]

[j5] **E. Edwards**, R.B., 2012, *A high-order accurate Particle-in-Cell method*, Intl. J. Numerical Methods in Engineering 90(9), 1073-1088

[j6] **M.B. Nielsen**, R.B., 2011, *Guide shapes for high resolution naturalistic liquid simulation*, ACM Trans. Graphics 30(3), 83:1-83:8 [Weta Digital]

[j7] **T. Brochu**, **C. Batty**, R.B., 2010, *Matching fluid simulation elements to surface geometry and topology*, ACM Trans. Graphics 29(3), 47:1-47:9

[j8] **T. Brochu**, R.B., 2009, *Robust topological operations for dynamic explicit surfaces*, SIAM J. Scientific Computing 31(4), 2472-2493

[j9] **E. English**, R.B., 2008, *Animating developable surfaces using nonconforming elements*, ACM Trans. Graphics 27(3), 66:1-66:5

[j10] R.B., J. Hourihan, M. Nordenstam, 2007, *Curl-noise for procedural fluid flow*, ACM Trans. Graphics 26(3), 46:1-46:3

[j11] **C. Batty**, **F. Bertails**, R.B., 2007, *A fast variational framework for accurate solid-fluid coupling*, ACM Trans. Graphics 26(3), 100:1-100:7

Refereed Conference Papers with Presentations

[c1] **T. Brochu**, **T. Keeler**, R.B., 2012, *Linear-time smoke animation with vortex-sheet meshes*, ACM/Eurographics Symp. Computer Animation, 6 pages

[c2] M. K. Misztal, K. Erleben, A. Bargteil, J. Fersund, B. B. Christensen, A. Bærentzen, R.B., 2012, *Multiphase flow of immiscible fluids on unstructured moving meshes*, ACM/Eurographics Symp. Computer Animation, 10 pages (best paper award)

[c3] H. Bhatacharya, M. B. Nielsen, R.B., 2012, *Steady state Stokes flow interpolation for fluid control*, Eurographics, 4 pages [Weta Digital]

[c4] **M. K. Misztal**, R.B., K. Erleben, A. Bærentzen, F. Anton, 2010, *Optimization-based fluid simulation on unstructured meshes*, VRIPHYS, 10 pages

[c5] **C. Batty**, R.B., 2008, *Accurate viscous free surfaces for buckling, coiling and rotating liquids*, ACM/Eurographics Symp. Computer Animation, 10 pages

[c6] **H. Schechter**, R.B., 2008, *Evolving sub-grid turbulence for smoke animation*, ACM/Eurographics Symp. Computer Animation, 7 pages

[c7] R.B., 2007, *Fast Poisson disk sampling in arbitrary dimensions*, ACM SIGGRAPH Sketches, 1 page

Refereed Posters

[p1] R.B., 2009, *SpikeNav: using stylus tilt in three-dimensional navigation*, ACM UIST

[p2] **T. Brochu**, R.B., 2009, *Animating smoke as a surface*, ACM/Eurographics Symp. Computer Animation

Other Refereed Contributions

[o1] R.B., M. Müller-Fischer, 2007, *Fluid Simulation*, SIGGRAPH Course Notes, 93 pages

[o2] R.B., M. Müller-Fischer, E. Guendelman, 2006, *Fluid Simulation*, SIGGRAPH Course Notes, 113 pages

Invited Contributions

[n1] R.B., **C. Batty**, 2010, *Computational physics in film*, Science 330(6012), 1756-1757

[n2] R.B., 2008, *Fluid simulation for computer graphics*, A K Peters Ltd., 246 pages

Contributions to Practical Applications of Knowledge

[a1] **T. Brochu**, **E. Edwards**, R.B., *ExactCCD* (software), open-source library providing geometrically exact continuous collision detection for 3D triangle meshes

[a2] R.B., 2011, *The Adventures of Tintin* (film), screen credit: R&D [Weta Digital]

[a3] R.B., 2011, *The Rise of the Planet of the Apes* (film), screen credit: R&D [Weta Digital]

[a4] **T. Brochu**, R.B., *El Topo* (software), open-source library providing robust Lagrangian 3D surface mesh tracking with topology change

[a5] M. Nordenstam, R.B., 2009, *Naiad* (software), commercial platform for general physics-based/procedural animation with a focus on fluid dynamics [Exotic Matter]

[a6] R.B., 2008, *Inkheart* (film), screen credit: Simulation Consultant [Double Negative]

[a7] M. Nordenstam, R.B., 2008, *Exotic Matter* (company) [self, Sweden/EU government]

[a8] M. Nordenstam, R.B., I. Masters, 2007, *Squirt* (software), custom fluid solver and associated geometry library [Double Negative]

[a9] R.B., 2007, *KKTDirect* (software), open-source library providing a direct linear solver for symmetric indefinite "saddlepoint" matrices arising from optimization

[a10] R.B., 2007, *Curlnoise* (software), open-source code demonstrating implementation and applications of curl-noise [j10] and fast Poisson disk sampling [c7]

Other Evidence of Impact and Contributions

- Invited to give the I.E. Block Community Lecture at the SIAM Annual Meeting 2012.
- Member of the NSERC Computer Science Evaluation Group in 2009-2011, and for the 2011-2012 competition one of three Section Chairs.
- Co-chaired ACM/Eurographics Symp. Computer Animation 2011; PC member 2007-2012.
- PC member for SIGGRAPH Technical Papers 2008, 2009, and 2012; on the paper sort (one of eight senior researchers who assign papers to the PC) 2010 and 2012.
- PC member for Symposium on Computational Geometry 2010, and VRIPHYS 2008-2012.
- Invited to write a "perspective" for *Science*, overviewing physics in animation as a whole [n1].
- My book [n2] has become the definitive reference on fluid simulation for computer graphics.

Contributions to the Training of Highly Qualified Personnel

My aspirations for undergrads are to excite them about research, for masters students to further prepare them with a numerical/mathematical problem-solving mindset and give them a start on real-world problems, and for PhD students to guide them to effectively become equal colleagues. I don't prioritize my own research agenda over their training, but offer flexibility and attention; they also gain from my breadth of expertise and interest, as well as my virtually unparalleled access to and influence upon the visual effects industry as a whole (knowing what a good problem is, networking, internships at top places, ability to make research have a real impact).

This has paid off: my students have started careers at top places like Dreamworks and ILM, or their own start-ups, or non-graphics companies like Tantalus (pioneering "smart grid" power technology) where the analytical and practical skills they have gained are equally valued; undergrads have gone on to Stanford or UBC for PhDs; a PhD went on to post-doc at Columbia with a Banting Fellowship; a post-doc became a permanent researcher at INRIA. Even the one student who did not complete their MSc left because his research was so successful he couldn't wait to jump into a start-up on the topic. I publish with my students exclusively in top, meaningful venues, and in several cases I've been delighted to support them in publishing on their own without me (e.g. Tyson Brochu at SCA, Christopher Batty at Eurographics, etc.).

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SEND ONE ORIGINAL ONLY DO NOT PHOTOCOPY

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: 2012/10/25

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Bridson	Robert	RE	**Valid** 214193

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

201-2366 Main Mall

Vancouver BC V6T1Z4
CANADA

If address is temporary, indicate:

Starting date

Leaving date

Telephone number	Facsimile number	E-mail address
1 (604) 8221993	(604) 8225485	rbridson@cs.ubc.ca

Telephone number (alternate): 1 (778) 2380617

Give an alternate telephone number only if you can be reached at that number during business hours.

Gender (completion optional): [X] Male [ ] Female

LANGUAGE CAPABILITY

English	Read [X]	Write [X]	Speak [X]
French	Read [X]	Write [ ]	Speak [ ]

I wish to receive my correspondence: in English [X] in French [ ]

AREA(S) OF EXPERTISE

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).

computer animation, computer graphics, contact and collision simulation, computational fluid dynamics, computational solid mechanics, sparse matrix methods, mesh generation, level set methods

Research subject code(s)

Primary: 2707

Secondary: 2955

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
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
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 Bridson, Robert RE

Department	Postsecondary Institution
Computer Science	British Columbia

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 *Privacy Act*, 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.