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: 2008/10/30

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Fiume	Eugene	EL	115008

☐ 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: Professor

Department: Computer Science

Campus:

Canadian postsecondary institution: Toronto

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	Computer Science	University of Waterloo	Canada	1981 / 06
Master's	Computer Science	University of Toronto	Canada	1983 / 01
Doctorate	Computer Science	University of Toronto	Canada	1986 / 07

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		1
Master's	3		6	1	10
Doctoral	4	3	2		9
Postdoctoral					
Others					
Total	7	3	9	1	20

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
115008	Fiume

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	Toronto	Computer Science	1997/07
Board of Directors	Tucows, Incorporated.		2005/06
Chair	University of Toronto	Computer Science	1998/07 to 2004/06
Director	Alias|Wavefront	Research and Usability Engineering	1998/01 to 1999/01
Senior and Consulting Research Scientist	Alias|Wavefront	Research	1996/07 to 1997/12
Visiting Professor	University of Grenoble	iMAGIS	1995/06 to 1995/09
Assistant/Associate Professor	University of Toronto	Computer Science	1987/07 to 1992/06
Maitre Assistant/NSERC Postdoctoral Fellow	Universite de Geneve	Centre d'Universitaire d'Informatique	1986/06 to 1987/07

PROTECTED WHEN COMPLETED

Personal identification no. (PIN)	Family name
115008	Fiume

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

Eugene Fiume	Inverse problems for computer graphics	74,000	2004
	NSERC	74,000	2005
	Individual Discovery Grants	74,000	2006
	40 hours/month	74,000	2007
Karan Singh	Mathematical Surface Representations for	100,000 (20%)	2005
	Conceptual Design	100,000 (20%)	2006
	MITACS	100,000 (20%)	2007
	10 hours/month	100,000 (20%)	2008
		100,000 (20%)	2009

c) Support applied for

Eugene Fiume	A Centre for Collaborative Interactive Digital	2,000,000 (10%)	2010
	Media	2,000,000 (10%)	2011
	Canada Foundation for Innovation/Ontario	2,000,000 (10%)	2012
	Research Fund		
	8 hours/month		

PROTECTED WHEN COMPLETED

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
115008	Fiume

Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Chris Gonterman	Master's (In Progress)	Supervised 2008 -	topics in light transport	graduate student
Andy Chow	Master's (In Progress)	Supervised 2007 -	Generalizaton of SOHO wavelets to spherical volumes	graduate student
Christian Lessig	Doctoral (In Progress)	Supervised 2007 -	mathematical foundations of computational illumination	graduate student
Derek Nowrouzezahı	Doctoral (In Progress)	Supervised 2007 -	accelerated algorithms for global illumination	graduate student
Hanieh Bastani	Doctoral (In Progress)	Supervised 2007 -	nonlinear dimensionality reduction for facial animation	graduate student
Sami Siddique	Doctoral (In Progress)	Co-supervised 2007 -	model driven image guided radation therapy	graduate student and research associate
Dongwoon Lee	Doctoral (In Progress)	Co-supervised 2005 -	parameterised physical virtual humans	graduate student and research associate
Cathy Jansen	Master's (In Progress)	Supervised 2001 -	natural language interfaces for computer graphics	graduate student and lecturer
Joe Laszlo	Doctoral (In Progress)	Supervised 2000 -	human-in-the-loop, interactive physically-based animation	graduate student
Hanieh Bastani	Master's (Completed)	Supervised 2007 - 2008	A Nonlinear Framework for Facial Animation	Ph.D. student
Christian Lessig	Master's (Completed)	Supervised 2005 - 2006	Orthogonal and Symmetric Haar Wavelets on the Sphere	Ph.D. student
Derek Nowrouzezahı	Master's (Completed)	Supervised 2005 - 2006	Vortex Based Smoke Simulation and Control	Ph.D. student
Matthew Carroll	Master's (Completed)	Supervised 2005 - 2006	Automatic Detection of revealing Cutting Planes in 3D Datase	Software Architect, IBM Canada
Gerard Baron	Master's (Completed)	Co-supervised 2004 - 2006	Graphics Hardware Accelerated Time-Domain Modeling	Entrepreneur, Toronto
Kevin Forbes	Master's (Completed)	Supervised 2004 - 2005	Motion Curves: A Versatile Representation for Motion Data	Games developer at Software Comic, Vancouver, BC
Mandheerej Nandra	Undergraduate (Completed)	Supervised 2004 - 2005	Hardware Accelerated Shadow Computation	Start-up company in the U.S.
Marge Coahran	Master's (Completed)	Supervised 2003 - 2005	Computer-Assisted Bargello Quilt Design	Lecturer at Grinnell University, Grinnell, Iowa
Michael Neff	Doctoral (Completed)	Supervised 2000 - 2005	Aesthetic Exploration and Refinement: A Computational	Assistant Professor at UC Davis, Davis, CA
Hao (Richard)	Doctoral (Completed)	Supervised 2000 - 2003	Signal Processing and Eigenvalue Decomposition of Polygonal	Assistant Professor, Simon Fraser University, Burnaby BC
Meng Sun	Doctoral (Completed)	Supervised 1999 - 2002	Video Input-Driven Animation	Graphics Software Engineer, Autodesk Canada

Eugene Fiume's Research and Development activities in past six years

I will first list activities over the past six years that are indirectly related to research. I will then list my published research results.

Board Memberships/International Review Panels

1. **Directorships**
   (a) Board of Directors, Tucows Inc., Toronto ON, since June 2005.
   (b) E-Tech Executive, University of Toronto, September 1999 - September 2003.
   (c) Board of Directors, CITO (Communications and Information Technology of Ontario), Ottawa ON, Nov. 1997 - September 2002.

2. **Scientific/Technical/Institutional Advisory Boards**
   (a) View22 Technology Inc., since June 2007.
   (b) Computer Science and Engineering Department, Hong Kong University of Science and Technology, since November 2006.
   (c) Crossflux and iTIVA Corporations, Kelowna BC, April 2005-April 2006.
   (d) iCORE International Board of Review, Calgary AB, March-September 2005.
   (e) Max Planck Center for Visual Computing and Communication, (Saarbrucken, Germany) and Stanford (Palo Alto, CA), since September 2004.
   (f) NGRAIN Corp., Vancouver BC, since July 2003.
   (g) OctigaBay Systems., July 2002-March 2004, Burnaby BC, acquired by Cray Systems in April 2004.
   (h) TrueSpectra Inc., Toronto ON, March 2002-September 2004.
   (i) BitFlash Graphics Inc., Ottawa ON, June 2001-October 2004.
   (j) PlateSpin Inc., Toronto ON, June 2001-January 2003.
   (k) CastleHill Ventures, Toronto ON, since September 2000.
   (l) Bell University Labs, Toronto ON, December 1999-January 2003.
   (m) Executive Advisory Board, IBM Centre for Advanced Study, Markham ON, July 1998 - June 2004.
   (n) Various other industrial advisory roles under nondisclosure.

3. **Conference Organization and Advisory Boards**
   (a) *Symposium for Computer Animation 2008*, general conference co-chair.
   (b) *Eurographics 2008* Programme Chair's papers advisory committee.
   (c) SIGGRAPH Executive Nominating Committee (July 2005-October 2005).
   (d) *SIGGRAPH 2005* Programme Chair's papers advisory committee.
   (e) *SIGGRAPH 2001* Papers Programme Chair and Overall Programme Planning Committee.
   (f) *SIGGRAPH 2000* Programme Chair's papers advisory committee.
   (g) *SIGGRAPH 1999* Programme Chair's papers advisory committee.

(h) *Symposium for Computer Animation 2005* "Best Student Paper" selection committee (July/August 2005).

4. **Evaluation committees**
   (a) President of evaluation committee of the Department of Computer Science at ETH, Zürich, Switzerland, November 2008.
   (b) Nominating Committee, ACM SIGGRAPH Executive, 2005.
   (c) Chair of ACM SIGGRAPH Awards Committee, five year term, 2004-2008.
   (d) Chair of evaluation committee of the Department of Computer Science at the University of British Columbia, January-March 2000.
   (e) Chair of evaluation committee of IMK, a 90-person research institute in Bonn, Germany, October 1999.
   (f) Chair of evaluation committee of IPSI, an 80-person research institute in Darmstadt, Germany, October 1997.
   (g) Member of Evaluation Panel, INRIA, August-November, 1996; evaluation of 11 major research projects in the areas of computer graphics, computer vision, image processing and robotics.

Programme/Papers Committees

When Held	Conference/Location
July 2008	*Symposium for Computer Animation*, conference co-chair.
April 2008	*Eurographics 2008*, Crete (also on advisory committee).
Sept. 2007	*Symposium for Computer Animation 2007*, Cyprus.
June 2007	*3IA 2007*, Limoges, France.
June 2007	*Graphics Interface 2007*, Montreal, Quebec.
June 2007	*GRAPP 2007*, Barcelona, Spain.
July 2006	*Symposium for Computer Animation 2006*, Vienna.
June 2006	*3IA 2006*, Limoges, France.
July 2005	*Symposium for Computer Animation 2005*, Los Angeles, California.
July 2005	*ACM SIGGRAPH '05*, Los Angeles (also papers advisory committee).
June 2005	*3IA 2005*, Limoges, France.
Sept. 2004	*Symposium for Computer Animation 2004*, Los Angeles, California.
Sept. 2004	*EUROGRAPHICS 2004*, Grenoble, France.
May 2004	*3IA 2004*, Limoges, France.
Sept. 2003	*EUROGRAPHICS 2003*, Granada, Spain.
Aug. 2003	*Symposium for Computer Animation 2003*, San Diego, California.
May 2003	*3IA 2003*, Limoges, France.
March 2003	*Web3D 2003 Symposium*, Saint Malo, France.
Sept. 2002	*EUROGRAPHICS 2002*, Saarbrucken, Germany.

Eugene Fiume's Publications in past six years

Co-authorship policy: I am almost always listed last and never put my name ahead of students.

Books

1. Fiume, E., *Computational Reality, Illusion and Deception*, in preparation, 2009.

Refereed Journals

1. Chow, A., C. Lessig and E. Fiume, "Wavelet compressed spherical volumes", to be submitted to *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2008.
2. Lessig, C. and E. Fiume, "SOHO: Orthogonal and symmetric Haar wavelets on the sphere", *ACM Transactions on Graphics, 27*(1) (March 2008), 1-11; also presented at *SIGGRAPH 2008*.
3. M. Neff and E. Fiume, "From Performance Theory to Character Animation Tools", Chapter 24 of *Human Motion Understanding, Modelling, Capture and Animation, Computational Imaging and Vision (36)*, eds. B. Rosenhahn, R. Klette, and D. Metaxas, Springer-Verlag, Berlin, 2007, 583-612 (this paper was both invited and fully refereed).
4. Ragia, L., and E. Fiume, "Challenges in Geovisualization", *IPSI Transactions on Advanced Research*, 2008.
5. Baron, G.S., E. Fiume, and C.D. Sarris, "A Graphics Hardware Accelerated Multiresolution Time-Domain Technique: Development, Evaluation and Applications", *IET Proceedings on Microwaves, Antennas & Propagation 2*(3) (April 2008), 288-301.
6. Neff, M., and E. Fiume, "Methods for exploring expressive stance", *Graphical Models 68*, 2 (March 2006), 133-157. A revised, expanded, re-refereed version of the paper that appeared in *ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2004*, 49-58 (August 2004)–see below.
7. A. Agur, V. Ng-Thow-Hing, K. Ball, E. Fiume, and McKee, N., "Documentation and three-dimensional modelling of human soleus muscle architecture", *Clinical Anatomy 16*, 4 (June 2003), 285-293.

Refereed Conferences

1. Nowrouzezahrai, D., V. Kalogerakis, E. Fiume, "Shadowing Dynamic Scenes with Arbitrary BRDFs", submitted to *Eurographics 2009*.
2. Nowrouzezahrai, D., V. Kalogerakis, P. Simari, E. Fiume, "Shadowed Relighting of Dynamic Geometry with 1D BRDFs", *Eurographics 2008*, short paper, May 2008.
3. Nowrouzezahrai, D., P. Simari, E. Kalogerakis, E. Fiume, "Eigentransport for Efficient and Accurate All-Frequency Relighting" *Graphite 2007*. [Received Best Paper Award for Conference.]
4. Nowrouzezahrai, D., P. Simari, E. Fiume, K. Singh, "Learning Radiance Transfer for Articulated Characters", *Graphite 2007*. [Honourable mention for Conference.]

5. Diener, J., L. Reveret, and E. Fiume, "Video-based animation of plants", *SIGGRAPH/Eurographics Symposium on Computer Animation 2006* (Sept. 2006).
6. Baron, G.S., E. Fiume, and C.D. Sarris, "Accelerated Implementation of the S-MRTD Technique Using Graphics Processor with commodity GPUs", *IEEE International Microwave Symposium Digest* (June 2006).
7. Baron, G.S., C.D. Sarris, and E. Fiume, "Real-time S-MRTD simulation of electrically large indoor wireless channels with commodity GPUs", *IEEE Antenna and Propagation Society International Symposium* (July 2006).
8. Neff, M., and E. Fiume, "AER: Aesthetic exploration and refinement for expressive animation", *ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2005* (Aug. 2005).
9. Tsang, W., K. Singh and E. Fiume, "Helping Hand: An anatomically accurate inverse dynamics solution for unconstrained hand motion", *ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2005* (Aug. 2005).
10. Forbes, K, and E. Fiume, "An efficient search algorithm for motion data using weighted PCA", *ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2005* (Aug. 2005).
11. Baron, G.S., C.D. Sarris, and E. Fiume, "Fast and accurate time-domain simulation with commodity graphics hardware" *IEEE Antenna and Propagation Society International Symposium* (July 2005).
12. Coahran, M., and E. Fiume, "Sketch-based design for Bargello quilts" *Eurographics Symposium Proceedings: Sketch-Based Interfaces and Modeling* (Sept. 2005), Takeo Igarashi, Joaquim Jorge (Eds.), 165-174.
13. Neff, M., and E. Fiume, "Methods for exploring expressive stance", *ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2004*, 49-58 (August 2004). A revised, re-refereed version of the paper appears in *Graphical Models*, 2006 (see above).
14. Neff, M., and E. Fiume, "Artistically based computer generation of expressive motion", *AISB '04 Symposium on Speech, Language and Gesture for Expressive Characters*, 29-39 (March 2004).
15. Sun, M., A. Jepson and E. Fiume, "Video Input Driven Animation (VIDA)", *International Conference on Computer Vision (ICCV) 2003*, (October 2003).
16. Zhang, H., and E. Fiume, "Butterworth Filtering and Implicit Fairing of Irregular Meshes", *IEEE Proceedings of Pacific Graphics 2003*, 502-506 (June 2003)
17. Neff, M., and E. Fiume, "Aesthetic edits for character animation", *ACM SIGGRAPH Symposium on Computer Animation 2003*, 239-244 (July 2003).
18. Neff, M., and E. Fiume, "Modeling tension and relaxation for computer animation", *ACM SIGGRAPH Symposium on Computer Animation 2002* (July 2002), 81-88.
19. V. Ng-Thow-Hing and E. Fiume, "Application specific muscle representations", *Graphics Interface '02*, May 2002, 107-116.
20. Xu, K., J. Stewart and E. Fiume, "Automatic layout of geometry using 2-D constraints", *Graphics Interface '02*, May 2002, 25-34.

21. Zhang, H., and E. Fiume, "Mesh smoothing with shape or feature preservation", *Proceedings of Computer Graphics International 2002* (June 2002), published as *Advances in Modeling, Animation, and Rendering*, J. Vince and R. Earnshaw, editors, Springer-Verlag, June 2002, 167-182.
22. Zhang, H., and E. Fiume, "Shape matching of 3-D contours using normalized Fourier descriptors", *Proceedings of the International Conference on Shape Modeling and Applications*, IEEE Computer Society, June 2002, 261-268.

Refereed Workshops and Others

1. Mould, D., and E. Fiume, "Texture synthesis from nonlinear dynamic cascades", *ACM SIGGRAPH 2002 Sketches* (August 2002), p248.

Articles and Invited Papers

1. E. Fiume, "Going digital is going human", *idea&s 4*, 2 (July 2007) (University of Toronto Press), 5-12.

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

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: 2008/10/30

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Fiume	Eugene	EL	115008

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:

Starting date

Leaving date

Telephone number	Facsimile number	E-mail address
1 (416) 978-5472	(416) 946-5464	elf@cs.toronto.edu

Telephone number (alternate): 1 (416) 737-7348

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 graphics and animation, internet software, computational mathematics, interactive graphics software, physically based methods

Research subject code(s)

Primary: 2707

Secondary: 2721

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: Fiume, Eugene EL

Department	Postsecondary Institution
Computer Science	Toronto

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.