



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

Date  
2009/10/26

|                             |                       |                                    |  |
|-----------------------------|-----------------------|------------------------------------|--|
| Family name<br>van de Panne | Given name<br>Michiel | Initial(s) of all given names<br>M | Personal identification no. (PIN)<br><b>Valid</b> 103212 |
|-----------------------------|-----------------------|------------------------------------|--|

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<br>Professor                         | Tenured or tenure-track academic appointment<br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>  |
| Department<br>Computer Science                         | Part-time appointment <input type="checkbox"/> Full-time appointment <input checked="" type="checkbox"/>   |
| Campus<br>Point Grey                                   | <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<br>British Columbia |  |

**ACADEMIC BACKGROUND**

| Degree     | Name of discipline                  | Institution               | Country | Date<br>yyyy/mm |
|------------|-------------------------------------|---------------------------|---------|-----------------|
| Bachelor's | Electrical Engineering              | The University of Calgary | CANADA  | 1987/05         |
| Master's   | Electrical Engineering              | University of Toronto     | CANADA  | 1989/09         |
| Doctorate  | Electrical and Computer Engineering | University of Toronto     | CANADA  | 1994/06         |
|            |                                     |                           |         |                 |

**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) |               | Total     |
|---------------|------------|---------------|--|---------------|-----------|
|               | Supervised | Co-supervised | Supervised   | Co-supervised |           |
| Undergraduate |            |               | 3  |               | 3         |
| Master's      | 3          |               | 8  | 1             | 12        |
| Doctoral      | 1          |               | 3  | 2             | 6         |
| Postdoctoral  | 1          |               | 1  | 1             | 3         |
| Others        |            |               |  |               |           |
| <b>Total</b>  | <b>5</b>   |               | <b>15</b>  | <b>4</b>      | <b>24</b> |

Personal identification no. (PIN)

**Valid** 103212

Family name

van de Panne

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

| Position held (begin with current) | Organization                        | Department                           | Period (yyyy/mm to yyyy/mm) |
|------------------------------------|-------------------------------------|--------------------------------------|-----------------------------|
| Professor                          | British Columbia                    | Computer Science                     | 2008/07                     |
| Associate Professor                | University of British Columbia      | Computer Science                     | 2002/01<br>to 2008/06       |
| founder                            | Motion Playground                   |                                      | 2000/07<br>to 2003/07       |
| visiting professor                 | University of British Columbia      | Computer Science                     | 1999/07<br>to 2002/12       |
| Associate Professor                | University of Toronto               | Computer Science                     | 1998/07<br>to 2001/06       |
| Assistant Professor                | University of Toronto               | Computer Science                     | 1993/07<br>to 1998/06       |
| summer researcher                  | National Research Council of Canada | Institute for Information Technology | 1990/05<br>to 1990/08       |
| summer student                     | SPAR Aerospace                      | Robotics Division                    | 1987/05<br>to 1987/08       |
| summer student                     | Robotic Systems International       |                                      | 1986/05<br>to 1986/08       |

Personal identification no. (PIN)

**Valid** 103212

Family name

van de Panne

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

| Position held (begin with current) | Organization                           | Department | Period (yyyy/mm to yyyy/mm) |
|------------------------------------|--|------------|-----------------------------|
| summer student                     | Esso Canada Ltd.                       | Research   | 1985/05<br>to 1985/08       |
| summer student                     | Geophysical Microcomputer Applications |            | 1984/05<br>to 1984/08       |

Personal identification no. (PIN)

Family name

**Valid** 103212

van de Panne

**RESEARCH SUPPORT**

| Family name and initial(s)<br>of applicant   | Title of proposal, funding source and program,<br>and time commitment (hours/month)  | Amount<br>per year   | Years of<br>tenure<br>(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>   |  |  |                                      |
| K Singh and 6 others - \$<br>shown reflect my fraction   | Mathematical Surface Representations for<br>Conceptual Design<br>MITACS<br>Information Technology Research Projects<br>10 hours/month                        | 3,000<br>2,000<br>11,000<br>5,000  | 2006<br>2007<br>2008<br>2009         |
| Kellogg Booth  | Direct Multi-Touch Interaction for a Very Large<br>Wall Display<br>NSERC<br>RTI (equipment)<br>10 hours/month  | 151,000 (10%)  | 2006                                 |
| <b>b) Support currently held</b>   |  |  |                                      |
| Michiel van de Panne   | Advanced data-driven and user-driven content<br>creation for computer graphics<br>NSERC<br>Discovery Grant<br>60 hours/month                                 | 46,000<br>46,000<br>46,000<br>46,000<br>46,000   | 2005<br>2006<br>2007<br>2008<br>2009 |
| <b>c) Support applied for</b>  |  |  |                                      |
| Kellogg Booth and 49 others  | GRAND: Graphics, Animation, and New Media<br>Canada<br>Canadian Networks of Centers of Excellence<br>2009 NCE Competition for New Networks<br>50 hours/month | 4,650,000 (2%)<br>4,650,000 (2%)<br>4,650,000 (2%)<br>4,650,000 (2%)<br>4,650,000 (2%) | 2010<br>2011<br>2012<br>2013<br>2014 |

## 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> 103212  | van de Panne                                  |
| Name            | Type of HQP Training and Status | Years Supervised or Co-supervised | Title of Project or Thesis                                   | Present Position                              |
| (Name withheld) | Master's (In Progress)          | Supervised 2009 -                 | Interactive Diagrams   | in progress                                   |
| (Name withheld) | Master's (In Progress)          | Supervised 2008 -                 | The Animation Canvas   | in progress                                   |
| (Name withheld) | Postdoctoral (In Progress)      | Supervised 2008 -                 | Physics-based motion skills.                                 | in progress                                   |
| (Name withheld) | Doctoral (In Progress)          | Supervised 2007 -                 | Planning and Control for Simulated Bipedal Locomotion        | in progress                                   |
| (Name withheld) | Master's (In Progress)          | Supervised 2006 -                 | Recognition of sketched objects                              | in progress                                   |
| (Name withheld) | Postdoctoral (Completed)        | Supervised 2008 - 2008            | Continuation methods for adapting simulated skills           | associate researcher, Microsoft Research Asia |
| (Name withheld) | Master's (Completed)            | Co-supervised 2006 - 2008         | Sketch-based model deformation                               | game industry, Vancouver                      |
| (Name withheld) | Doctoral (Completed)            | Co-supervised 2005 - 2008         | Data-Driven Kinematic and Dynamic Models for Character       | Associate Researcher, Microsoft Research Asia |
| (Name withheld) | Doctoral (Not Completed)        | Supervised 2006 - 2007            | Learning Locomotion Skills                                   | game industry, Vancouver                      |
| (Name withheld) | Master's (Completed)            | Supervised 2005 - 2007            | Planning dynamic vehicle motion using move trees             | game industry, Vancouver                      |
| (Name withheld) | Doctoral (Completed)            | Supervised 1999 - 2007            | Toward More Efficient Motion Planning with Differential Cons | Google, Waterloo, Canada                      |
| (Name withheld) | Doctoral (Not Completed)        | Co-supervised 1996 - 2007         | Interfaces for Interactive Control of Physics-Based Animatio | unknown                                       |
| (Name withheld) | Master's (Completed)            | Supervised 2004 - 2006            | Sketch-based Modeling of Parameterized Objects               | game industry, Vancouver                      |
| Zhijin Wang     | Master's (Completed)            | Supervised 2004 - 2006            | Design and Implementation of a Voice-Driven Animation System | game industry, Vancouver                      |
| (Name withheld) | Undergraduate (Completed)       | Supervised 2004 - 2005            | Novel multimodal interfaces for character animation          | unknown                                       |
| Dana Sharon     | Doctoral (Not Completed)        | Supervised 2004 - 2005            | statistically based sketch recognition                       | game industry, Vancouver                      |
| (Name withheld) | Undergraduate (Completed)       | Supervised 2004 - 2005            | Character path planning in constrained environments          | MSc, U Toronto                                |
| Jason Harrison  | Postdoctoral (Completed)        | Co-supervised 2002 - 2005         | Perceptual Models for Computer Animation                     | PDFTron, Vancouver                            |
| (Name withheld) | Master's (Completed)            | Supervised 2003 - 2004            | Sketch-based Instancing of Parameterized 3D Models           | game industry, Vancouver                      |
| Dana Sharon     | Master's (Completed)            | Supervised 2003 - 2004            | Synthesis of Stylized Walking Controllers                    | game industry, Vancouver                      |

## 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)<br><b>Valid</b> 103212 | Family name<br>van de Panne               |
|-----------------|---------------------------------|-----------------------------------|--|---|
| Name            | Type of HQP Training and Status | Years Supervised or Co-supervised | Title of Project or Thesis                               | Present Position                          |
| Dinos Tsiknis   | Undergraduate (Completed)       | Supervised 2003 - 2004            | Interpreting Sketches of 3D Polygonal Objects            | game industry, Vancouver                  |
| Kenneth Alton   | Master's (Completed)            | Supervised 2003 - 2004            | Reinforcement Learning Using Semi-Parametric Policies    | PhD program                               |
| (Name withheld) | Master's (Completed)            | Supervised 2003 - 2004            | An Interface for Prototyping Dynamic Aerial Motions      | Software developer, Microsoft, Redmond    |
| Hamish Carr     | Doctoral (Completed)            | Co-supervised 2002 - 2004         | Topological Manipulation of IsoSurfaces                  | Lecturer, Dept of CS, Univ College Dublin |

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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



**PROTECTED WHEN COMPLETED**

## 1 Most Significant Contributions to Research (2003-2009)

I have played a key role in all of the following projects through participation in defining the ideas, guiding development, and writing. For two projects, I have also made contributions to aspects of the implementation.

### Simple Biped Locomotion Control

Our SIMBICON project [J10] enables real-time physics-based character simulations to walk, run, turn, skip, recover from pushes, and cope with terrain slope variations. The paper makes two primary technical contributions: a robust balance strategy for walking and a new method for learning feed-forward control. The lack of simple and robust control strategies for walking has long been a sticking point in the further development of physics-based animation and made it difficult to develop practical scenarios that went beyond rag-doll simulations. As such, this work has played a role (although this is for others to judge) in helping to revitalize physics-based character animation. A growing fraction of character animation papers at SIGGRAPH and elsewhere are now on physics-based animation and control.

We are aware of 10 different implementations of the method by other teams, 4 of these in industry. This is a high number given the complexities of implementing dynamic walking simulations. The work has been presented at ACM SIGGRAPH, and also as a poster-with-live-demo at leading venues for machine learning (NIPS) and walking simulation (Dynamic Walking). The method was presented at two seminar series at Cornell University on invitation from Andy Ruina, who is well known for his work on the energetics of walking. We have made our most recent implementation freely available and it is being downloaded on a regular basis. Since publication two years ago, Google Scholar shows 39 citations (caveat: includes self-citations).

### Flexible Locomotion Skills

Given basic locomotion, a next step is to develop locomotion skills that are aware of their environment. We have pursued three directions: (a) automatic adaptation of walking to tasks such as climbing large steps, stepping over objects, pushing heavy objects, and walking on ice [J6]; (b) learning to walk in constrained environments, such as walking over terrain with sequences of gaps [J5]; and (c) learning task-level control policies, such as walking or running quickly to a desired location [J10]. In association with [J10], we distribute two simple prototype games with fully physics-based character animation, arguably among the first of their kind wherein physics-based characters move with a reasonable degree of skill. While it is too early to judge their impact, the methods have been enthusiastically received in demonstrations to game developers, humanoid robot developers, and at invited talks.

### Novel Animation Interfaces

We have developed a number of new interface techniques for animation, including: a pen-based interface for drawing motions [J1], a voice-driven interface allowing for multimodal voice-and-pointing direction of character motion [C9], and a game-controller-based interface for the control of physics-based sports stunts [C6]. [J1] has been the most influential (88 citations, Google Scholar). One impact has been to encourage the invention of new interface ‘languages’, where the input vocabulary of gestures are reminiscent of the motions that they are intended to trigger. For example, the SIGGRAPH 2009 paper “Performance-based control interface for character animation” further explores this idea in very interesting ways.

### Sketch-based Modeling

I maintain a strong interest in sketch-based modeling techniques. Our work on “Sketch-based modeling of Parameterized Objects” [C5] was among the first to explore the use of techniques from model-based vision in support of sketch-based modeling and it has played an iconic role in that context. A revised version of this work will appear as a chapter in a first book on Sketch Based Interfaces and Modeling [NR2]. We build further on this direction in recent work on “Modeling from Contour Drawings” [C15], where we construct 3D models from drawings with the help of 3D template geometry. We compute optimal correspondences between the template geometry and the drawing using a hidden Markov model framework, and then apply recent variational deformation techniques to reshape the model and its pose to match the drawing. We believe that the use of strong shape priors will continue to play a critical role in the interpretation of sketches and drawings.

## 2 Research Contributions (2003–2009)

ACM Transactions on Graphics (TOG) and its ACM SIGGRAPH and ACM SIGGRAPH ASIA issues are the most competitive and highest-impact publication venues, and so they remain my first choice for publication (eight publications since 2004). The ACM/EG Symposium on Computer Animation is the top forum dedicated specifically to computer animation, and is thus my second choice. With few exceptions, the listed publications receive at least 4 reviews based on the full-length paper. SIGGRAPH and SIGGRAPH ASIA papers receive a minimum of 5 detailed, full-length reviews followed by a revision cycle before publication in ACM TOG.

The authorship convention in computer graphics lists students first, in order of contribution, followed by faculty, in order of contribution. Graduate students or post-doctoral fellows that I have supervised are listed in boldface. In collaborations with my students, I participate fully in idea conception, guidance of the implementation, and the writing. For outside collaborations, I comment on my contributions in the bibliographic entry (space permitting).

NSERC has been the primary source of funding for my research, with MITACS funding providing partial student funding for projects related to sketch-based modeling.

### Refereed Journal Articles

- [J10] **Stelian Coros, Philippe Beaudoin**, and Michiel van de Panne. Robust task-based control policies for physics-based characters. *ACM Trans. on Graphics (Proc. SIGGRAPH ASIA, accepted as of Aug 2)*, 2009. 9 pages.
- [J9] Weiwei Xu, Jun Wang, KangKang Yin, Kun Zhou, Michiel van de Panne, Falai Chen, and Baining Guo. Joint-aware manipulation of deformable models. *ACM Trans. Graphics (Proc. ACM SIGGRAPH)*, 28(3):35, 2009. 9 pages. **Contributions: examples, writing.**
- [J8] Nicolas Bonneel, Sylvain Paris, Michiel van de Panne, Frédo Durand, and George Drettakis. Single photo estimation of hair appearance. *Computer Graphics Forum (Proc. Eurographics Symposium on Rendering)*, 28(4):1171–1180, 2009. **Contributions: algorithm, writing.**



- [J7] **Hamish Carr**, Jack Snoeyink, and Michiel van de Panne. Flexible isosurfaces: Simplifying and displaying scalar topology using the contour tree. *Computational Geometry: Theory and Applications*, 43:42–58, 2010. to appear, accepted March 20 2009.
- [J6] **KangKang Yin**, **Stelian Coros**, **Philippe Beaudoin**, and Michiel van de Panne. Continuation methods for adapting simulated skills. *ACM Trans. Graphics (Proc. ACM SIGGRAPH)*, 27(3):81, 2008. 7 pages.
- [J5] **Stelian Coros**, **Philippe Beaudoin**, **KangKang Yin**, and Michiel van de Panne. Synthesis of constrained walking skills. *ACM Trans. Graphics (Proc. ACM SIGGRAPH ASIA)*, 27(5):113, 2008. 9 pages.
- [J4] Tao Ju, Qian-Yi Zhou, Michiel van de Panne, Danny Cohen-Or, and Ulrich Neumann. Reusable skinning templates using cage-based deformations. *ACM Trans. Graphics (Proc. ACM SIGGRAPH ASIA)*, 27(5):122, 2008. 10 pages. **Contributions: idea, writing.**
- [J3] **KangKang Yin**, **Kevin Loken**, and Michiel van de Panne. SIMBICON: Simple biped locomotion control. *ACM Trans. Graphics (Proc. SIGGRAPH)*, 26(3), 2007. 10 pages.
- [J2] **Jason Harrison**, Ron Rensink, and Michiel van de Panne. Obscuring length changes during animated motion. *ACM Trans. Graphics (Proc. SIGGRAPH)*, 23(3):569–73, 2004.
- [J1] **Matthew Thorne**, **David Burke**, and Michiel van de Panne. Motion Doodles: An interface for sketching character motion. *ACM Trans. Graphics (Proc. SIGGRAPH)*, 23(3):424 – 431, 2004.

### Refereed Conference Proceedings (refereed on full paper)

- [C15] Vladislav Kraevoy, Alla Sheffer, and Michiel van de Panne. Modeling from contour drawings. In *Proc. EG Symposium on Sketch-Based Interfaces and Modeling*, 2009. 8 pages.
- [C14] Philippe Beaudoin, Michiel van de Panne, Pierre Poulin, and **Stelian Coros**. Motion-motif graphs. In *ACM/EG Symposium on Computer Animation*, 2008. 10 pages.
- [C13] **Maciej Kalisiak** and Michiel van de Panne. Faster motion planning using learned local viability models. In *Proc. IEEE Int’l Conf. on Robotics and Automation*, 2007. 6 pages.
- [C12] Philippe Beaudoin, Pierre Poulin, and Michiel van de Panne. Adapting wavelet compression to human motion capture clips. In *Proc. Graphics Interface*, pages 313–318, 2007.
- [C11] **Dana Sharon** and Michiel van de Panne. Constellation models for sketch recognition. In *SBIM’06: EG Sketch Based Interfaces and Modeling*, pages 19–27, 2006.
- [C10] **Maciej Kalisiak** and Michiel van de Panne. RRT-blossom: RRT with a local flood-fill behavior. In *Proc. IEEE Int’l Conf. on Robotics and Automation*, 2006. 6 pages.
- [C9] **Zhijin Wang** and Michiel van de Panne. Walk to here: A voice driven animation system. In *ACM SIGGRAPH/EG Symp. on Computer Animation*, pages 243–251, 2006.
- [C8] **Ken Alton** and Michiel van de Panne. Learning to steer on winding tracks using semi-parametric control policies. In *IEEE Int’l Conf. on Robotics and Automation*, 2005. 6 pages.

- [C7] **Dana Sharon** and Michiel van de Panne. Synthesis of controllers for stylized planar bipedal walking. In *IEEE Int'l Conf. on Robotics and Automation*, 2005. 6 pages.
- [C6] **Peng Zhao** and Michiel van de Panne. User interfaces for interactive control of physics-based 3d characters. In *ACM Symp. on Interactive 3D Graphics and Games*, 2005. 8 pages.
- [C5] **Chen Yang**, **Dana Sharon**, and Michiel van de Panne. Sketch-based modeling of parameterized objects. In *EG Sketch-Based Interfaces and Modeling*, 2005. 10 pages.
- [C4] **Kangkang Yin**, Dinesh Pai, and Michiel van de Panne. Data-driven interactive balancing behaviors. In *Pacific Graphics*, 2005. Accepted as 4-page short paper; full paper is 9 pages.
- [C3] **Maciej Kalisiak** and Michiel van de Panne. Approximate safety enforcement using computed viability envelopes. In *IEEE Int'l Conf. on Robotics and Automation*, 2004. 6 pages.
- [C2] **Hamish Carr**, Jack Snoeyink, and Michiel van de Panne. Simplifying flexible isosurfaces using local geometric measures. In *Proceedings of IEEE Visualization*, 2004. 8 pages.
- [C1] **Petros Faloutsos**, Michiel van de Panne, and Demetri Terzopoulos. Autonomous reactive control for simulated humanoids. In *IEEE Int'l Conf. on Robotics and Automation*, 2003. 8 pages.

#### Abstracts, Posters, and Sketches (refereed on abstract)

- [A9] **Stelian Coros**, **Philippe Beaudoin**, and Michiel van de Panne. Control of a physics-based character in a virtual environment. In *Dynamic Walking*, 2009. poster presentation.
- [A8] **Stelian Coros**, **Philippe Beaudoin**, and Michiel van de Panne. Towards games with physics-based characters. In *ACM/EG Symposium on Computer Animation*, 2009. poster presentation.
- [A7] **Stelian Coros**, **Philippe Beaudoin**, **KangKang Yin**, and Michiel van de Panne. Synthesis of constrained walking skills. In *ACM/EG Symposium on Computer Animation*, 2008. poster presentation.
- [A6] **Stelian Coros**, **KangKang Yin**, **Kevin Loken**, and Michiel van de Panne. SIMBICON: simple biped locomotion control. In *Dynamic Walking*, 2007. poster presentation.
- [A5] David White, **Kevin Loken**, and Michiel van de Panne. Slow-in and slow-out cartoon animation filter. In *Poster presentation, ACM SIGGRAPH*, 2006. finalist in best-poster competition (top 25/179).
- [A4] **Chen Yang**, **Dana Sharon**, and Michiel van de Panne. Sketch-based modeling of parameterized objects. In *ACM SIGGRAPH Technical Sketch*, 2005.
- [A3] **Jason Harrison**, Ron Rensink, and Michiel van de Panne. Length changes are difficult but not impossible to detect without attention. Vision Sciences Society, 2004. refereed abstract and poster presentation.
- [A2] **Hamish Carr**, Jack Snoeyink, and Michiel van de Panne. Contour tree simplification with local geometric measures. In *14th Annual Fall Workshop on Computational Geometry*, 2004. Reviewed by abstract only.

- [A1] **Jason Harrison**, Ron Rensink, and Michiel van de Panne. Detecting changes of velocity of smoothly moving objects. Vision Sciences Society, May 9-14 2003. refereed abstract and poster presentation.

### Non-refereed Contributions

- [NR2] Michiel van de Panne and Dana Sharon. Flexible parts-based sketch recognition. In Joaquim Jorge and Faramarz Samavati, editors, *Sketch Based Interfaces and Modeling*, chapter 5. Springer, 2010. to appear.
- [NR1] Michiel van de Panne and Cedric Lee. Ski stunt simulator: Experiments with interactive dynamics. In *Proceedings of the 14th Western Computer Graphics Symposium*, Banff, Canada, April 2003.

### Edited Volumes

- [V2] Michiel van de Panne and Eric Saund, editors. *Proceedings of Sketch Based Interfaces and Modeling*. ACM SIGGRAPH and Eurographics, 2008. ISBN:978-1-59593-915-3.
- [V1] Kori Inkpen and Michiel van de Panne, editors. *Proceedings of Graphics Interface*. AK Peters Ltd., 2005. ISBN 1-56881-265-5.

## 3 Other Evidence of Impact and Contributions (2003-2009)

- Canada Research Chair, 2007 (Tier 2, five-year renewal)
- Program co-Chair, EG Symposium on Sketch-based Interfaces and Modeling, 2007.
- Program co-Chair, Graphics Interface 2005.
- Chair and organizer, 15th Western Canadian Computer Graphics Symposium, 2004
- Associate Editor, *ACM Transactions on Graphics*, (2005–2008)
- Associate Editor, *Revue electronique francophone d'informatique graphique*, (2006– )
- Steering Committee, ACM/Eurographics Symposium on Computer Animation (2003-2005)
- MITACS College of Reviewers (2008–present)
- Program Committees: ACM SIGGRAPH ASIA (2009), ACM SIGGRAPH (2003, 2004, 2005, 2007), ACM Symposium on Computer Animation, (2003–2009), NPAR (2006), Graphics Interface (2003, 2004, 2005), CASA (2004-2008)

## 4 Delays in Research Activity

None expected.

## 5 Contributions to the Training of Highly Qualified Personnel

I have supervised or co-supervised 21 M.Sc., Ph.D., and Postdoctoral Fellows since 2004. Of these, five are ongoing and two have left before completion.



**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<br>2009/10/26   |
| Family name<br>van de Panne   | Given name<br>Michiel  | Initial(s) of all given names<br>M             | Personal identification no. (PIN)<br><b>Valid</b> 103212   |
| 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   |  |  | If address is temporary, indicate:<br><br>Starting date<br><br>Leaving date                              |
| <b>CANADA</b>   |  |  |  |
| Telephone number<br>(604) 822-8737  | Facsimile number<br>(604) 822-4231   | E-mail address<br>van@cs.ubc.ca                |  |
| Telephone number (alternate)  | <input type="checkbox"/> Give an alternate telephone number only if you can be reached at that number during business hours. |  | Gender (completion optional)<br><input checked="" type="checkbox"/> Male <input 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 checked="" type="checkbox"/>      | Speak <input checked="" 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).<br><br>computer animation, physics-based simulation, motion control, motion planning, robotics, kinesiology, biomechanics, human modeling and simulation, sketch based modeling |  |  | Research subject code(s)<br><br>Primary<br>2707<br><br>Secondary   |



### 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 <b>van de Panne, Michiel M</b>   |  |
| Department<br><b>Computer Science</b>   | Postsecondary Institution<br><b>British Columbia</b> |
| <p>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.</p> |  |
| _____   | _____  |
| Trainee's signature   | Date   |
| <p>Note: This form must be retained by the applicant and made available to NSERC upon request.</p>  |  |