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: 2013/06/16

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Eagleson	Roy	RA	Valid 116163

☐ 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: Electrical and Computer Engineering

Campus: Thompson Engineering Bldg

Canadian postsecondary institution:

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	Electrical Engineering	Western Ontario	CANADA	1983 / 06
Master's	Engineering Science	Western Ontario	CANADA	1986 / 06
Doctorate	Cognitive Science	Western Ontario	CANADA	1992 / 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	4	2	35	4	45
Master's	2	2	10	5	19
Doctoral	1	3	1	3	8
Postdoctoral		1	1		2
Others	4		10		14
Total	11	8	57	12	88

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

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Version française disponible

Not Completed

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	Western Ontario	Electrical and Computer Engineering	1996/01
Assistant Professor	University of Western Ontario	Electrical and Computer Engineering	1996/01 to 2000/06
Assistant Professor	Ryerson Polytechnic University	Electrical and Computer Engineering	1994/08 to 1996/01
Post-Doctoral Fellow	University of Western Ontario	Cognitive Science	1992/06 to 1994/07

Personal identification no. (PIN)	Family name
Valid 116163	Eagleson

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			
Eagleson, R.	Virtual Environments for Robotic Task Execution NCE IRIS/Precarn Robotics and Intelligent Systems 30 hours/month	20,000(100%)	2004
Eagleson, R.	Human-Computer Interface Design NCE Tele-Learning Systems Design for Tele-Learning 30 hours/month	20,000(100%)	2004
Patel,R. and 5 others	Facility for Modeling, Visualization, and VR-Based Interaction CFI 10 hours/month	2,060,100 (5%)	2004
Eagleson, R.	Surgical Visualization and 3D Tracking NSERC Computer Engineering 40 hours/month	17,000(100%) 17,000(100%) 17,000(100%) 17,000(100%)	2005 2006 2007 2008

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Canada

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RESEARCH SUPPORT

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b) Support currently held			
Boyd, W.D. and 12 others	Centre for Minimally Invasive Robotic Surgery Canadian Foundation for Innovation, and Ont. Research and Devel't Challenge Fund 20 hours/month	6,266,857 (1%)	2004
Peters,T. and 10 others	Surgery and Therapy Simulation Facility CFI 20 hours/month	4,925,833 (5%)	2004
Eagleson	Use of Wave Variables for Haptics in Time-Delay TeleSurgery Precarn / CSA Space Agency Grant 20 hours/month	39,900 (100%)	2005
Eagleson, Roy	Surgical Tele-Robotics Visualization and Performance Evaluation NSERC Discovery Grant 15 hours/month	20,000 20,000 20,000 20,000 20,000	2009 2010 2011 2012 2013

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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			
Peters, T., co-applicant	Image-Guided Minimally Invasive Intervention and Simulation CFI Leading Edge Fund 20 hours/month	2,577,602 (5%)	2010
Eagleson, Roy	HLTHSIM: Simulation and Animation for Surgical and Healthcare Training National Centres of Excellence Graphics and New Media (NCE-GRAND) 30 hours/month	35,000(100%) 35,000(100%) 35,000(100%) 35,000(100%) 35,000(100%)	2010 2011 2012 2013 2014
Eagleson, Roy	Surgical Simulator Design and Evaluation using Game Engine Technology MITACS MITACS Accelerate 20 hours/month	60,000(100%) 60,000(100%)	2013 2014

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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
Valid 116163	Eagleson

Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Justin Mackenzie	Master's (In Progress)	Supervised 2013 -	Surgical Scenario Design Using Evolution Game Engine	
Saeed Bakhshmand	Doctoral (In Progress)	Co-supervised 2013 -	DTI and fMRI visualization for surgical planning	
Shaun Carnegie	Master's (In Progress)	Supervised 2013 -	Game Engine Design of Surgical Simulator	
Matthew Kramers	Master's (In Progress)	Co-supervised 2012 -	Prostate Biopsy Training Simulator Design and Evaluation	
Ryan Armstrong	Doctoral (In Progress)	Co-supervised 2011 -	3D Visualization for Augmented Reality Surgical Training	
Abhari, Kamyar	Doctoral (In Progress)	Co-supervised 2010 -	Stereo Visualization for Surgical Intervention	PhD student
Hourie, Craig	Doctoral (Not Completed)	Co-supervised 2005 -	Robotic Pyeloplasty Simulation Platform	grad student / Inscriber
(Name withheld)	Doctoral (Not Completed)	Co-supervised 2004 -	Haptic-Visual Modeling Platform for Surgical Training	Inscriber
Shahbazi, Sahar	Master's (Completed)	Co-supervised 2010 - 2012	Brain Deformation Modeling for Neurosurgical Simulation	MESc student
Ashrafi, Ladan	Master's (Completed)	Supervised 2009 - 2011	Evaluation of Spatial Reasoning for Surgical Training	Grad Student
Filion, Jean-Michel	Master's (Completed)	Supervised 2008 - 2010	Translucency for 3D Visualization of Multi-Modal Data	Kongsberg Underwater Ultrasound Simulation
Shahingohar, Aria	Doctoral (Completed)	Supervised 2006 - 2010	Real-Time Soft Tissue Deformation Modeling	Toronto Multimedia
Ahmadian, Mahnaz	Master's (Completed)	Co-supervised 2007 - 2009	Tissue Deformation Measurement with Computer Vision	AB Siemens
Lo, Jennifer	Master's (Completed)	Co-supervised 2007 - 2009	Human Factors in Surgical Robotics	CAE Medical Simulation
Zhang, Qi	Doctoral (Completed)	Co-supervised 2004 - 2009	GPU-based Volumetric Visualization of MRI and	NRC Canada Winnipeg Biomedical Research
Namavarian, Ali	NSERC USRA (Completed)	Supervised 2007 - 2007	Haptic/Visual Interface for Suturing Simulation	student
Almond, Steve	Master's (Completed)	Supervised 2005 - 2007	3D Tele-Surgical Simulation for Performance Evaluation	grad student
Gharib, Muna	Master's (Completed)	Supervised 2005 - 2007	Time-Delayed Tele-Surgical Performance Evaluation	Siemens, Germany (Medical Division)
Gonzales, Nicolas	Master's (Completed)	Supervised 2005 - 2007	GPU-based Surgical Simulator for Suturing	Imaging; Princess Margaret Hospital
Marmurek, Jonathan	Master's (Completed)	Co-supervised 2005 - 2007	Real-Time Surgical Laser Guidance	Harvard Medical School

Highly Qualified Personnel (HQP)

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Name	Type of HQP Training and Status	Years Supervised or Co-supervised	Title of Project or Thesis	Present Position
Fernandez, David	NSERC USRA (Completed)	Co-supervised 2006 - 2006	Ultrasound Imaging Guidance for Needle Biopsy	student
Tadayyon, Syed	NSERC USRA (Completed)	Supervised 2006 - 2006	Haptic Device Design	grad student
(Name withheld)	Doctoral (Completed)	Supervised 2001 - 2006	Reference Frame Selection for Spatial Reasoning	University of Guelph
(Name withheld)	NSERC USRA (Completed)	Supervised 2005 - 2005	OpenGL Graphics Programming for Surgical Simulation	grad student
Follett, Craig	Technician (Completed)	Co-supervised 2005 - 2005	3D Virtual Reality for Surgical Planning	student
Gharib, Muna	NSERC USRA (Completed)	Supervised 2005 - 2005	Time-Delay Tele-Surgery Platform	Siemens Medical
(Name withheld)	Res. Associate (Completed)	Co-supervised 2005 - 2005	3D Graphics for Surgical Simulator	student
Tabbara, Hussam	Undergraduate (Completed)	Supervised 2004 - 2005	Collision Detetion in Virtual Environments: Haptics Module	Bell Canada - Engineering Mgr
(Name withheld)	Master's (Completed)	Supervised 2003 - 2005	Surface Tesselation Algorithm and Interface	Computer System Design
Gharib, Muna	NSERC USRA (Completed)	Supervised 2004 - 2004	3D Surface Graphics from point cloud measures	Siemens
(Name withheld)	Master's (Completed)	Supervised 2002 - 2004	Haptic Wave Variables Interface Simulation	Cryptologic
(Name withheld)	Master's (Completed)	Supervised 2002 - 2004	3D Real-Time visualization of Cardiac Dynamics	Wayne State University
Kharrat, Dia	NSERC USRA (Completed)	Supervised 2003 - 2003	GPU graphics programming for 3D visualization	NVIDIA Corp
McInnis, Talbot	NSERC USRA (Completed)	Supervised 2003 - 2003	fPGA-based 3D graphics and haptic interface driver	IO Industries, fPGA, Imaging
(Name withheld)	Master's (Completed)	Supervised 2002 - 2003	Analysis and Design of haptic surgical interface	Senior Control System Designer
McInnis, Talbot	NSERC USRA (Completed)	Supervised 2002 - 2002	Object-Oriented 3D Visualization Software	IO Industries
Qandil, Bayan	Precarn/IRIS (Completed)	Supervised 2001 - 2001	Haptic Interface for VASST platform	Cedara
(Name withheld)	Postdoctoral (Completed)	Supervised 2001 - 2001	Haptic Interface for VASST platform	University North Carolina Visualization
(Name withheld)	Master's (Completed)	Supervised 1997 - 1999	Haptic Interface for Real-Time 3D Visualization	Founder, EK3
(Name withheld)	Doctoral (Completed)	Co-supervised 1996 - 1999	3D Pointing and Grasping in Virtual Environments	Assistant Professor, University of Alberta

Roy Eagleson, Ph.D., P.Eng. – Curriculum Vita

Publications in Refereed Journals (grad student names in underline)

1.1 Abhari,K, Baxter,J, Chen,E, Wedlake,C, Peters,T, de Ribaupierre,S, and Eagleson,R (2013) "Use of a Mixed-Reality System to Improve the Planning of Brain Tumour Resections". Invited paper accepted to Springer LNCS AE-CAI Special Issue. Augmented Environments for Computer-Assisted Interventions. Lecture Notes in Computer Science Volume 7815, 2013, pp 55-66.

1.2 Plumley,L, Armstrong,R, de Ribaupierre,S, and Eagleson,Roy (2013) "Spatial Ability and Training in Virtual Neuroanatomy" Studies in Health Technology and Informatics, IOS Press. v.184, pp.324-329.

1.3 Zhang,Q, Eagleson,R, Peters,T (2012) "GPU-Based Visualization and Synchronization of 4D Cardiac MR and Ultrasound Images" Journal IEEE Transactions on Information Technology in Biomedicine. IEEE. v.16(5), pp. 878-890, 2012.

1.4 Brewer D, Wilson T, Eagleson,R, de Ribaupierre,S (2012) "Evaluation of Neuroanatomical Training using a 3D Virtual Reality Model". Studies in Health Technology and Informatics, IOS Press. v.173, pp.85-91, 2012.

1.5 Shahingohar,A, and Eagleson,R. (2011) "A Framework for GPU-Accelerated Deformable Object Modeling". The International Journal of High Performance Computing. V.26(3) pp.203–214.

1.6 Abhari,K, de Ribaupierre,S, Peters,T, and Eagleson,R (2011) 'Evaluation of a VR and Stereo-Endoscopic Tool to Facilitate 3rd Ventriculostomy'. Studies in Health Technology and Informatics, IOS Press, Amsterdam. V.163, pp.1-7, 2011.

1.7 Zhang Q., Eagleson R. and Peters T. (2011) "Volume Visualization: A Technical Overview with a Focus on Medical Applications" Journal of Digital Imaging, vol. 24(4), pp. 640-664, Springer, NY. Doi: 10.1007/s10278-010-9321-6

1.8 Eagleson,R, de Ribaupierre,S, King,S, and Stroulia,E (2011) 'Medical Education and Evaluation through Virtual Worlds: The HLTHSIM Project'. Studies in Health Technology and Informatics, IOS Press, Amsterdam. ISBN: 978-1-60750-705-5. Volume 163, pp.180-184, 2011.

1.9 Linte,C, White,J, Eagleson,R, Guiraudon,G, and Peters,T (2010) ``Virtual and Augmented Medical Imaging Environments: Enabling Technology for Minimally Invasive Cardiac Interventional Guidance``. IEEE Reviews in Biomedical Engineering. IEEE. Vol.3, Nov, pp.25-47

1.10 Cool,D, Connolly,M, Sherebrin,S, Eagleson,R, Fenster,A (2010) 'Repeat Prostate Biopsy Accuracy: Simulator-based Comparison of Two- and Three-dimensional Transrectal US Modalities'. Journal of Radiology, February 2010, v.254, pp.587-594.

1.11 Zhang Q., Eagleson R. and Peters T. (2010) ``Rapid scalar value classification and volume clipping for interactive 3D medical image visualization`` The Visual Computer Journal. Editor: N. Magnenat-Thalmann. v.27,n.1,pp.3-19,2011. DOI: 10.1007/s00371-010-0509-z

1.12 Zhang Q., Eagleson R. and Peters T. (2009). "High-Quality Cardiac Image Dynamic Visualization with Feature Enhancement and Virtual Surgical Tool Inclusion", The Visual Computer Journal. v.25(11), pp. 1019-1035.

1.13 Van Koughnett JAM, Jayaraman S, Eagleson R, Quan D, Schlachta CM. (2009) "Are there advantages to robotic-assisted surgery over laparoscopy from the surgeon's perspective?" Journal of Robotic Surgery, 2009; v3.n2: pp.79-82.

1.14 Zhang Q., Eagleson R. and Peters T. (2009) "Dynamic Real-Time 4D Cardiac Display Using GPU-Accelerated Volume Rendering". The Journal of Computerized Medical Imaging and Graphics. v.33(6), September, pp.461-476.

1.15 Lo,J.G., Moore,J, Wedlake,C, Eagleson,R, Peters,T (2009) Surgeon-Controlled Visualization Techniques for Virtual-Reality Guided Cardiac Surgery. Studies in Health Technology Informatics. V.142.pp.162-167, IOS Press. [8 other journal papers deleted to conform to space requirements.]

Publications in Refereed Conference Proceedings (graduate student names in underline)

2.1 Nguyen,N, Eagleson,R, de Ribaupierre,S (2013) "Establishing the validity and reliability of computer-based simulation for cerebral angiography using the ANGIO Mentor Express" Experimental Biology Conference; American Association of Anatomists. Boston, April 20-24, 2013.
2.2 de Ribaupierre S, Cantor,D, Abhari,K, Chen,E, Peters,T, Fondop,J, Eagleson R. (2013) "Web-based Collaborative Interface to Facilitate Neurosurgical Case Discussions". American Society of Pediatric Neurosurgeons (ASPN) Annual Meeting, Feb 10-15, Kauai.
2.3 Abhari,K, Baxter,J, Chen,E, Wedlake,C, Peters,T, Eagleson,R, de Ribaupierre,S (2012) "Development and Evaluation of a VR System for Planning Tumour Resection Intervention" MICCAI 2012 Workshop on Augmented Environments for Computer-Assisted Interventions. (MICCAI-AECAI 2012) Nice, France, October 5th, 2012.
2.4 Khan,Ali, Goubran,M, Eagleson,R, Peters,T, and de Ribaupierre,S (2012) 'Multi-fiber tractography for tumour resection with characterization of peri-tumoural tracts' MICCAI 2012 DTI Tractography Challenge. Nice, France, Oct 1, 2012.
2.5 Roach,V, Mistry,M, LeBel,M, Eagleson,R, and Wilson,T (2012) "Stereo Laparoscopy: Evaluations on a New Frontier In Surgical Visualization" Presented at the American Association of Anatomists Annual Meeting, April 21-25, San Diego.
2.6 de Ribaupierre,S, Cantor,D, Abhari,K, Chen,E, Peters,T, Eagleson,R (2012) Web-based Collaborative Interface to Decrease Surgical Errors. Journal abs. Childs Nervous System, In Proc. The International Symposium on Pediatric Neurosurgery (ISPN) Sydney, Australia, Sep 2012.
2.7 Istead,J, de Ribaupierre,S, and Eagleson,R (2012) ""Using Motion Capture to Manipulate and View Neuro-Anatomical Meshes" SIGGRAPH 2012: The 39th International Conference and Exhibition on Computer Graphics and Interactive Techniques, 5−9 August 2012, Los Angeles.
2.8 Abhari,K, Baxter,J, de Ribaupierre,S, Eagleson,R, and Peters,T (2012) "Perceptual enhancement of arteriovenous malformation in MRI angiography displays". In Proc. SPIE Medical Imaging 2012: Image Perception, Observer Performance, and Technology Assessment. Society of Photonics and Instrumentation Engineering (SPIE) v.8318, n.8, Feb 4-9, 2012. San Diego.
2.9 Eagleson,R, and de Ribaupierre,S (2012) "DTI-based Tractography as a Local/Global Constraint Satisfaction Problem: User Interactive Method" Alpine Brain Imaging Meeting. Champery, Switzerland. Jan 8-12, 2012.
2.10 Sandrine de Ribaupierre, Streimer,C, Goodale,M, and Eagleson,R (2012) "Attentional Mechanisms in the Cerebellum? Evidence from fMRI and DTI data" Alpine Brain Imaging Meeting. Champery, Switzerland. Jan 8-12, 2012.
2.11 Eagleson,R, Moschandreou,T, and de Ribaupierre,S (2011) "Brain Deformation Model for Neurosurgical Simulation" The International Conference on Biomedical Engineering and Biotechnology (BEB2011), Shanghai China, 28-30 October, 2011, special track within the World Congress on Engineering and Technology (CET2011).
2.12 de Ribaupierre,S, Brewer,D, Eagleson,R, and Wilson,T (2011) "The role of spatial abilities in learning neurosurgical procedures". The International Symposium on Pediatric Neurosurgery, Goa, India, Oct 16-20.
2.13 Abhari,K, de Ribaupierre,S, Peters,T, and Eagleson,R (2011) "Does stereo-endoscopy improve neurosurgical targeting in 3rd ventriculostomy?" SPIE Medical Imaging 2011: Image Perception, Observer Performance, and Technology Assessment. Manning and Abbey Eds, Proc SPIE v.7966, Orlando, Feb 12-17.

2.14 Eagleson,R, Schlachta,C, Peters,T, and de Ribaupierre,S (2010) "Ubiquitous Learning for Healthcare Training Using Game Engine Design and Evaluation Methodologies" Ubiquitous Learning Conference, Vancouver, Dec 10-11, 2010.
2.15 de Ribaupierre,S, Eagleson,R, Brewer,D, and Wilson,T (2010) "Ubiquitous Learning for Neuroanatomy" Ubiquitous Learning Conference, Vancouver, Dec 10-11, 2010.
2.16 Shahingohar,A, de Ribaupierre,S, and Eagleson,R (2010) 'GPU Accelerated Needle Insertion Simulation using Meshfree Methods'. Workshop on Virtual Reality Interaction and Physical Simulation VRIPHYS (2010), J. Bender, K. Erleben, and M. Teschner (Editors). Copenhagen, November 11-12, 2010.
2.17 Eagleson,R, Stroulia,E, Schlachta,C, and de Ribaupierre,S (2010) "Surgical Skills Training Simulators and Performance Evaluation" Presented at 20th CASCON, Workshop on "New Methods for Clinical Decision Support in Hospitals" (M.Chignell chair) Markham, Nov 1-4.
2.18 Shahingohar,A, and Eagleson,R (2010) 'A Framework for GPU Accelerated Deformable Object Modeling' Proceedings International Workshop on GPUs and Scientific Applications (GPUScA 2010). Mehofer,E, et al Eds. pp.43-50. In conjunction with International Conference on Parallel Architectures and Compilation Techniques (PACT 2010), Vienna, Sept 11-15, 2010.
2.19 Shahingohar,A, and Eagleson,R (2010) A Framework for GPU-Accelerated Needle Insertion Simulation using Meshfree Methods. SIGGRAPH 2010, July 19-25, Los Angeles. (Student Research Competition Semi-Finalist)
2.20 Cool,D, Connolly,M, Sherebrin,S, Eagleson,R, Izawa,J, Amann,J, Romagnoli,C, Romano,W, Fenster,A. (2009) 2D vs. 3D Transrectal Ultrasound (TRUS) for Repeat Prostate Biopsies (RPBx): Quantitative Comparison of Accuracy and Efficiency. 64th Annual Meeting of the Canadian Urological Association. Toronto, June 29, 2009.
2.21 Zhang Q., White,J, Eagleson R. and Peters T. (2009) "A Two-Level Transfer Function Based Method for Heart Display with Vascular Tissue and Scar Enhancement. IEEE International Symposium on Biomedical Imaging (IEEE-ISBI), pp.903-906. Boston, June 28 - July 1, 2009.
2.22 Cool,D, Connolly,M, Sherebrin,S, Eagleson,R, Fenster,A. (2009) "Quantitative comparison of 2D vs. 3D transrectal ultrasound using a patient-based prostate biopsy simulator" CARS 2009: Computer Assisted Radiology and Surgery. 23rd Int'l Congress and Exhibition. Berlin. June 23-27.
2.23 Zhang Q., Eagleson R. and Peters T. (2009) "A Software Platform for Real-Time Visualization and Manipulation of 4D Cardiac Images". 5th Int'l Conf on Functional Imaging and Modeling of the Heart. LNCS v.5528/2009, pp.396-406. Nice, France. June 3-5, 2009.
2.24 Rayman,R, Primak,S, and Eagleson,R (2009) "Effects of Network Delay on Training for Telesurgery". Invited Paper; Wireless Communications, Vehicular Technology, Information Theory and Aerospace & Electronic Systems Technology (Wireless VITAE) 17-20 May, 2009, Aalborg Congress and Culture Centre, Aalborg, Denmark.
2.25 Shahingohar,A, Ahmadian,M, and Eagleson,R (2009) "Bergman's Minimal Model for Insulin Delivery Using Genetic Algorithms", in the First Canadian Student Conference on Biomedical Computing (CSCBC), UBC Vancouver, March 12-14.
2.26 Eagleson,R, Lawen,J, and West,K (2009) "Minimal Access Robotically-Assisted Kidney Transplantation: A Model for the Assessment of Feasibility" Canadian Transplantation Society Annual Meeting, Banff, March 5-8.
2.27 Eagleson, R., and Peters, T. (2008) "Perceptual Capacitites and Constraints in Augmented Reality Biomedical Displays" Innovations in Patient Care: Engineering and Physical Sciences in Medicine; Australian Biomedical Engineering Conference. Christchurch N.Z.. Nov 16-20.

2.28 Lo,J.G., Moore,J, Wedlake,C, Guiraudon,G, Eagleson,R, Peters,T (2008) "Evaluation of Parameters that Affect Visual Perception in Virtual Reality Guided Surgery". Winner of "Best Presentation" Prize at Graphics Interface Conference. Windsor, 2008, May 27-30.
2.29 Shahingohar,A. and Eagleson,R. (2008) "Deformable Body Interaction Modeling Using Meshless Methods on a CUDA Graphics Architecture" Invited to Precarn Intelligent Systems Conf. Windsor, May 28-30.
2.30 Eagleson,R., Luke,P., and West,K. (2008) "Development of a Model and Methodology for Evaluation of an Apparatus for Minimal Access Robotically-Assisted Kidney Transplantation" Canadian Transplantation Society Annual Scientific Meeting. Mont Tremblant,QC. Feb28-Mar2.
2.31 Zhang Q, Eagleson R, Guiraudon G, and Peters TM. (2008) "High-Quality Anatomical Structure Enhancement for Cardiac Image Dynamic Volume Rendering", SPIE Medical Imaging, Volume 6918, San Diego, Feb 18, 2008.
2.32 Van Koughnett,J., Jayaram,S., Eagleson,R., Quan,D., Schlachta,C. (2008) "Are There Advantages to Robot-Assisted Surgery over Laparoscopy from the Surgeon's Perspective?" The 3rd International Congress of the Minimally-Invasive Robotic Association. Rome. Jan 24-26, 2008
2.33 Zhang Q, Eagleson R, Peters TM. (2007), Rapid Voxel Classification Methodology for Interactive 3D Medical Image Visualization. Medical Image Computing and Computer-Assisted Intervention – MICCAI 2007: 10th International Conference, pp.86-93, Brisbane. Oct 29 – Nov 2.
2.34 Zhang Q., Eagleson R. and Peters T.M. (2007), GPU-Based Image Manipulation and Enhancement Techniques for Dynamic Volumetric Medical Image Visualization. IEEE International Symposium on Biomedical Imaging (ISBI), Washington DC, April 12-15, 2007.
2.35 Zhang Q., Huang X.S., Eagleson R., Guiraudon G. and Peters T.M. (2007), "Real-Time Dynamic Display of Registered 4D Cardiac MR and Ultrasound Images Using a GPU", the SPIE International Symposium on Medical Imaging v.6509-84, pp.1168-1171, San Diego, CA. Feb 17-22, 2007. (Best presentation award)
2.36 vanWynsberghe,A., Smith,S.,Peterson,S.,Primak,S.,Eagleson,R.,Patel,R.,Schlachta,C. (2006) The Effect of Network Jitter on Tele-Surgery Performance. European Association for Endoscopic Surgery annual meeting. Berlin, Sept 13-16, 2006.
2.37 Zhang,Q., Eagleson,R., and Peters,T. (2006) Dynamic Real-Time Visualization of Cardiac MR and Ultrasound Images Using a GPU. IEEE Int'l Symp. On Biomedical Imaging (ISBI 2006): From Nano to Macro. pp.343-346. Arlington, VA, April 6-9, 2006.
2.38 vanWynsberghe,A., Smith,S.,Peterson,S.,Primak,S.,Eagleson,R.,Patel,R.,Schlachta,C. (2006) The Effect of Network Jitter on Tele-Surgery Performance. Society of American Gastrointestinal and Endoscopic Surgeons annual meeting. Dallas, Apr 26-29, 2006.
2.39 Zhang,Q., Eagleson, R., and Peters, T. (2006) GPU-Based Volumetric Biomedical Dataset Visualization and Classification. Medical Imaging 2006: Visualization, Image-Guided Procedures, and Display. Cleary,K.R., and Galloway,R.L.Jr.eds,Proc. SPIE,v.6141-2T-102, 12 Feb 2006.
2.40 Zhang,Q., Eagleson,R., and Peters,T. (2005) Multi-resolution 3D Multi-Texture Based Volume Visualization and Classification. OCITS Research Workshop, Toronto, November 7, 2005.
2.41 Zhang,Q., Eagleson,R., and Peters,T. (2005) GPU-Based Real-Time Beating Heart Volume Rendering Using Dynamic 3D Texture Binding. Canadian Student Conference on Biomedical Computing (CSCBC), Queen's University, Kingston.

34 additional conference papers deleted to conform to space requirements

Recent Book Chapter:
Zhang,Q, Peters,T, and Eagleson,R (2011) ``Volumetric Visualization: Algorithms, Pipelines, and Clinical Applications`` In Dougherty,G, Ed., "Medical Image Processing: Techniques and Applications", Chapter 13. Series: Biological and Medical Physics, Biomedical Engineering. ISBN: 978-1-4419-9769-2 Springer, NY. 15 July 2011.

Colloquia and Demonstrations at Workshops and Symposia

3.1 de Ribaupierre,S, Mella,N, Abdulkadir,A, Eagleson,R, Khan,A, and de Ribaupierre,A (2013) "Functional MRI, Diffusion tensor imaging, and cognitive variability in young versus older adults: A pilot study" Alpine Brain Imaging Meeting, Champery, Switzerland, Jan 8-10, 2013.
3.2 Armstrong R, de Ribaupierre S., and Eagleson,R (2012) Exploration of Fused Multi-Volme Images Using User-Defined Masks". VRST 2012 Workshop on Virtual Reality; Toronto
3.3 Jing, J, Eagleson R, Tsou L, Fels S, de Ribaupierre S. (2012) Brain skull Growth Simulation using a Hybrid Model. Presented at the London Imaging Discovery Day, LHSC, June 27, London.
3.4 Armstrong R, Eagleson R, de Ribaupierre S. (2012) Exploration of Multi-Modality Volumetric Medical Datasets through Spatial Interactions. Presented at the London Imaging Discovery Day, LHSC, June 27th 2012, London.
3.5 Istead J, Eagleson R, de Ribaupierre S. (2012) A Platform for Fully-Immersive Collaborative Spaces. Poster at the Annual Meeting of NCE-GRAND: Graphics, Animation, and New Media conference, May 2-4, Montreal.
3.6 Jing J, de Ribaupierre S, Ling T, Fels S, Eagleson R. (2012) Modeling Brain Volumetric Deformations and Skull Surface contact forces Utilizing Deformable Object and Rigid Body Interactions. Poster at the Annual Meeting of NCE-GRAND: Graphics, Animation, and New Media conference, May 2-4, Montreal.
3.7 Armstrong R, Eagleson R, de Ribaupierre S. (2012) A Novel Radial Transfer Function for Immersive Spatial Exploration of the Volumetric Medical Data Sets. Poster at the Annual Meeting of NCE-GRAND: Graphics, Animation, and New Media conference, May 2-4, Montreal.
3.8 Armstrong R, Eagleson R, de Ribaupierre S. (2012) An immersive virtual environment for spatial and anatomical evaluation and training. Lawson Health Research Day. March 20, London.
3.9 Jing J, Eagleson R, de Ribaupierre S. (2012) Modeling Brain Volumetric Deformations and Skull Surface Contact Forces Utilizing Deformable Object and Rigid Body Interactions. Presented at the Lawson Health Research Day. March 20, London.
3.10 Shabazi S, Eagleson R, Matic D, Holdsworth D, de Ribaupierre S. (2012) Modeling skull growth in rats. Presented at the Lawson Health Research Day. March 20, London.
3.11 Abhari, K., Baxter J., de Ribaupierre S., Peters T. M., & Eagleson R. (2011) "Perceptual Enhancement of MR Angiography Data Visualization using Cel-Shading Model", London Imaging Discovery Day, London ON, 23 Jun 2011.
3.12 S. Shahbazi, S de Ribaupierre, S. Power, D. Matic, S. Pollman, D. Holdsworth, R. Eagleson, (2011) Non-rigid Registration of Rat Calvarial Landmarks from CT during Development: Transformation Model Fitting and Conditioning. Poster at the London Imaging Discovery Day, London ON, 23 Jun 2011
3.13 Abhari, K., Baxter J., de Ribaupierre S., Peters T. M., & Eagleson R., (2011) "Perceptual Enhancement of MR Angiography Data Visualization using a Cel-drawing Model", Graphics, Animation, and New Media (GRAND), Vancouver, 6 May 2011. 25 other presentations deleted to conform to page limits.

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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: 2013/06/16

Family name	Given name	Initial(s) of all given names	Personal identification no. (PIN)
Eagleson	Roy	RA	**Valid** 116163

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

UWO Electrical Engineering

London ON N6A5B9
CANADA

If address is temporary, indicate:

Starting date

Leaving date

Telephone number	Facsimile number	E-mail address
(519) 6612111 88215	(519) 8502436	eagleson@uwo.ca

Telephone number (alternate)

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 [ ]	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).

Tele-Robotics, Visualization, Virtual Reality, Surgical Robotics, Haptics, Biomedical Engineering, Cognitive Science, Spatial Reasoning, Software Engineering, Medical Imaging

Research subject code(s)

Primary: 1900

Secondary: 2606

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 Eagleson, Roy RA

Department	Postsecondary Institution
Electrical and Computer Engineering	Western Ontario

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.