

## JANET L. RONSKY — Curriculum Vitae

### BIOGRAPHICAL DATA:

Name: Janet L. Ronsky  
Date of Birth: July 9, 1960  
Present Position: Professor, Mechanical and Manufacturing Engineering, Faculties of Engineering and Kinesiology  
Citizenship: Canadian  
Office Address: Department of Mechanical Engineering  
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### PROFESSIONAL RECORD

#### A. Academic Record

- i) *Undergraduate*  
1978 – 1983 B.A.Sc Mechanical Engineering  
(First Class Honours)  
University of Waterloo, Waterloo, Ontario
- ii) *Graduate*  
1988 – 1990 MSc Mechanical Engineering (Biomechanics)  
University of Calgary, Calgary, AB  
(transferred directly into PhD Program)
- 1990 – 1994 PhD. Mechanical Engineering (Biomechanics)  
University of Calgary, Calgary, Alberta
- Thesis: In-Vivo Quantification of Patellofemoral  
Joint Contact Characteristics

**B. Academic and Other Appointments**

08/2003	Co-Director – CBRE (Centre for Biomedical Research and Education) University of Calgary
07/2003	Professor – Department of Mechanical and Manufacturing Engineering, University of Calgary
07/2003	Professor – Faculty of Kinesiology, University of Calgary
2001	Canada Research Chair in Biomedical Engineering, Faculty of Engineering, University of Calgary
2001	Associate Professor, Faculty of Kinesiology, University of Calgary
1999 –2002	Director, Graduate Studies and Research Program, Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, University of Calgary
1997	Associate Professor – Department of Mechanical Engineering, Faculty of Engineering, University of Calgary
1995 – 2001	Adjunct Professor – Faculty of Kinesiology, University of Calgary
1995	Member – Joint Injuries and Arthritis Research Group, Department of Surgery, Faculty of Medicine, University of Calgary
1994	Assistant Professor – Department of Mechanical Engineering, Faculty of Engineering, University of Calgary
1986 – 1988	Alberta Gas Ethylene Company, Calgary, Alberta Ethane Coordinator - Fuel and Feedstocks
1984 – 1986	Nova Corporation of Alberta, Edmonton, Alberta Project Engineer – Operations Engineering
1983 – 1984	Nova Corporation of Alberta, Edson, Alberta Field Engineer-in-training - Field Operations
1982	Nova Corporation of Alberta, Calgary, Alberta Co-op Student – Operations Engineering
1981	Ontario Crippled Children’s Centre, Toronto, Ontario Research Assistant – Rehabilitation Engineering

- 1981 University of Waterloo, Waterloo, Ontario  
Research Assistant – Mechanical Engineering
- 1980 Sudbury Memorial Hospital, Sudbury, Ontario  
Research Assistant – Biomedical Engineering
- 1978 - 1979 General Motors of Canada Ltd., Oshawa, Ontario  
Student - Manager-in-Training Program, Car Assembly Plant #2.

### C. Professional Certification and Memberships in Learned Societies

- |                       |  |
|-----------------------|--|
| Professional Engineer | Association of Profession Engineers, Geologists and Geophysicists of Alberta |
| Member                | Canadian Society of Biomechanics   |
| Member                | American Society of Mechanical Engineers                                     |
| Member                | International Society of Biomechanics  |
| Member                | Canadian Medical and Biological Engineering Society                          |
| Member                | Association for the Advancement of Automotive Medicine                       |
| Member                | Canadian Orthopaedic Research Society  |
| Member                | Engineering Associates Program, University of Calgary                        |
| Member                | Association of Women in Science and Engineering, Calgary Chapter             |
| Member                | Paediatric Orthopaedic Research Group, University of Calgary                 |
| Associate Member      | Joint Injuries and Arthritis Research Group, University of Calgary           |

### D. Awards, Distinctions and Fellowships

- 2005 APEGGA Summit Award for Research Excellence
- 2004 Canadian Council of Professional Engineers, Award for the Support of Women in the Engineering Profession
- 2003 Co-Director, Centre for Biomedical Research & Education, Faculty of Engineering, University of Calgary-
- 2003 2003 Research Excellence Award, Mechanical & Manufacturing Engineering, University of Calgary

- 2001 Canada Research Chair in Biomedical Engineering, University of Calgary
- 2001-2001 University of Calgary - Sabbatical Fellowship
- 2000 YWCA Women of Distinction Award – Science and Technology
- 2000 University of Calgary Faculty of Engineering Undergraduate Teaching Award
- 2000 University of Calgary Department of Mechanical and Manufacturing Engineering Undergraduate Teaching Award
- 1999 University of Calgary Faculty of Engineering Undergraduate Engineering Student Society – Mechanical Engineering “Professor of the Year” Award
- 1999 McCaig Programme Development Award
- 1998 University of Calgary Faculty of Engineering Undergraduate Teaching Award
- 1997 McCaig Programme Development Award
- 1995 Calgary Herald – New Investigator Award
- 1994 Natural Sciences and Engineering Research Council of Canada – Women’s Faculty Award
- 1994 Canadian Society of Biomechanics – New Investigator Award
- 1991 – 1992 Province of Alberta Graduate Scholarship
- 1989 – 1994 Alberta Heritage Foundation for Medical Research – Fulltime Studentship Award
- 1989 – 1991 Alberta Heritage Trust Fund – Wilfred R. May Scholarship for Career Development
- 1989 – 1990 Canadian Council of Professional Engineers North American Life Insurance Scholarship
- 1989 – 1990 Canadian Federation of University Women – Alice E. Wilson Award
- 1988 – 1989 Province of Alberta Graduate Scholarship
- 1988 – 1990 Robert B. Paugh Memorial Bursary in Engineering
- 1988 - 1990 University Scholarships of Canada Award

1981	University of Waterloo Research Assistantship
1981	Babcock & Wilcox Undergraduate Award
1978	University of Toronto Wallberg Memorial Scholarship (not accepted)
1978	Queen's University Entrance Scholarship (not accepted)

### III. EDUCATIONAL ACTIVITIES

#### A. Instruction

##### Undergraduate Instruction

New Course Development ENBM 003	Healthcare Management, Development of Block week course for second year undergraduate engineering students in the Biomedical Engineering Specialization
Engineering Dynamics (ENGG 249)	University of Calgary – Winter 1995, 1997, 1998, 1999, 2000 Responsibilities: Lectures, tutorials Teaching Evaluations: 1995: 3.3/4.0 ( $\pm 0.74$ ) (Faculty avg = $3.0 \pm 0.70$ ) lecture 3.4/4.0 ( $\pm 0.65$ ) (Faculty avg = $3.0 \pm 0.70$ ) Tut#1 3.4/4.0 ( $\pm 0.78$ ) (Faculty avg = $3.0 \pm 0.70$ ) Tut#2 1997: 3.4/4.0 ( $\pm 0.69$ ) (Faculty avg = $3.0 \pm 0.73$ ) lecture 1998: 3.1/4.0 ( $\pm 0.82$ ) (Faculty avg = $3.0 \pm 0.73$ ) lecture 1999: 6.26/7.0 2000: 6.34/7.0 ( $\pm 0.82$ ) (Faculty avg = $5.19 \pm 1.11$ ) lecture
Technology and Society (ENGG 481)	University of Calgary – Winter 1996, 1997 Responsibilities: Lectures, tutorials Teaching evaluations: 1996: 2.9/4.0 ( $\pm 0.94$ ) (Faculty avg = $2.9 \pm 0.78$ ) 1997: N/A (course coordinator, guest lecture series)
Biomechanics of Joints (ENME 519.17)	University of Calgary – Fall 2002, 2003, 2004, 2005 Responsibilities: Lectures, labs, tutorials Teaching evaluations:
Practice of the Engineering Profession (ENGG 513)	University of Calgary – Fall 2000 (Co-instructor) Responsibilities: Lectures, tutorials as co-instructor. Teaching evaluation: not known
Mechanical Engineering Senior	University of Calgary – Winter 1996, 1998, 1999, 2000,

Project (ENME 535) Advisor	2002, 2003, 2004 Responsibilities: project specifications, design team consultations Teaching evaluations: N/A
Electrical Engineering Senior Project (ENEL 599) Advisor	University of Calgary – Winter 1998 Responsibilities: project specifications, design team consultations Teaching evaluations: N/A

### Graduate Instruction

Applications of Rigid Body Mechanics in Biomechanics (ENME 683)	University of Calgary – Winter 2005, Redesigned graduate course readings and student term projects. Responsibilities: lectures, labs Teaching evaluations: N/A
Applications of Rigid Body Mechanics in Biomechanics (ENME 619.72)	University of Calgary – Fall 1995, 1996, 1997, Winter 1999, 2000, 2002, 2003, 2004 Responsibilities: lectures, labs Teaching evaluations: N/A
New Frontiers in Biomedical Engineering (ENME 619.81, 619.82)	University of Calgary – Fall 1996, 1997, 1998, Winter 1997, 1998 Responsibilities: lectures, seminar coordination Teaching evaluations: N/A
Applications of Non-Invasive Imaging Techniques in Biomechanics (ENME 619.98)	University of Calgary – Winter 1997 Responsibilities: lectures, labs Teaching evaluations: N/A

### Invited Lectures/Seminars

Bone and Joint Health – Core Course MDSC 751.30 / INT D 602	MSK System – function Lecture October 2005
Fundamentals of Bioengineering (BMEN 601)	Guest lectures, 2004
Frontiers of Biomedical Engineering (BMEN 603)	Guest lectures, 2005
Transdisciplinary Bone and Joint Health Research (MDSC 755)	Guest lectures, 2004
Advanced Biomechanics ENME/KINE 663	Lectures, 1996
Biomechanics II KINE 353	Lectures, 1996,1997

Introduction to Engineering Practice ENGG 215	Lectures, 1999
Special Topics in Joint Injuries and Arthritis MDSC 751.31	Lectures 1997, 1998, 1999
Fundamentals of Human Biomechanics ENME 685	Lectures 1996, 1997
Technology and Society ENGG 481	Lectures 1998
Resident Rounds – Orthopaedic Biomechanics Faculty of Medicine	Lectures 1998

## **B. Graduate and Undergraduate Supervision:**

### **Graduate Student Supervisor (In-program):**

Anderson, Samantha	MSc dissertation, Supervisor (Commenced 09/05)
Andrews, Stephen	MSc dissertation, Supervisor (Commenced 09/05)
Gotch, Matthew	MSc dissertation, Supervisor (Commenced 09/05)
Thannhauser, Steven	MSc dissertation, Supervisor (Commenced 05/05)
Chou, Tyrone	“Postural stability with ACL reconstructions”, MSc dissertation, Supervisor (Commenced 09/02, Scholarships/ Funding: APEGGA R.M. Hardy Graduate Scholarship, Province of Alberta Graduate Scholarship. Expected Date of Completion: 06/05.
Donnelly, Bryan	“Quantification of Hip prosthesis deformation using RSA” PhD, Supervisor (Commenced MSc 09/01, transferred to PhD 06/04, PhD proposal 11/04, PhD Candidacy 12/04 - successful). Expected date of completion: June 2006.
Good, Craig	“Vehicle Occupant Biomechanics and Seat Belt Restraint Systems”, PhD, Supervisor (Commenced PhD 01/01, leave from program 12/02 – 04/04, PhD Proposal 11/04, Candidacy: 12/04 - successful). Scholarships/Funding: NSERC PGS B, AHFMR, UC Graduate Scholarships, UC Silver Anniversary Award. Expected date of completion: June 2006.
McLaughlin, Kimberly	“Characterization of In-vivo Joint Kinematics and Contact Characteristics in Patellofemoral Pain Syndrome using MR Imaging”, MSc dissertation, Supervisor (Commenced 09/02, Expected

- completion: 06/05). Scholarships/Funding: Province of Alberta Graduate Scholarship.
- Robu, Daniela “Multi-camera optical imaging and surface reconstructions for scoliosis evaluations” MSc dissertation, Co-supervisor with F. Chariet (commenced 01/03, expected completion 06/05). Scholarships/Funding: GEOIDE Poster Award, NSERC PGS, Dean’s Research Excellence Award - University of Calgary.
- Cheng, Rita “Magnetic Resonance Image Registration of Healthy and Degenerated Joint for the Study of Osteoarthritis”, MSc dissertation, Co-Supervisor with Dr. Habib – Geomatics (commenced 01/04, expected completion 12/05). Scholarships/Funding: NSERC PGS, Alberta Ingenuity Fund MSc Studentship Incentive Award, Dean’s Research Excellence Award - University of Calgary.
- Fjeld, Ingrid “ACL Deficiency Joint Dynamics”, MSc dissertation, Supervisor (commenced 09/04, expected completion 08/06). Scholarships/Funding: NSERC – PGS, AIF, UC Markin Flanagan Undergraduate Student Research Program in Bone and Joint Health.
- Johnson, Jessica “In-vivo joint laxity quantification”, MSc dissertation, Supervisor (commenced 09/04, expected completion 08/06). Scholarships/Funding: NSERC PGS, AIF, Dean’s Research Excellence Award - University of Calgary.
- Robu, Ion “Cartilage loading characteristics with MRI”, MSc dissertation, Supervisor (commenced 09/04, expected completion 08/06). Scholarships/Funding: NSERC PGS
- Visser, Daniel “TLSO Custom Brace Design, Fabrication and Evaluation”, MSc dissertation, Co-supervisor with D. Xue (commenced 09/04, expected completion 08/06). Scholarships/Funding: UC Markin Flanagan Undergraduate Student Research Program in Bone and Joint Health.
- Wu, Hong Fa “Predicting progression of scoliosis with neural networks and surface modeling” PhD dissertation, Supervisor (commencing 05/03, expected completion 04/06). Awards: CIHR Training Scholarship
- Tapper, Janet “In-vivo Joint Kinematics and Estimation of ACL Strain.” MSc/PhD Dissertation, Co-supervisor. (Commenced MSc 09/99, transferred to PhD program in 08/00, enrolled in MD/PhD program 09/01, transferred to BME program with supervisor change 04/02). Scholarships/Funding: NSERC PGS B, AHFMR

**Graduate Student Supervisor (Completed):**

- Hetu, Alexis “Reconstruction 3d de la Surface Externe Du Tronc Humain Pour Le Suivi Non Effraktif Des Deformations Scoliotiques.” MSc dissertation, Co-Supervisor E’cole Polytechnique, Montreal, QC (Commenced 09/02, Completed 04/04).
- Scovil, Carol “The Viability of a 3D Forward Dynamic Model of Walking as a Research Tool to Enhance Clinical Understanding of Gait Abnormalities”. PhD Dissertation, Supervisor (Commenced 01/98, transferred from MSc to PhD 08/00, (Completed March 31, 2005) Scholarships/Funding: NSERC PGS B, AHFMR, UC Graduate Scholarships, CEMF, Synaps Applied Optimization Award, UC Silver Anniversary Award, URG Conference Travel Grant. Present Position: PDF, Centre for Studies in Aging at Sunnybrook & Women’s Hospital Research
- Gildenhuis, Anne “Perturbation of Dynamic Postural Stability MSc Dissertation, Supervisor (Commenced 09/00, Completed 11/03) Scholarships/Funding: NSERC PGS A, iCORE, UC Thesis research grant, URG Conference Travel grant. Present Position: Engineering – Dynastream Innovations.
- Alvarez, Maria “Influence of Socket Design on Quality of Life in Below Knee Amputees.” MSc Dissertation, Supervisor (Commenced 09/99, Completed: 11/03) Scholarships/Funding: WCB. Present Position: Consultant
- Boyd, Steven “A 3D In-Situ Model for Patellofemoral Joint Contact Analysis in the Normal and Anterior Cruciate Ligament Deficient Knee”. MSc Dissertation. Supervisor (1995-1997, completed April, 1997) Scholarships/Funding: NSERC PGS A, AHFMR, UC Silver Anniversary Award  
Current Position: Assistant Professor, University of Calgary
- Young, Dominic “Mechanical Properties of the Cat Patellar Tendon.” MSc Dissertation. Supervisor.(1996-1998, completed Dec., 1998)  
Current Position: Injury Biomechanics Consultant, Calgary, AB.
- Powers, Marilyn “Mechanics of Patellofemoral Joint Tracking and Related Joint Contact.” MSc Dissertation, Supervisor. (1996-1999, completed Sept., 1999)  
Current Position: PhD Student, University of Calgary.

- Kralovic, Barbara “Influence of Knee Joint Integrity and Muscular Force Levels on Patellofemoral Joint Stress Distributions Using FEM.” MSc Dissertation, Supervisor. (1997 – 2000, completed Jan., 2000)  
Current Position: Biomedical Research and Development, Sulzer Medica, TX., USA.
- Magnusson, Daniel “Analysis of Shoulder Stability During Wheelchair Locomotion: An MR Imaging Study.” MSc Dissertation, Co-Supervisor with Dr. T. van den Bogert (1999-2001, completed Oct, 2001) (Note: external supervision, with student transferring to Cleveland Clinic Foundation, Cleveland, OH).  
Current Position: Vice President, Motion Analysis Corporation, CA., USA.
- Tardiff, Nathalie “Accuracy of optical laser scanning for torso surface imaging.” Co-supervisor with J. Dansereau, Ecole Polytechnique. MSc Dissertation. (1999-2001, completed Dec., 2001) (Note: student enrolled at Ecole Polytechnique, conducted thesis research at UC under my supervision)  
Current Position: Engineering Specialist, Schlumberger, Calgary. AB.
- Moss, Rebecca “Characterization of Joint Cartilage Deformation Using Magnetic Resonance Imaging.” MSc Dissertation, Supervisor. (1998 – 2001, completed Sept, 2001) (Note: student commenced employment in biomedical sector in Edmonton, Jan. 2001).  
Current Position: Pulmonox Inc., Edmonton, AB.
- Baker, Nicole “Quantification of Normal Knee Joint Contact Characteristics Using Magnetic Resonance Imaging.” MSc Dissertation, Supervisor. (1998 – 2002, completed Jan., 2002) (Note: student commenced employment in biomedical sector in Toronto, Summer 2001).  
Current Position: Research Engineer, Sunnybrook Hospital, Toronto, ON.
- Maurer, Jessica “Biomechanical Comparison of Traditional and CAD/CAM Generated Prosthetic Socket Designs.” MSc Dissertation, Supervisor. (1998 – 2002, completed June, 2002) (Note: student relocated for family reasons to BC in Fall 2000, and commenced employment as research engineer in biomedical laboratory in Fall, 2001).  
Current Position: Research Engineer, Simon Fraser University, Vancouver, BC.
- Thistlethwaite, Paul “Prediction of Hip Prosthesis Migration using RSA techniques”, MSc dissertation, Co-supervisor with Dr. R. Gill (2000 – 2002, completed Sept., 2002).  
Current Position: PhD student, Biomechanics Lab, University of Berne.

**Supervisory Committee Member (in program):**

- Monteleone, Brad      “Proprioception, Muscle Activation and Ankle Injuries.” PhD Dissertation, Medical Science, Medicine, University of Calgary, (Expected completion 05/05)
- Carroll, Michael      “Joint Biomechanics and Benign Hypermobility Joint Syndrome.” Kinesiology, Kinesiology, University of Calgary (Candidacy planned for 2005).
- Germescheid, Nicole      “Tissue adaptation and joint injuries.” Medical Science, Medicine, University of Calgary (Expected completion 2006).
- Dudley, Richard      Neuron regeneration using Axon fusion techniques. PhD dissertation Mechanical and Manufacturing Engineering, University of Calgary, (Extended medical leave)

**Supervisory Committee Member (completed):**

- Gerin-Lajoie, Martin      Anticipatory Navigational Behaviour during Locomotion, PhD Thesis – Oral Examination Committee. Experimental Medicine Program, Laval University (Completed PhD candidacy 12/03)
- Lemothe, Jeremy      “Bone adaptation in response to fluid flow and mechanical stimuli.” PhD Dissertation, Kinesiology, University of Calgary, (Completed 04/03). Current Position: MD student, University of Calgary
- Miller, Janice      “Factors Affecting Human Heel Pad Mechanics: A Finite Element Study.” Mechanical and Manufacturing Engineering, University of Calgary, PhD Dissertation, (Completed 04/03). Current Position: Instructor, Mount Royal College, Calgary.
- Wohl, Gregory      Mechanical Behaviour of Transplanted Osteochondral Allografts. PhD Dissertation (Completed 09/02)  
Current Position: PDF, St. Louis, MN.
- Li, Longmei      Composite material modeling and manufacture for rapid prototyping applications. PhD dissertation. Mechanical and Manufacturing Engineering, University of Calgary, (completed 06/03)
- Boyd, Steven      Material Characterization and Modeling of Bone Adaptation in Normal and Pathological Knee Joints. PhD Dissertation (Completed 01/01)  
Current Position: Current Position: Assistant Professor, University of Calgary, Calgary, AB.

Hau, Anne	Adaptation and muscle tuning response to foot orthotics. PhD Dissertation, Medical Science, Medicine, University of Calgary, (Completed 11/01). Current Position: PDF, Stanford, CA.
Thornton, Gail	Creep Behaviour and Mechanisms of Normal and Healing Ligaments. PhD. Dissertation. (Completed 03/00) Current Position: Bioengineering Consultant, Vancouver, BC.
Barnes, Kenneth	Influence of Antero-medialization of the Tibial Tubercle on Patellar Tracking. MSc Dissertation (Completed: 07/98) Current Position: Medical Resident, University of Dublin, Dublin, Ireland.

#### PhD Candidacy Oral Examination Committees:

Martell, Steven	Kinesiology (06/24/2004)
Gerin-Lajoie, Martin	Kinesiology (12/2003), Laval University
Lamothe, Jeremy	Kinesiology (04/2003)
Dudley, Richard	Mechanical and Manufacturing Engineering (2001)
Ivey, Tyler	Medical Science (2001)
Li, Longmei	Mechanical and Manufacturing Engineering (2001)
Monteleone, Bradley	Medical Science (2001)
Balhadda, Abdullah	Mechanical and Manufacturing Engineering (2000)
Chow, Dann	Mechanical and Manufacturing Engineering (2000)
Hau, Anne	Medical Science (2000)
Nurse, Matthew	Medical Science, Biomedical Engineering Program (2000)
Scovil, Carol	Mechanical and Manufacturing Engineering (2000)
Jaremko, Jacob	Medical Science, Biomedical Engineering Program (1999)
Miller, Janice	Mechanical and Manufacturing Engineering (1999)
Boyd, Steven	Mechanical and Manufacturing Engineering (1998)
Nikolic, Milo	Mechanical and Manufacturing Engineering (1998)
Thornton, Gail	Civil Engineering (1998)
Huysse, Luc	Civil Engineering (1997)
Judex, Stefan	Mechanical and Manufacturing Engineering (1997)
Wohl, Gregory	Mechanical and Manufacturing Engineering (1997)
Wright, Ian	Mechanical and Manufacturing Engineering (1997)

#### Dissertation Oral Examination Committees:

Scovil, Carol	“Numerical modeling and simulation for movement analysis.” Mechanical and Manufacturing Engineering, University of Calgary (03/05/04).
Lamothe, Jeremy	“Bone adaptation in response to fluid flow and mechanical stimuli.”

	Kinesiology, University of Calgary (04/27/04).
Doschak, Michael	“Bisphosphonate Antiresorptive Drug Use in a Rabbit Model of Osteoarthritis.” Medical Science, Medicine, University of Calgary (04/30/04).
Miller-Young, Janice	“Factors Affecting Human Heel Pad Mechanics: A Finite Element Study.” Mechanical and Manufacturing Engineering, University of Calgary (04/2003).
Wohl, Gregory	“Biomechanical and histomorphological assessment of graft and host osteochondral tissue in the sheep knee.” Department of Mechanical and Manufacturing Engineering, University of Calgary (02/04/03).
Li, Longmei	“Analysis and Fabrication of FDM Prototypes with Locally Controlled Properties.” Department of Mechanical and Manufacturing Engineering, University of Calgary (02/06/03).
Thornton, Gail	Civil Engineering, Faculty of Engineering (2000)
Judex, Stefan	Mechanical and Manufacturing Engineering, Faculty of Engineering (1999)
Huyse, Luc	Civil Engineering, Faculty of Engineering (1999)
Ferguson, Keith	Computer Science, Faculty of Science (1996)
Reinschmidt, Christoph	Medical Science, Faculty of Medicine (1996)

#### **MSc Thesis Oral Examination Committees:**

Keilman, Jeff	“The Development and Experimental Verification of the Lexel™ Array: A Microelectrode Structure to Implement Reconfigurable, Programmable AC Electrokinetic Particle Manipulations.” (June 10, 2005).
Pullivelli, Anoop	“Digital Imaging Systems.” Geomatics Engineering, University of Calgary. Internal/External. (March 22, 2005).
Su, Renfeng	“Validation of Finite Element Modelling of Bone Micro-Mechanics by Micro-Computed Tomography and Rapid Prototyping.” Mechanical & Manufacturing Engineering, University of Calgary

- (April 6, 2005).
- Dempsey, Erika “Identification of a Model of Sound Transmission in the Human Knee: Vibroarthrographic Signals as a Diagnostic Tool” Electrical and Computer Engineering, University of Calgary (January 13, 2005).
- Wing Lun Ip, Alan “Analysis of Integrated Sensor Orientation for Airborne Mapping.” Thesis-based. Geomatics Engineering, University of Calgary (11/29/04).
- Nagarajappa, Nirupama “Background Suppression Using Hadamard RF Pulses for Endovascular Therapy in Magnetic Resonance, Thesis-Based. Electrical and Computer Engineering, University of Calgary (11/26/04).
- Gildenhuis, Anne “Development and Validation of an Experimental Technique for Studying Dynamic Stability During Standing, Mechanical and Manufacturing Engineering, University of Calgary (Completed 12/03).
- Alvarez Uribarri, Maria “Functional Abilities and Quality of Life of Canadian Unilateral Transtibial Amputees as a Function of Socket Design”, MSc Dissertation, University of Calgary (11/03).
- Chi, Simon “Mechanical compression stimulates the aggrecan promoter of chondrocytes embedded in agarose gels.” Medical Science, Faculty of Medicine (09/2003).
- Thistlethwaite, Paul Mechanical and Manufacturing Engineering, Faculty of Engineering (2002).
- Maurer, Jessica Mechanical and Manufacturing Engineering, Faculty of Engineering (2002)
- Alam, Sharmila Chemical and Petroleum Engineering, University of Calgary (2002)
- Baker, Nicole Mechanical and Manufacturing Engineering, Faculty of Engineering (2002)
- Chi, Simon “Mechanical compression stimulates the aggrecan promoter of chondrocytes embedded in agarose gels.” MSc, Medical Science, Faculty of Medicine, University of Calgary (2002)
- McGuinness, Brett MSc Thesis, Medical Science, Faculty of Medicine (2002).

Magnusson, Daniel	Faculty of Kinesiology (2001)
Moss, Rebecca	Mechanical and Manufacturing Engineering, Faculty of Engineering (2001)
Tardif, Nathalie	Mechanical Engineering, Ecole Polytechnique (2001)
Rosenfeld, Louis	Mechanical and Manufacturing Engineering, Faculty of Engineering (2000)
Dmowski, Jan	Mechanical and Manufacturing Engineering, Faculty of Engineering (1999)
Peng, Liying	Civil Engineering, Faculty of Engineering (1999)
Barnes, Kenneth	Medical Science, Faculty of Medicine (1998)
Bishop, Gregory	Neurosciences, Faculty of Medicine (1998)
Grassman, Stephanie	Civil Engineering, Faculty of Engineering (1998)
Sen, Arindom	Chemical and Petroleum Engineering, Faculty of Engineering (1998)
Ajemian, Stan	Medical Science, Faculty of Medicine (1997)
Boorman, Richard	Medical Science, Faculty of Medicine (1997)
Lee, Samuel	Mechanical and Manufacturing Engineering, Faculty of Engineering (1997)
Alto, Hilary	Geomatics Engineering, Faculty of Engineering (1996)
Malmqvist, Lara	Civil Engineering, Faculty of Engineering (1996)
Stergiou, Prothromo	Medical Science, Faculty of Medicine (1996)
Wohl, Gregory	Mechanical and Manufacturing Engineering, Faculty of Engineering (1996)

**External Examination Committees:**

Clin, Julien	MSc, "Biomechanical Simulation of the Orthotic Treatment of Idiopathic Scoliosis: Application to Rational Design of Braces." Polytechnique de Montreal, Hopital Sainte-Justine, Centre de recherche(April 13, 2005)
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Hetu, Alexis	MSc, “Reconstruction 3d De La Surface Externe Du Tonc Humain Pour Le Suivi Non Effraktif Des Deformations Scoliotiques.” Ecole Polytechnique (04/20/04).
Gerin-Lajoie, Martin	PhD. “Anticipatory Navigational Behaviour During Locomotion.” Experimental Medicine Program, Laval University, QC (12/2003).
Ferguson, Stephen	Mechanical Engineering, Queen’s University – External Examiner, (2000)
Costigan, Patrick	School of Physical and Health Education, Queen’s University - External Examiner, (1997)

### **Supervision of Undergraduate Students:**

Meier, Angela	UC Markin Flanagan Summer Studentship “MIME” (05/05 – 08/05).
Platt, Jodie	UC Markin Flanagan Summer Studentship “ACL” (05/05 – 08/05).
Kwakkel, Cid	EnCana Undergraduate Studentship Program & CCIT “Scoliosis” (05/05 – 08/05).
Fairley, Jillian	NSERC Undergraduate Student Research Award “The Role of Muscle Force Sharing and Joint Contact in Patellofemoral Pain Syndrome” (05/05 – 08/05).
Blackhall, Elise	SCP – Summer Career Placement Funding “Scoliosis” (05/05 – 08/05).
Jones, Katelyn	UC Markin Flanagan Summer Studentship “Evaluation of functional effects of bracing of pectus carinatum using optical imaging.” (05/05 – 08/05).
Elliott, Kevin	Undergraduate Research Assistant, UC Mechanical and Manufacturing Engineering (01/05 – 08/05).
Romanow, Michele	Summer Studentship (visiting undergraduate engineering student from Queen’s University. (05/04 – 08/04).
Westover, Lindsey	NSERC Undergraduate Student Research Program Award, UC Mechanical Engineering Undergraduate Student. (05/04 – 08/04).
Fjeld, Ingrid	UC Markin Flanagan Undergraduate Student Research Program in

	Bone and Joint Health Scholarship, UC Mechanical Engineering Undergraduate Student. (05/04 – 08/04).
Sutherland, Karley	UC Markin Flanagan Undergraduate Student Research Program in Bone and Joint Health Scholarship, UC Kinesiology Undergraduate Student. (05/04 – 08/04).
Visser, Daniel	UC Markin Flanagan Undergraduate Student Research Program Award, UC Mechanical Engineering Undergraduate Student. (05/04 – 08/04).
Anderson, Samantha	Current position: Graduate student (U of C) NSERC Undergraduate Student Research Program Award, UC Mechanical Engineering Undergraduate Student. (05/04 – 08/04).
Spiller, Robert	NSERC Undergraduate Student Research Program Award and UC Markin Flanagan Undergraduate Student Research Program in Bone and Joint Health Scholarship (UC Mechanical Engineering Undergraduate Student) “Determination of Physiological Cross-Sectional Area of Muscle based on MR imaging (01/04 – 04/04).
McNeil, Eleanor	Grade 11 High School Student, Mentor Program, Job Shadowing (11/03), Strathcona Tweedsmuir School.
Campbell, Leah	Grade 11 High School Student, Summer Research Student (06/03 – 08/03), Earnest manning High School.
Mandry, Louise	Current position: Undergraduate engineering student (U of A) NSERC Summer Research Student (05/03 – 08/03), Markin Flanagan Undergraduate Research Program Research Student (05/03 – 08/03).
Savage, Luke	NSERC Summer Research Student (05/03 – 08/03), Markin Flanagan Undergraduate Research Program Research Student (05/03 – 08/03).
Desrouchers, J.	Current position: Medical student (U of A) NSERC Summer Research Student (05/03 – 08/03), Markin Flanagan Undergraduate Research Program Research Student (05/03/08/03).
Dhar, Parag	Markin Flanagan Undergraduate Research Program Research Student (01/03 – 04/03), NSERC Summer Research Student (05/03 – 08/03).
Raugust, Jordon	Current position: Graduate student (U of T) AHFMR Summer Research Student, Kinesiology (05/03 – 08/03).
Sanden, Andrew	Current position: Medical Student Markin Flanagan Undergraduate Research Program Research Student (09/03 – 12/03).

Dubetz, Tyler	Markin Flanagan Undergraduate Research Program Research Student (09/03 – 12/03).
Fjeld, Ingrid	NSERC Summer Research Student (05/03 – 08/03), Part-time Research Assistant (01/03 – 04/03). Current position: Graduate student (UC)
Baker, Mackenzie	Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (NSERC summer studentship) (2002) Current position: Graduate Student (McGill)
Cohen, Jeremy	Summer research student, Engineering Physics, University of Toronto (UC Markin-Flanagan USRP scholarship) (2002) Current position: Medical Student, U of T.
Evison, Rhiannon	Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (2001,2002)
Fjeld, Ingrid	Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (2001,2002) (UC Markin-Flanagan USRP scholarship, 2002)
Raugust, Jordon	Summer research student, Kinesiology, University of Calgary, UC Markin-Flanagan USRP Scholarship, (2001, 2002)
Schneider, Prism	Summer research student, Kinesiology, McGill University (2002) Current position: PhD student (UC)
Dubetz, Tyler	Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (NSERC summer studentship, 2001)
Harder, Erika	Summer research student, Medicine, University of Alberta (AHFMR summer studentship, 2001)
Logan, Elizabeth	Summer research student, Chemical and Petroleum Engineering, University of Calgary (NSERC summer studentships, 2000, 2001)
Sennhuaser, Daniel	Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (NSERC summer studentships, 1999, 2000)
Smithanuk, Jeffrey	Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (NSERC summer studentships, 1998, 1999)
Corbeil, Ramona	Summer research student, Summer research student, Mechanical

and Manufacturing Engineering, University of Calgary (NSERC summer studentships 1999,2000)

- Donnelly, Bryan Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (1998)
- Banes, Sarbi Summer research student, Mechanical and Manufacturing Engineering, University of Calgary (1998)
- Canteenwalla, Zubin Summer research student , Mechanical Engineering, Queen's University (1997, 1998)

### C. Postdoctoral Fellow Trainees and Research Assistants

- Gordon, Karen PDF, " Quantification of structure and biology of meniscus using 3T MR imaging and gadolinium contrast agent." (03/2004 – 08/2004 PDF shortened due to commencement of academic appointment as Assistant Professor at Guelph University, July 2004). Funding: NSERC.
- Ferber, Reed PDF, "Joint Injuries, ACL Deficiencies and Neuromotor control adaptations." (09/04 – 12/04), Funding: NSERC. Current Position: Head, Running Biomechanics Clinic, Mount Royal College, Calgary, AB
- Thannhauser, Steven Undergraduate Research Assistant, Mechanical Engineering, University of Saskatchewan (01/05 – 03/05)
- Mandry, Louise Research Assistant, BSc. Locomotion and Movement Assessment (2004). Funding: CRC
- Robu, Ion Research Assistant, Clinical Movement Assessment Lab (McCaig Centre), University of Calgary (09/03 – 08/04). Funding: WCB  
Current Position: Graduate Student, University of Calgary.
- Aalbersberg, Sietska Visiting PhD Student. Currently completing PhD research in collaborative research on knee joint modeling and joint moment arms (collaborative project with Dr. I. Kingma and J. van Deen) (04/03 – 07/03), Faculty of Human Movement Science, Free University of Amsterdam.
- Bergeron, Charles Visiting MSc Student. Currently completing MSc at Ecole Polytechnique under supervision of Dr. F. Chariet (scoliosis project collaborator). (06/03)
- Zeng, Y. PDF, Surface Models, Imaging (2001 - 2002)

	Funding: NSERC Current Position: Assistant Professor, CRC Chair, Concordia University, PQ.
Ramage, B.	Research Associate, Gait, Posture, Imaging (1998 – present) Funding: ACHF, CHRA, WCB, CRC program
Poncet, Philippe	PDF, Scoliosis (1998 – present) Funding: Arthritis Society, CIHR, ACHF, Fraternal Order of Eagles
Andersen, Maggie	Research Assistant, Socket pressures and gait in amputees (2002 – present) Funding: Worker’s Compensation Board Current position: Mother (home based)
Martin, Jeffrey	Research Assistant, MR imaging (2002 – 2004) Funding: CRC Program Current status: deceased.
Robu, Daniella	Research Assistant, Optical imaging system development (2002) Funding: GEOIDE Current position: Graduate student (U of C)
Wu, Hongfa	Research Assistant, Scoliosis brace development (2002-2003) Funding: Fraternal Order of Eagles Current position: Graduate student (U of C)
Donnelly, Bryan	Research Assistant, Joint kinematics (2001-2002) Funding: CIHR Current position: Graduate student (U of C)
Glod, Eva	Research Assistant, Joint surface measurements (2000 - 2001) Funding: GEOIDE
Hamel, Jennifer	Research Assistant, Joint surface measurements (1999-2000) Funding: GEOIDE
Powers, Marilyn	Research Assistant, gait and movement analysis (1999-2000) Funding: ATCO, CIHR, TCPL

#### IV. SCHOLARLY ACTIVITIES

##### A. Research Support

2005	CIHR – IMHA, Team Planning and Development Grants, (\$94,000 total award applied for), PI: H. Labelle.
2005 – 2006	ACHF – Alberta Children’s Hospital Foundation (\$42,280 total award applied for), PI: D. Sigalet.

- 2005 – 2007 MSIF – Medical Services Incorporated Foundation (\$164,000 total award applied for, LOI submitted March 2005). PI: B. Ramage.
- 2005 – 2006 ASRIP – CFI – CCIT Bioengineering Centre Infrastructure Grant (\$100,000 total award). PI: Ronsky.
- 2003 – 2005 University of Calgary – Centre for Bioengineering Research and Education (\$30,000 total award, \$10,000 p.a.). PI: Ronsky.
- 2005 – 2009 CFI / NRC / Province of Alberta / MD Robotics – Project Neuro-Arm: MR Compatible Image Guided Robot for Microsurgery (\$30,000,357 total award, \$16,740,605 Biomedical portion). PI: G. Sutherland, Co-App: Ronsky
- 2005 – 2007 CIHR – Predicting Scoliosis Progression with Surface Imaging and Neural Networks (\$81,313 p.a., 50% allocation to Ronsky). PI: Ronsky.
- 2004 – 2008 NSERC – Numerical Analysis and Modeling of in-vivo joint mechanics and dynamic joint function (\$47,370 p.a., 100% allocation to Ronsky). PI: Ronsky.
- 2003 - 2006 The Arthritis Society – Diarthrodial joint as organ in health and disease (\$86,455 p.a., 25% allocation to Ronsky (\$21,613.75). PI: Shrive, Co-Investigators: Hart, Bray and Ronsky.
- 2004 – 2006 Canadian Institutes for Health Research (CIHR) – Neuromotor rehabilitation after large fibre somatosensory loss (\$185,400 total award, \$61,800 p.a., 20% allocation to Ronsky (\$12,360.00). PI: Hulliger, Co-Investigators: Ronsky and 2 others.
- 2003 – 2008 Canadian Institutes for Health Research Institute of Aging, CFI Infrastructure Grant (NET) – Sex and Gender Influences on Musculoskeletal Health across the Lifespan. (\$1,500,000 total award, \$300,000 p.a., 50% allocation to Ronsky 2004. PI: Hart, Co-Investigators: Ronsky and 4 others.
- 2003 – 2007 Canadian Institutes for Health Research – ICE Institute of Musculoskeletal Health and Arthritis – Movement in the Mind’s Eye (MIME) – A Multidisciplinary Study of Body Motion (\$495,000 total award, 165,000 p.a., 16.5% allocation to Ronsky (\$27,500). PI: Edwards, Co-Investigators: Ronsky and 5 others (multi-institutional, international team)
- 2004 – 2005 Hospital for Sick Children – Reliability study of the non-invasive assessment of the 3-D external asymmetry of patients with adolescent

- idiopathic scoliosis (\$129,680 total award, 64,840 p.a., 15% allocation to Ronsky (\$9,726). PI: Cheriet, Co-Investigators: Ronsky and 3 others.
- 2002 – 2004 GEOIDE National Centre of Excellence – Biometrology for Informed Decisions in Medical Diagnoses, Procedures and Treatment Evaluations – An Application Driven Research and Development Initiative Phase II (\$143,000 p.a., 20% allocation to Ronsky (\$31,725). PI: Ronsky, Co-Investigators: Chapman, Clausi, Zernicke, Shrive, Gill (multi-institution collaboration)
- 2002 – 2004 Workers' Compensation Board (Alberta) – Assessment of Prosthesis for Transtibial Amputees – Phase II (Evaluation of Quality of Life related to Socket Designs for Below Knee Amputees) (\$36,000 p.a.) PI: Ronsky.
- 2002 – 2006 Canada Foundation for Innovation – New Infrastructure Grant - Integrating Research in Osteoarthritis: From the Bedside to the Bench and Back Again. (\$12,700,000 total award, \$2,540,000 p.a.). PI: Hart, Co-Investigators: Ronsky and 11 others, Ronsky: 1-6 Project Coordinators.
- 2003 – 2007 Canadian Institutes for Health Research (CIHR) – Alberta Provincial Training Program in Bone and Joint Health (\$1,600,000 total award, \$320,000 p.a.) PI: Zernicke, Crites-Battie, Co-Applicants: Ronsky and 6 others.
- 2000 – 2005 Zimmer of Canada – Versys Hip Prosthesis Migration RSA Study (\$45,000 p.a., 50% allocation to Ronsky (\$22,500). PI: Gill, Co-Investigator: Ronsky.
- 2001 – 2005 NSERC – Canada Research Chair in Bioengineering Tier II. (\$100,000 p.a.) PI: Ronsky.
- 2001 – 2005 University of Calgary – Faculty Retention research grant (\$30,000 p.a.). PI: Ronsky
- 2003 – 2005 National Institutes of Health (NIH) USA, Alcoholic Beverage Medical Research Foundation – Improving the diagnoses of mild FAS and ADHD (\$100,000 total award, \$50,000 p.a., 10% allocation to Ronsky (\$3,500). PI: Kooistra, Co-Investigators: Ronsky and 2 others.
- 2004 – 2005 CIHR – Building a Multidisciplinary Team in Adolescent Sport Injury Prevention (\$91,151 p.a., 5% allocation to Ronsky (\$4,557.55)
- 2001 – 2004 Canada Foundation for Innovation – CRC New Infrastructure grant (\$139,500 p.a.) PI: Ronsky.

- 2001 – 2004 Canadian Institutes for Health Research – Predicting Scoliosis with laser scanning and neural networks (\$68,000 p.a., 50% allocation to Ronsky (\$34,000). PI: Zernicke, Co-Investigators: Ronsky, Harder, Dansereau, Labelle (multi-institution collaboration)
- 2002 – 2003 AHFMR – Optical Surface Scanning System, Major Equipment Grant (\$100,000). PI: Ronsky, Co-Investigators: Zernicke, Frank, Shrive, Nigg, Stefanyshyn, Xue, El-Sheimy, Kawchuk, VX Technologies Inc.
- 2001 – 2003 University of Calgary – Canada Research Chairs research start-up grant (\$20,000 p.a.) PI: Ronsky.
- 2001 – 2003 Alberta Children’s Hospital Foundation – Relations amongst postural control and locomotion in youngsters with spastic diplegia (\$19,900 p.a.) PI: Ronsky, Co-Investigators: Kiefer, Zernicke, Harder
- 2001 Natural Sciences and Engineering Research Council of Canada – Equipment Grant – Kinematics and kinetic movement analysis system upgrade (\$69,300). PI: Ronsky, Co-Investigators: Frank, Shrive, Zernicke
- 2001 University of Calgary – Conference Travel Grant (\$1300) PI : Ronsky.
- 2000 – 2002 CRHA – Influence of spinal epidurals on gait and posture (\$11,000 p.a.) PI: Ronsky, Co-Investigators: Breen, Yang, Zernicke.
- 2000 – 2003 The Arthritis Society – Ligament Injuries in Osteoarthritis (\$85,400 p.a., 30% allocation to Ronsky), PI: Frank, Co –Investigators: Ronsky, Shrive.
- 2000 – 2001 Natural Sciences and Engineering Research Council of Canada – Equipment Grant High Resolution Digital Scanner, (\$73,000). PI: Gill, Co-Investigator: Ronsky.
- 2000 – 2002 McCaig Programme Development Award – CRHA Partners in Health (\$45,000 p.a.) PI: Ronsky.
- 2000 – 2001 Arthritis Society of Canada – Predicting Scoliosis progression with Neural Networks and Laser Scanning (\$67,500 p.a., 50% allocation to Ronsky). PI: Zernicke, Co-Investigators: Ronsky, Harder, Dansereau, Labelle (multi-institutional collaboration).
- 1999 -2004 (CIHR) Medical Research Council of Canada – Ligament Injury and Healing Mechanics (\$185,000 p.a., 25% allocation to Ronsky). PI: Frank, Co-Investigators: Ronsky, Hart, Shrive.
- 1999 – 2000 Workers Compensation Board – Evaluation of Quality of Life related to

- Socket Designs for Below Knee Amputees (\$19,500 p.a.) PI: Ronsky, Co-Investigators: Zernicke, Harder, Agarwalla.
- 1999 – 2002 GEOIDE National Centre of Excellence – Biometrology Group. Biometrology in support of Medical Procedures: An Application driven research and development initiative (\$72,500 p.a., 15% allocation to Ronsky). Co-PI: Chapman, Ronsky, Co-Investigators: Clausi, Shrive, Gill
- 1998 Intellectual Infrastructure Partnership Programme – University of Calgary and Province of Alberta – Bioengineering Laboratory Infrastructure (\$98,000). PI: Ronsky, Co-Investigators: Duncan, Goldsmith
- 1998 – 1999 Hospital for Sick Children Fund – Predicting Scoliosis with Neural Networks (\$67,500 p.a., 50% allocation to Ronsky). PI: Zernicke, Co-Investigators: Ronsky, Harder, Dansereau, Labelle (multi-institutional collaboration).
- 1997 – 2004 NSERC – Mathematical Modeling of Knee Joint Contact Mechanics (\$32,500 p.a.) PI: Ronsky. (note: NSERC GSC 13 average funding level for 2002 of \$25,600 p.a.)
- 1997 – 1999 McCaig Programme Development Award – CRHA Partners in Health (\$22,500 p.a.) PI: Ronsky.
- 1998 University of Calgary - Conference Travel Grant (\$1,300) PI: Ronsky.
- 1997 – 1998 Canadian Orthopaedic Association Hip Hip Hooray – Relation Between Tibial Malrotation and Gait Abnormalities (\$1,500) PI: Zernicke, Co-Investigators: Ronsky, Powell.
- 1997 University of Calgary - Conference Travel Grant (\$1,300) PI: Ronsky.
- 1997 Natural Sciences and Engineering Research Council of Canada – Equipment Grant Data Acquisition System (\$37,000) PI: Ronsky.
- 1997 – 1998 Alberta Children’s Hospital Foundation – Assessing Scoliosis with Laser Imaging and Neural Networks (renewal) (\$15,000 p.a., 40% allocation to Ronsky) PI: Zernicke, Co-Investigators: Ronsky, Harder, Dewar.
- 1997 – 2000 Whitaker Foundation (Special Opportunities Grant) – Coordinated Graduate Programme in Biomedical Engineering for Alberta (\$330,000 p.a.) Co-PI: Zernicke, Allen. Co-applicants: Ronsky and numerous others.

- 1997 The University of Calgary (Research Enhancement Envelope) (\$30,000)  
PI: Ronsky.
- 1996 – 1999 The University of Calgary (Research Enhancement Envelope) –  
Developing Distance Learning Materials for Biomedical Engineering  
(\$58,000 p.a.) PI: Zernicke, Co-Applicants: Ronsky, Shrive.
- 1995 – 1998 TransCanada Pipeline Ltd. – Children’s Gait Assessment (\$5,000 p.a.,  
40% allocation to Ronsky). PI: Zernicke, Co-Investigators: Ronsky,  
Joughin, Harder.
- 1995 – 2000 ATCO Ltd. – Analysis of Paediatric Gait (\$20,000 p.a., 40% allocation to  
Ronsky) PI: Zernicke, Co-Investigators: Ronsky, Harder, Joughin,  
Kiefer.
- 1995 – 1997 Alberta Children’s Hospital Foundation – Femoral Antitorsion and Knee  
Pain (17,500 p.a., 30% allocation to Ronsky). PI: Joughin, Co-  
Investigators: Zernicke, Ronsky.
- 1995 – 1997 The University of Calgary (URGC) – Influence of External Loading on  
In-vivo Joint Contact (\$10,000) PI: Ronsky.
- 1994 – 1997 Natural Sciences and Engineering Research Council of Canada –  
Research Grant – Mathematical Modeling of Knee Joint Contact  
Mechanics (\$30,000 p.a.) PI: Ronsky.
- 1993 University of Calgary Thesis Research Grant – In-vivo Quantification of  
Joint Contact Pressures (\$1000) PI: Ronsky.
- 1993 University of Calgary Conference Travel Grant (\$1300). PI: Ronsky.
- 1992 Foothills Hospital Research and Development Committee Grant – In-  
vivo Quantification of Patellofemoral Joint Contact Using MRI. (\$2500)  
PI: Wallace, Co-Investigator: Ronsky.

#### **B. Invited Presentations / Keynote Addresses**

1. Ronsky, J.L., et. al. New Insights into Osteoarthritis Using Novel Imaging Modalities, Joint Dynamics, Biology and Robotics. *13<sup>th</sup> Biennial Meeting of the Canadian Society of Biomechanics*. Halifax, NS, Aug. 2004.
2. Ronsky, J.L. and Hunter, C. “Bone and Joint Injury and Regeneration.” *Alberta Bone and Joint Institute Meeting*. Calgary, AB, December 2004.
3. Ronsky, J.L., Zernicke, R.F. “Elements of a Successful Research Grant.” *13<sup>th</sup> Biennial Meeting of the Canadian Society of Biomechanics*. Halifax, NS, Aug. 2004.

4. Ronsky, J.L., Butterwick, D., Ramage, B. "Thoracic Compression Protection." *Rodeo Research and Clinical Care, 1<sup>st</sup> International Conference*. Calgary, AB, July, 2004.
5. Ronsky, J.L. "Locomotion Research Within an Orthopaedics Framework: Successes and Challenges", Invited Lecture. *World Congress of Biomechanics*, Calgary, Alberta., August 8, 2002.
6. Ronsky, J.L. "Insights into In-Vivo Knee Mechanics with Magnetic Resonance Imaging", Invited Lecture. *World Congress of Biomechanics*, Calgary, Alberta., August 8, 2002.
7. Ronsky, J.L. "Health Geomatics", Invited Lecture, *GEOIDE Phase III Planning Meeting*, Vancouver, BC, Mar, 2002.
8. Ronsky, J.L. "Knee Joint Contact Mechanics". Faculty of Human Movement Science, Free University of Amsterdam, Amsterdam, NL., August, 2001.
9. Ronsky, J.L., Kralovic, B.J., Boyd, S.K., Vellet, D. Invited Lecture: In-vivo Analysis of Joint Contact. *Biomedical Engineering Society Annual Fall Meeting*, Cleveland, Ohio, USA, Oct. 10-13, 1998.
10. Ronsky, J.L. Invited Lecture: Graphics in Biomechanics – More than Just Pretty Pictures? *NACOB '98. The Third North American Congress on Biomechanics*, Waterloo, Canada, August 14-18, 1998.
11. Ronsky, J.L., van den Bogert, A., Nigg, B., Boyd, S., Kralovic, B. Invited Lecture: In-vivo Joint contact Determinations using Models from MRI Data. *3<sup>rd</sup> World Congress on Biomechanics*, Sapporo, Japan, 1998
12. Young, D., Ronsky, J.L., Sutherland, C. In-situ Stress and Strain in Cat Patellar Tendon. *3<sup>rd</sup> World Congress on Biomechanics*, Sapporo, Japan, 1998.

### C. Publications

#### Refereed Journals (published, in press, in review)

#### Published Refereed Journals (22)

1. Tapper, J.E.\*, Fukushima, S., Azuma, H., Thornton, G.M., Ronsky, J.L., Shrive, N.G., Frank, C.B. Dynamic in vivo kinematics of the intact ovine stifle joint. *J. Orthopaedic Research* (In Press, July 2005). Ref.: ORTRES-D-05-00197R1.
2. \*Scovil, C.Y., **Ronsky, J.L.** Sensitivity of a Hill based muscle model to perturbations in model parameters. *J. Biomechanics* (Accepted, May 2005). Ref.: BM-D-04-00739R1.
3. Bergeron, C., Cheriet, F., **Ronsky, J.L.**, Zernicke, R.Z., and Labelle, H. Prediction of Anterior Scoliotic Spinal Curve from Trunk Surface Using Support Vector Regression. *International Scientific Journal Engineering Applications of Artificial Intelligence* (Accepted, in press, March 2005). Ref.: EAAI-04-31R2.
4. Aalbersberg, S., Kingma, I., **Ronsky, J.L.**, Frayne, R. and van Dieën, J.H. Orientation of tendons *in vivo* with active and passive knee muscles. *J. Biomechanics*. Vol. 38/9, pp. 1780-1788., (Ref: BM2525).

5. Bergeron, C., Cheriet, F., Zernicke, R., Ronsky, J., Labelle, H. A Robust Methodology for Non-Invasive Followup of Scoliotic Spinal Curve from three-Dimensional Trunk Surface. *Intn'l Res. Society of Spinal Deformities*, pp14 – 17, June 2004
6. \*Tapper, J.E., **Ronsky, J.L.**, \*Powers, M., Sutherland, C., Majima, T., Frank, C., Shrive, N. In Vivo Measurement of the Dynamic 3-D Kinematics of the Ovine Stifle Joint. *J. Biomech. Eng.*, Vol. 126, No. 2, pp. 301–305, April 2004.
7. \*Scovil C.Y., **Ronsky J.L.** Sensitivity of a gait simulation of tibial rotational malunion. *IXth International Symposium on Computer Simulation in Biomechanics*. Sydney, Australia, July 2003. (full technical paper).
8. Hogervorst, T, Howard, R.A., Thornton, G.M., Paulson, K., Shrive, N., **Ronsky, J.L.**, and Frank, C.B. A Potential Animal Model for Creating a Controlled and Reversible Anterior Cruciate Ligament Insufficiency. *The Knee*. 9(3), 209 - 214, 2002.
9. Jaremko, J.L., \*Poncet, P., **Ronsky, J. L.**, Harder, J., Dansereau, J., Labelle, H., and Zernicke, R. F. Indices of torso asymmetry related to spinal deformity in scoliosis *Clinical Biomechanics*. 17(8), 559-68, 2002.
10. Jaremko, J. L., \*Poncet, P., **Ronsky, J. L.**, Harder, J., Dansereau, J., Labelle, H., and Zernicke, R. F. Genetic Algorithm - Neural Network Estimation of Cobb Angle from Torso Asymmetry in Scoliosis. *Journal of Biomechanical Engineering*, 124(5), 496-503, October 2002.
11. Jaremko, J.L., \*Poncet, P., **Ronsky, J.L.**, Harder, J., Dansereau, J., Labelle, H., Zernicke, R.F. Comparison of Cobb angles measured manually, calculated from 3-D spinal reconstruction. and estimated for torso asymmetry. *Computer Methods in Biomechanics & Biomedical Engineering*, 5(4):277-81, August 2002.
12. \*Wu, H., Xue, D., Harder, J., **Ronsky, J.L.**, \*Poncet, P., Jaremko, J., Clynch, G., Gyorffy, A., and Zernicke, R.F. Design and Manufacturing of Customized Braces for Scoliosis Treatment. *Transactions American Society of Mechanical Engineering CIE-34477*, pp 1-10, 2002. *CD ROM Proceedings of the ASME 2002 Design Engineering Technical Conferences*, Montreal, Quebec, Canada.
13. Jaremko, J. L., \*Poncet, P., **Ronsky, J. L.**, Harder, J., Dansereau, J., Labelle, H., and Zernicke, R. F. Estimation of spinal deformity in scoliosis from torso surface cross sections. *Spine* 26(14):1583-91, July 2001.
14. \*Boyd, S.K. and **Ronsky, J.L.** Normal and ACL-Deficient in-situ Measurement of Patellofemoral Joint Contact. *J. Appl Biomech*, 16(2), 111-123, 2000.
15. Jaremko, J., \*Delorme, S., Dansereau, J., Labelle, H., **Ronsky, J.L.**, \*Poncet, P., Harder, J., Dewar, R., Zernicke, R.F. Use of Neural Networks to Correlate Spine and Rib Deformity in Scoliosis. *Computer Methods in Biomechanics and Biomedical Engineering*. 2000; 3(3): 203-213.
16. \*Poncet, P., \*Delorme, S., **Ronsky, J.L.** Dansereau, J., Harder, J., Dewar, R., Labelle, H., Gu, P., Zernicke, R. Reconstructions of Laser-scanned 3D Torso Topography and Stereoradiographical Spine and Rib-cage Geometry in Scoliosis. *Computer Methods in Biomechanics and Biomedical Engineering* 4(1):59-75, 2000.

17. **Ronsky, J.L.**, \*Boyd, S.K., Lichti, D.D., Chapman, M.A., Salkauskas, K. Precise Measurement of Cat Patellofemoral Joint Surface Geometry with Multi-station Digital Photogrammetry. *J. of Biomechanical Engineering*, Vol. 121(2): 196-205, April 1999.
18. \*Boyd, S.K., **Ronsky, J.L.** Lichti, R.D., Salkauskas, K., Chapman, M.A. Joint Surface Modeling with Thin-Plate Splines. *J. Biomechanical Engineering*, 121(5):525-32, October 1999.
19. \*Poncet, P., \*Delorme, S., **Ronsky, J.L.**, Dansereau, J., Clynch, G., Harder, J., Dewar, R., Labelle, H., Gu, P., Zernicke, R. 3D Reconstructions of the External and Internal Geometries of the Trunk Using Laser and Stereoradiographic Imaging Techniques. In: *Technology and Informatics: Research into Spinal Deformities 2*, Stokes, I.A.F. (ed.) IOS Press, Amsterdam, The Netherlands, pp. 21-24, 1999.
20. \*Boyd, S.K., **Ronsky, J.L.** Instantaneous Moment Arm Determination of the Cat Knee Joint. *J. Biomechanics* 31:279-83, 1998.
21. He, Y., Gu, P., \*Furgerson, K. **Ronsky, J.L.**, and Zernicke, R. Implicit Surfaces Reconstruction for Reverse Engineering. *SPIE International Symposium on Intelligent Systems and Advanced Manufacturing*, Boston, USA, 1998.
22. \*Lichti, D.D., Chapman, M.A., \*Boyd, S.K., and **Ronsky, J.L.** Digital Photogrammetric Measurement of Knee Joint Surfaces. *ASPRS, Vol. 3: Photogrammetry and Remote Sensing*. pp. 283-92, 1997.

#### **Submitted Refereed Papers (8)**

1. Habib, A., Cheng, R. and **Ronsky, J.L.** Surface Matching for Automated Registration of MRI Imagery. *Workshop Italy-Canada 2005 – “3D Digital Imaging and Modeling: Applications of Heritage, Industry, Medicine and Land”*, Padua, Italy, May 17-18, 2005
2. \*Thistlethwaite, P., **Ronsky, J.L.**, Gill, H.S. Efficient and Robust Convolution-based Marker Detection for Roentgen Stereophotogrammetric Analysis. *Computational and Computer Methods in Biomechanics*. (revised and resubmitted, Feb, 2005).
3. Wu, H-F., Xue, D., Harder, J., Poncet, P., Zernicke, R., **Ronsky, J.** Design and Manufacturing of Customized Braces with Symmetrical Geometry and Custom-fit in Pelvis Area for Orthotic Treatment of Adolescent Idiopathic Scoliosis. *J Prosthetics & Orthotics* (submitted, Jan. 2005).
4. Wu, H-F., Xue, D., Harder, J.A., Poncet, P., Zernicke, R.F., **Ronsky, J.L.** Geometric Modeling and Development of Customized Brace for Non-Invasive Treatment of Adolescent Idiopathic Scoliosis. *Geomatica – Special Edition*. (submitted October 2004).
5. Scovil, C., Ramage, B., **Ronsky, J.**, Bell, D., Maitland, M. Effects of a knee or an ankle brace on knee stability: A case study using finite helical axes analysis. (submitted, Jan. 2005).
6. \*Guiltenhuys, A., \*Loitz-Ramage, B. J., **Ronsky, J. L.**, Breen, T. W., Yang, T., \*Maurer, J., and Zernicke, R. F. Effects of epidural anesthesia with bupivacaine and ropivacane on postural stability. *Journal of Applied Biomechanics* (in revision).

7. **Ronsky, J.L.**, \*Kralovic, B., \*Boyd, S. The effects of patellofemoral kinematics on joint congruence. *J. Biomechanical Engineering* (submitted, MS#00-110 in revision).
8. \*Kralovic, B., **Ronsky, J.L.**, \*Boyd, S. The effects of Patellofemoral Kinematics on Cartilage Stresses. *J. Biomechanical Engineering* (submitted, MS#00-111 in revision).

**Refereed Abstracts/Papers in Conference Proceedings (published, accepted) (123)**

1. Cheng, R.W.T., Frayne, R., **Ronsky, J.L.**, and Habib, A.F. Matching strategy for co-registration of lidar and MR imagery. *CD Proceedings of the International Geoscience and Remote Sensing Symposium*, Korea, 2005.
2. Habib, A., Cheng, R., Frayne, R. and **Ronsky, J.L.** Surface matching for automated registration of lidar and MR imagery. *CD Proceedings of the Workshop Italy-Canada 2005 "3D Digital Imaging and Modelling: Applications of Heritage, Industry, Medicine and Land*, Italy, 2005.
3. McLaughlin, K., Ronsky, J., Frayne, R. In vivo assessment of congruence in the patellofemoral joint of healthy subjects. *XXth Congress of the International Society of Biomechanics*, Cleveland, OH, USA, August 1-5, 2005.
4. Bergeron, C., Cheriet, F., Ronsky, J.L., Zernicke, R.Z., Labelle, H. Prediction of three-dimensional spinal curve from back surface in scoliosis. *SPIE International Symposium, Medical Imaging 2005*, San Diego, CA, Feb. 13 – 18, 2005. (Accepted).
5. Wu, H-F., Poncet, P., Harder, J., Cheriet, F., Labelle, H., Zernicke, R.F., Ronsky, J.L. A Mathematical Classification for Prediction of Spinal Deformity Progression in Adolescent Idiopathic Scoliosis. *5<sup>th</sup> Combined Meeting of the Orthopaedic Research Society (ORS)*, Banff, AB, October 2004.
6. Wu, H-F., Poncet, P., Harder, J., Cheriet, F., Labelle, H., Zernicke, R.F., Ronsky, J.L. Prediction of Scoliosis Progression in Time Series Using Numerical Modeling Techniques. *5<sup>th</sup> Combined Meeting of the Orthopaedic Research Society (ORS)*, Banff, AB, October 2004.
7. Wu, H-F., Poncet, P., Harder, J., Cheriet, F., Labelle, H., Zernicke, R.F., Ronsky, J.L. Prediction of Scoliosis Progression in Time Series Using Artificial Intelligence Techniques. *5<sup>th</sup> Combined Meeting of the Orthopaedic Research Society (ORS)*, Banff, AB, October 2004.
8. Johnson, J., Ramage, B., Robu, I., Ronsky, J. Finite Helical Axis as a Measure of Joint Dispersion and Knee Joint Center Orientation in ACL Deficient Subjects. *5<sup>th</sup> Combined Meeting of the Orthopaedic Research Society (ORS)*, Banff, AB, October 2004.
9. Vickers, J., Ronsky, J.L., Ramage, B., Morton, T.B., Park, S. Gaze Stabilization of Balance with and without an Ankle Foot Orthosis: A Pilot Study, *13<sup>th</sup> Biennial Meeting of the Canadian Society of Biomechanics*, Halifax, NS, August 2004.
10. Poncet, P., Robu, D., Jaremko, J., Harder, J., Cheriet, F., Zernicke, R.F. and Ronsky, J.L. Assessing three dimensional changes in trunk asymmetry after surgical correction of idiopathic scoliosis. *5<sup>th</sup> Combined Meeting of the ORS*. Banff, Oct. 2004.

11. Ferber, R., Ronsky, J.L., von Tscharnar, V. and Osternig, L.R. Neuromuscular Response to Unexpected Gait Perturbations in Anterior Cruciate Ligament Injured Non-Copers. *28<sup>th</sup> Annual American Society of Biomechanics Meeting* Portland, Oregon. Sept. 8 – 11, 2004
12. Aalbersberg, S, Kingma, I., Ronsky, J.L., Frayne, R., Van Dieën, J.H. Knee Tendon Orientations With and Without Muscle Contraction. *ESB 2004*, 's-Hertogenbosch, The Netherlands, July 4 -7, 2004.
13. Ronsky, J.L., Tapper, J., Funakoshi, Y., Hariu, M., Howard, R., Marchuk, L., Shrive, N., Frank, C. New Insights into Osteoarthritis Using Novel Imaging Modalities, Joint Dynamics, Biology and Robotics. *Biennial Meeting of the Canadian Society of Biomechanics*. Halifax, NS, Aug. 2004.
14. Savage, L., Butterwick, D., Loitz-Ramage, B., Ronsky, J. Estimation of ground reaction forces in bucking rodeo bulls. *Biennial Meeting of the Canadian Society of Biomechanics*. Halifax, NS, Aug. 2004.
15. Robu, D., Poncet, P., Cheriet, F., Harder, J., Labelle, H., Zernicke, R.F., and Ronsky, J.L. Optical imaging technique applied in 3D reconstruction of scoliotic human torso. *13<sup>th</sup> Biennial Conference, CSB*, Halifax, NS, Aug. 2004.
16. Poncet, P., Robu, D., Jaremko, J., Harder, J., Cheriet, F., Zernicke, R.F. and Ronsky, J.L. Comparison of Changes in Torso Shape Asymmetry and Spinal Deformity of Scoliotic Subjects Before and After Surgery. *13<sup>th</sup> Biennial Conference, CSB*, Halifax, NS, Aug. 2004.
17. Monteleone, B.J., Ronsky, J.L., Meeuwisse, W.H. and Zernicke, R.F. Effects of Functional Ankle Instability on Ground Reaction Forces During a Lateral Hop Movement. . *13<sup>th</sup> Biennial Conference, CSB*, Halifax, NS, Aug. 2004.
18. Monteleone, B., Ronsky, J.L., Meeuwisse, W., Zernicke, R.F. Effects of Functional Ankle Joint Instability on Ankle Joint Moments during Lateral Hop Movement. *5<sup>th</sup> Combined Meeting of the ORS*, Banff, AB, Oct. 2004.
19. Donnelly, B., Ronsky, J.L. and Gill, R. Two Novel Techniques for Error Reduction in RSA. . *13<sup>th</sup> Biennial Conference, CSB*, Halifax, NS, Aug. 2004.
20. McLaughlin, K., Dhar, P., Baker, N. and Ronsky, J.L. In-vivo Assessment of Congruence in the Patellofemoral Joint of Healthy Subjects. . *13<sup>th</sup> Biennial Conference, CSB*, Halifax, NS, Aug. 2004.
21. Wu, H.-F., Xue, D., Harder, J., Poncet, P., Zernicke, R.F. and Ronsky, J.L. Geometric Modeling and Development of Personalized-Braces for Orthotic Treatment in Idiopathic Scoliosis. *6<sup>th</sup> Annual Scientific Conference of the GEOIDE Network*, Gatineau, QC, May 2004.
22. Bergeron, C., Cheriet, F., Ronsky, J.L., Zernicke, R.F. and Labelle, H. A Robust Methodology for Non-Invasive Follow-up of Scoliotic Spinal Curve from Three-Dimensional Trunk Surface. *International Research Society for Spinal Deformities*, Vancouver, B.C., June 10-12, 2004.

23. Robu, D., Poncet, P., Zernicke, R., Ronsky, J. Assessment of 3D Reconstruction of Scoliotic Human Torso using Imaging Techniques and Stereo-Radiography. *6<sup>th</sup> Annual Scientific Conference of the GEOIDE Network*. May 2004.
24. Lun, V., Pullan, N. Adams, C., Ramage, B., Ronsky, J., Suchowersky, O. Comparison of the effects of a self-supervised home exercise program and a physiotherapist-supervised exercise program on gait parameters in a Parkinson's disease population. *8<sup>th</sup> International Congress of Parkinson's Disease and Movement Disorders*. Rome, Italy, 2004.
25. Tapper, J., Barnsdale, C; Funakoshi, Y; Hariu, M; Sutherland, C; Thornton, G M; Ronsky, J L; Shrive, N G; Frank, C B. Evidence supporting a new hypothesis for the development of Osteoarthritis. *Transactions Of The 48<sup>th</sup> Orthopaedic Research Society Meeting*, San Francisco, CA. March 2004. (Young Investigator Award).
26. Frank, C.B., Howard, R.A., Rosvold, J.M., Tapper, J.M., Marchuk, L.L., Ronsky, J.L., Shrive, N.G.: A pilot study presenting new methodology to quantify in vivo tissue loads by in vitro robotic reproduction. ACL Study Group Meeting, Sardinia, Italy, May 29-June 4, 2004.
27. Howard, R.A., Rosvold, J.M., Tapper, J.M., Marchuk, L.L., Ronsky, J.L., Frank, C.B., Shrive, N.G.: Measurement of loads in the ovine stifle joint during in-vitro robotic reproduction of in-vivo kinematics. ISL&T IV, San Francisco, March 2004.
28. Howard, R., Rosvold, J.M., Tapper, J.E., Marchuk, L.L., Ronsky, J.L., Shrive, N.G., Frank, C.B.: Reproduction of in-vivo joint kinematics in-vitro using parallel robotics and measurement of resulting joint loads. *Canadian Orthopaedic Research Society*, Calgary, AB, June 2004.
29. Martin, J., Ronsky, J.,\* Good, C., Tapper, J., Cohen, J., Shrive, N., Frank, C. Prediction of Joint Reaction Forces and Moments for the Ovine Lower Limb during Locomotion using Optimization and Inverse Dynamics Techniques. *Canadian Orthopaedic Research Society*, Calgary, AB. June, 2004.
30. \*Donnelly, B., Ronsky, J., Gill, R. Reconstruction Algorithms for RSA. *Canadian Orthopaedic Research Society*, Calgary, AB. June, 2004.
31. Donnelly, B., Ronsky, J.LI, Chapman, M., Gill, R. The Implementation of a Non-Linear Reconstruction Algorithm in RSA. *6<sup>th</sup> Annual Scientific Conf. of the GEOIDE Network*, Gatineau, PQ, May 2004.
32. \*Ramage, B., Wakeling, J., Desrochers, J., Zernicke, R., Ronsky, J. Static Stability and Response to Perturbation with and without AFOs in Healthy Adults. *Canadian Orthopaedic Research Society*, Calgary, AB. June, 2004.
33. Howard RA, Rosvold JM, Tapper JE, Marchuk LL, Ronsky JL, Frank CB, Shrive NG: Computations in the Reproduction of In-vivo Motion Using a Parallel Robot and Calculation of Resulting Connective Tissue Loads. *6th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering*, Madrid, Spain, February 25-28, 2004.
34. \*Wu, H., Ronsky, J., Harder, J., \*Fjeld, I., Poncet, P., Zernicke, R. Geometric Modeling

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- and Prototyping of Custom-Braces for Idiopathic Scoliosis Treatment. *4<sup>th</sup> Annual Provincial Alberta Biomedical Engineering Conference*, Banff, AB, October, 2003. (Podium Presenter: H. Wu).
35. \*Schneider, P.S., Wakeling, J.M., \*Loitz-Ramage, B. , Zernicke, R.F. , Ronsky, J.L. Time Frequency Analysis Of Myoelectric Signals From Children With Cerebral Palsy: A New Muscular Co-Contraction Assessment Technique. *Proc. Of Ixth Congress Of The International Society Of Biomechanics.*, Dunedin, New Zealand, 2003. (Podium Presenter: P. Schneider)
  36. \*Schneider, P.S., \*Loitz-Ramage, B.J., Yang, T., Zernicke, R.F., Breen, T., Ronsky, J. Controlling Centre Of Mass Momentum In Sit-To-Stand Following Epidural Analgesia Infusion. *Proc. Of Ixth Congress Of The International Society Of Biomechanics.* Dunedin, New Zealand, July 2003. (Podium Presenter: P. Schneider)
  37. Ronsky, J., \*Donnelly, B. Geomatics Technologies in Health. *5<sup>th</sup> Annual GEOIDE NCE Summer School*, Victoria BC May 2003. (Invited Lecture prepared by J. Ronsky, Podium Presenter: B. Donnelly)
  38. Ronsky, J., Chapman, M., Clausi, D., Gill, R., Shrive, N., Zernicke, R. Biometry for Informed Decisions in Medical Diagnoses, Procedures, and Treatment Evaluations. *5th Annual Scientific Conference GEOIDE*, Victoria BC May 2003. (Prepared by J. Ronsky, Podium Presenter: K. McLaughlin)
  39. \*Chou, T., \*McLaughlin, K., Frayne, R., Chapman, M., Ronsky, J. 'Medical Image Accuracy, Data Fusion and Co-Registration for Surgical Applications'. *5th Annual Scientific Conference GEOIDE*, Victoria BC May 2003.  
Awarded: Best Poster Award (sponsored by GEOIDE NCE) (Poster Presenter: T. Chou).
  40. \*Robu, D., \*Poncet, P., Zernicke, R., Ronsky, J. Optical Imaging and Stereo Radiography for Assessment of Scoliosis. *5th Annual Scientific Conference GEOIDE*, Victoria BC May 2003  
Awarded: Best Student Poster Award (sponsored by GEOIDE industry partner). (Poster Presenter: D. Robu)
  41. \*Schneider Ps, Wakeling Jm, \*Loitz-Ramage B, Zernicke Rf, Ronsky JI. Time Frequency Analysis Of Myoelectric Signals From Children With Cerebral Palsy: A Muscular Inter-Step Variability Assessment Technique. *Proceedings Of The Alberta Children's Hospital Research Days*, Calgary, Alberta, April, 2003. (Podium Presenter: P. Schneider)
  42. Tapper, J.E., Funakoshi, Y., Hariu, M. Sutherland, C., Thornton, G.M., Ronsky, J.L. Shrive, N.G., Frank, C.B. Inter-Insertion Distances Measured Over Time In Both Damaged And Intact Knee Ligaments After ACL/MCL Injury. *ISTL Conference*, New Orleans, 2003. (Podium Presenter: J. Tapper)
  43. \*Robu, D., \*Poncet, P., \*Fjeld, I., Zernicke, R., Ronsky, J. 3D Scoliotic Reconstruction of Human Torso using Optical Imaging and Stereo-Radiography. *4<sup>th</sup> Annual Provincial Alberta Biomedical Engineering Conference*, Banff, AB, October, 2003. (poster).

44. \*Scovil C.Y., Ronsky J.L. Analytical Evaluation Of The Sensitivity Of A Hill Based Muscle Model. *Proc. Of Lxxth Congress Of The International Society Of Biomechanics*. Dunedin, New Zealand, July 2003.
45. \*Thistlethwaite, P., Ronsky, J., Gill, H. Fast And Robust Marker Detection With Roentgen Stereophotogrammetric Analysis. *Proceedings Of The Asme Summer Bioengineering Meeting*, Key Brisbane, Florida, June, 2003.
46. \*Thistlethwaite, P., Ronsky, J., Gill, H. Generalized Feature Based Rsa Of Orthopaedic Implants. *Proceedings Of The Asme Summer Bioengineering Meeting*, Key Brisbane, Florida, June, 2003.
47. \*Maurer, J., Ronsky, J., \*Loitz-Ramage, B., \*Andersen, M., Zernicke, R., Harder, J. Prosthetic Socket Interfaced Pressures: Customized Calibration Technique For The Tekscan F-Socket System. *Proceedings Of The Asme Summer Bioengineering Meeting*, Key Brisbane, Florida, June, 2003.
48. \*Tapper, J.E., Funakoshi, Y., Hariu, M. Sutherland, C., \*Thornton, G.M., Ronsky, J.L. Shrive, N.G., Frank, C.B. Inter-Insertion Distances Measured Over Time In Both Damaged And Intact Knee Ligaments After ACL/MCL Injury. *ISTL Conference*, New Orleans, 2003.
49. \*Thistlethwaite, P., Ronsky, J., Gill, H. A new feature based method for position and pose determination of implants using RSA. *Proceedings of the Canadian Orthopaedic Research Society Conference*, Winnipeg, Man. Oct, 2003.
50. \*Maurer, J., Ronsky, J., \*Andersen, M., \*Loitz-Ramage, B, Harder, J., Zernicke, R. Socket interface pressures, socket discomfort, and gait characteristics of below-knee amputees. *Proceedings of the Canadian Orthopaedic Research Society Conference*, Winnipeg, Man. Oct, 2003.
51. \*Loitz-Ramage, B., \*Schneider, P., Ronsky, J., Zernicke, R., Breen, T. Kinetic and kinematic analyses during gait following epidural analgesia. *Proceedings of the Canadian Orthopaedic Research Society Conference*, Winnipeg, Man. Oct, 2003.
52. \*Tapper, J.E., Fukushima, S., Hariu, M., \*Thornton, G.M., Ronsky, J.L., Shrive, N.G., Frank, C.B. The Ovine Stifle Joint: An In Vivo Model of Osteoarthritis. *Proceedings of the Canadian Arthritis Network Annual Meeting*, Calgary, Alberta. Sept, 2002.
53. \*Thistlethwaite, P., Ronsky, J.L., Gill, H.S. A Fast Circle Finding Technique for Digital RSA. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
54. \*Scovil, C.Y. and Ronsky, J.L. Sensitivity of a Hill-Based Muscle Model to Perturbations in Model Paramters. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
55. \*Moss, R. and Ronsky, J.L. Accuracy of Patellofemoral Joint Contact Area Predictions Using MR Imaging. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.

56. \*Baker, N. and Ronsky, J.L. Effect of Hamstrings Inclusion on Calculation of Joint Contact Force and Stress. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
57. \*Tapper, J., Fukushima, S., Azuma, H., \*Thornton, G., Ronsky, J.L., Frank, C., Shrive, N. Joint Surface Kinematics During Walking in an Animal Model of Osteoarthritis. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
58. Ronsky, J., \*Baker, N., \*Moss, R., Frayne, R. Insights Into In-Vivo Knee Mechanics with Magnetic Resonance Imaging. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
59. Ronsky, J., \*Loitz-Ramage, B., \*Scovil, C., \*Gildenhuis, A., \*Maurer, J., \*Good, C., Zernicke, R., Locomotion Research within an Orthopaedics Framework: Successes and Challenges. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
60. \*Poncet, Philippe, Jaremko, J.J., Ronsky, J., Harder, J., Dansereau, J., Labelle, H., Zernicke, R.F. (2002) Estimation of Spinal Deformity in Scoliosis From Geometric Torsion. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
61. Jaremko, J.L., \*Poncet, P., Ronsky, J.L., Harder, J.A., Dansereau, J., Labelle, H., Zernicke, R.F. Grouping of Scoliosis Patients by Spinal Curve Severity from Torso Surface Data. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
62. \*Alvarez, M., Ronsky, J.L., Aggarwala, R., Harder, J., Zernicke, R.F. Socket Comfort and Perceived Functional Ability in Unilateral Transtibial Amputee Patients Using Plaster-Cast and CAD/CAM Manufactured Sockets. *CD ROM Proceedings of the 4<sup>th</sup> World Congress on Biomechanics*, Calgary, Alberta. August 4-9, 2002.
63. \*Poncet, P., Jaremko, J., Ronsky, J.L., Harder, J., Labelle, H., Dansereau, J., and Zernicke, R.F. Prediction of spinal deformity in scoliosis from geometric torsion. *Transactions of the International Research Society of Spinal Deformities*. Athens, Greece. June, 2002.
64. Jaremko, J.L., \*Poncet, P., Ronsky, J.L., Harder, J., Dansereau, J., Labelle, H., and Zernicke, R.F. Cobb angle estimation by 3-D spinal reconstruction and by neural-network analysis of torso surface asymmetry. *Transactions of the Canadian Orthopaedic Research Society*, Victoria, British Columbia. (June 2002)
65. Ronsky, J., \*Tapper, J., Fukushima, S., Azuma, H., Thornton, G., Shrive, N. Frank, C. Dynamic Stability and Degeneration of the Ovine Stifle Joint. *Transactions of the 48<sup>th</sup> Orthopaedic Research Society Meeting*, Dallas, Texas. February 2002
66. \*Poncet, P., Jaremko, J., Ronsky, J.L., Harder, J., Labelle, H., Dansereau, J., and Zernicke, R. F. Prediction of spinal deformity in scoliosis from geometric torsion. *Transactions of the International Research Society of Spinal Deformities*. Athens, Greece, 2002.

67. Jaremko, J. L., \*Poncet, P., Ronsky, J.L., Harder, J., Dansereau, J., Labelle, H., and Zernicke, R. F. Cobb angle estimation by 3-D spinal reconstruction and by neural-network analysis of torso surface asymmetry. *Transactions of the Canadian Orthopaedic Research Society*, Victoria, British Columbia, June 2002.
68. \*Good, C., Ronsky, J., Tapper, J. Inverse Dynamic Analysis of the Sheep Hindlimb with Insufficient Data. Proceedings of the *2nd Annual Alberta Provincial Biomedical Engineering Conference*, Banff, AB. Oct., 2001
69. \*Tapper, J., Ronsky, J., Fukushima, S., Azuma, H., Shrive, N., Franks, C. The Ovine Stifle Joint: An in vivo Model of Osteoarthritis. Proceedings of the *2nd Annual Alberta Provincial Biomedical Engineering Conference*, Banff, AB. Oct., 2001
70. \*Scovil C, Bell GD, \*Loitz-Ramage BJ, Ronsky J and Maitland M. Effects of Knee Brace and AFO on Knee Stability. *XVIIIth Congress of the International Society of Biomechanics*, Zürich, Switzerland, July 8 – 13, 2001
71. Ronsky, J.L. \*Tapper, J.E. , \*Powers, M.J., Majima, T., Shrive, N.G., Frank, C.B. The Dynamic Stability of the Intact and Ligament Deficient Ovine Stifle Joint During Walking, Incline Walking, and Running. . *XVIIIth Congress of the International Society of Biomechanics*, Zürich, Switzerland , July 8-13, 2001
72. \*N. Baker, J.L. Ronsky. (July 8 – 13, 2001). Use of Instantaneous Helical Axis to Determine Knee Joint Centre on Magnetic Resonance Images. . *XVIIIth Congress of the International Society of Biomechanics*, Zürich, Switzerland, July 8-13, 2001
73. Jaremko, J.L., \*Poncet, P., Ronsky, J.L., Harder, J., Dansereau, J., Labelle, H., and Zernicke, R.F. Neural-network Detection of Thoracic Curve Severity in Scoliosis. *Transactions of the Congress of the International Society of Biomechanics*, Zürich, Switzerland, July 8-13, 2001
74. Ronsky, J.L., \*Tapper, J.E., \*Powers, M.J., Majima, T., \*Sennhauser, D., Shrive, N.G., Frank, C.B. (June, 2001) The Kinematics Of The Stable And Unstable Ovine Stifle Joint During Walking, Incline Walking, And Running. *Proceedings of the ASME Summer Bioengineering Meeting*, Snowmass, Utah.
75. Ronsky, J.L., \*Moss, R.L., \*Glod, E., Lichti, D., Chapman, M. Multi-station Digital Photogrammetry to Evaluate the Accuracy of Magnetic Resonance Images of Joint Structures. Proceedings of *GEOIDE 2001 Annual Conference*. Fredricton, N.B. June 20 – 22, 2001.
76. \*Tapper, J.E., Ronsky, J.L., \*Powers, M.J., Majima, T., Shrive, N.G., Frank, C.B.. Stereophotogrammetric Measurement of the Kinematics of the Intact and Ligament Deficient Ovine Stifle Joint. Proceedings of *GEOIDE 2001 Annual Conference*. Fredricton, N.B. June 20 – 22, 2001.
77. J.L. Ronsky, N.G. Shrive, \*J. Tapper, R. Howard, \*D. Sennhauser. (June 20 – 22, 2001). Biometrology – Highlights of 2000 – 2001. Proceedings of *GEOIDE 2001 Annual Conference*. Fredricton, N.B. June 20 – 22, 2001.

78. \*Loitz-Ramage BJ, \*Scovil C, Powell J, Ronsky J.L., Allende B, Zernicke R. (2001) Changes in gait kinetics and kinematics following tibial nailing. *Canadian Orthopaedic Association Annual Meeting*, London, ONT.
79. Jaremko, J. L., \*Poncet, P., Ronsky, J.L., Harder, J., Dansereau, J., Labelle, H., and Zernicke, R. F. Detection of thoracic curve severity from torso surface scans. *Transactions of the Fourth Combined Meeting of the Orthopaedic Research Societies of the USA, Canada, Europe, and Japan*. Rhodes, Greece, June 2001.
80. Jaremko, J. L., \*Poncet, P., Ronsky, J.L., Harder, J., Dansereau, J., Labelle, H., and Zernicke, R. F. Prediction of spinal deformity in scoliosis from torso surface cross sections. *Transactions of the 47<sup>th</sup> Annual Meeting of the Orthopaedic Research Society*. San Francisco, California, February 2001.
81. \*Loitz-Ramage B, Ronsky J.L., \*Guilkenhuys A, \*Maurer J, Breen T, Yang T, Zernicke R. Epidural analgesia with bupivacaine and ropivacaine: centre of pressure analysis of stability *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000
82. Breen TW, Yang T, \*Loitz-Ramage B, Ronsky J.L., \*Gildenhuys A. Epidural analgesia with ropivacaine and bupivacaine: a pilot study comparing bolus dose and infusion techniques using movement analyses *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000
83. Ronsky, J.L., \*Powers, M., \*Tapper, J., Majima, T., Sutherland, C., Shrive, N., Frank, C. In vivo distance between ACL insertions of the ovine stifle joint during walking. *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, p. 67.
84. Ronsky, J.L., \*Hamel, J., \*Canteenwalla, Z., Lichti, D., Moss, R. Effects of the Freeze-Thaw Cycle on the Thickness and Surface Contours of Articular Cartilage. *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, p. 175.
85. \*Tapper, J., \*Powers, M., Ronsky, J.L., Majima, T., Sutherland, C., Shrive, N., Frank, C. The Finite Helical Axis Distribution of the Ovine Stifle Joint During the Swing Phase of Normal Gait. *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, p. 119.
86. Jaremko, J., \*Poncet, P., Ronsky, J.L., Zernicke, R. Estimation of Vertebral Levels from Torso Surface Data. *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, p. 198.
87. \*Poncet, P., Ronsky, J.L., Dansereau, J., Zernicke, R. Assessment of Subject Motion in a Trunk Positioning Apparatus for Scoliosis Measurement. *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, P. 24.
88. \*Baker, N., Ronsky, J.L., Prediction of Muscular Forces using Partitioning of EMG. *Proceedings of the Combined Conference Societe de Biomecanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, p.55.

89. \*Kralovic, B., \*Boyd, S., Ronsky, J.L. The Effects of Patellofemoral Tracking Kinematics on Cartilage Stresses. *Proceedings of the Combined Conference Societe de Biomechanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, p. 183.
90. \*Tardiff, N., \*Poncet, P., Ronsky, J.L., Dansereau, J., Zernicke, R. Evaluation of a Laser (Optical) Imaging Technique for Torso Asymmetry Measurement in Scoliosis. *Proceedings of the Combined Conference Societe de Biomechanique and Canadian Society of Biomechanics*, Montreal, PQ, 2000, p. 200.
91. \*Powers, M., Ronsky, J.L., \*Kralovic, B., Bray, R. Characterization of Patellofemoral Joint Congruence throughout Knee Flexion. *Canadian Orthopaedic Research Society 34<sup>th</sup> Annual Meeting*, Edmonton, AB., 2000, p. 57.
92. Ronsky J.L., \*Loitz-Ramage B, Powell J, Taylor C, Allende B, Zernicke R. Hip - knee angle - angle diagrams during gait as outcome measures of the surgical correction of rotational malunion of the tibia. *Canadian Orthopaedic Research Society Annual Meeting*, Edmonton, AB., June, 2000.p.57
93. Ronsky, J.L., \*Hamel, J., Lichti, D., \*Boyd, S., Powers, M., Chapman, M. Joint Surface Characterization using Multi-Station Digital Photogrammetry. *2<sup>nd</sup> Annual GEOIDE Network Conference*, Calgary, AB, 2000. (CD-ROM).
94. \*Tapper, J., Ronsky, J.L., \*Powers, M., Majima, T., Frank, C., Shrive, N. The in-vivo kinematics of the ovine stifle joint during normal walking: a pilot study. *2<sup>nd</sup> Annual GEOIDE Network Conference*, Calgary, AB, 2000. (CD-ROM).
95. \*Scovil, C., Ronsky, J.L., Wright, I., Zernicke, R. Comparison of the effects of tibial malrotation on experimental and predicted gait characteristics. *Gait and Clinical Movement Analysis Annual Meeting*, Madison, Wisconsin, 2000.
96. \*Scovil, C., Wright, I., Ronsky, J.L., Zernicke, R., Powell, J. Quantification of the effects of the angle of tibial malrotation on ground reaction forces and joint moments using a forward dynamics model. *Int'l. Society of Biomechanics XVII<sup>th</sup> Congress*, Calgary, AB, 1999, p. 575.
97. \*Kralovic, B., \*Boyd, S., Ronsky, J.L. Dynamic in-situ measurements of patellofemoral joint congruence. *Int'l. Society of Biomechanics XVII<sup>th</sup> Congress*, Calgary, AB, Aug. 1999, p. 615.
98. \*Powers, M.J., Ronsky, J.L., and Paulsen, D.K. Effects of axial loading on patella tracking kinematics – A cadaver model. *Int'l. Society of Biomechanics XVII<sup>th</sup> Congress*, Calgary, AB, Aug. 1999, p. 616.
99. Jaremko, J., \*Delorme, S., Dansereau, J., Labelle, H., Ronsky, J.L., \*Poncet, P., Harder, J., Dewar, R., Zernicke, R. Using neural networks to correlate spine and rib deformity in scoliosis. *Int'l. Society of Biomechanics XVII<sup>th</sup> Congress*, Calgary, AB, Aug. 1999, p. 455.
100. \*Tardiff, N., Dansereau, J., \*Delorme, S., Zernicke, R., Ronsky, J.L., Poncet, P., Labelle, H. Evaluation of two 3D imaging techniques for the study of scoliotic deformities: Laser scanning of the external surface of the trunk and stereoradiographic

- reconstruction of the spine and rib cage. *Int'l. Society of Biomechanics XVII<sup>th</sup> Congress*, Calgary, AB, Aug. 1999, p. 653.
101. \*Rosenfeld, L., Ronsky, J.L., Wiley, P., Caswell, D. Are the Kinetic and Kinematic Changes to Gait Caused by Foot Orthotic Use in a Pronated Population Permanent, or Mitigated During a One-Month Period of Adaptation. *Fourth Symposium on Footwear Biomechanics*, Canmore, Aug. 1999, p. 82-83.
  102. \*Rosenfeld, L.B., Ronsky, J.L., Wiley, P., Caswell, D. Functionality of a New System of Calcaneal Marker Attachment Used to Collect Three-dimensional Kinematic Data Both Shod and Barefoot. *International Society of Biomechanics SVI<sup>th</sup> Congress*, Calgary, AB, 1999, p. 710.
  103. \*Poncet, P., \*Delorme, S., \*Dudley, R., Ronsky, J.L., Dansereau, J., Harder, J., Dewar, R., Labelle, H., Zernicke, R. Reconstructions 3D de la geometrie externe et interne du tronc a l'aide des techniques d'imagerie laser et stereoradiographique. *XXIII<sup>eme</sup> Congre de la Societe de Biomechanique (SB)*, Sept. 17-18, 1998, Lyon, France.
  104. Ronsky, J.L., \*Kralovic, B., \*Boyd, S., D. Vellet. In-vivo analysis of joint contact. Biomedical Engineering Society Annual Fall Meeting. Cleveland, Ohio, USA. Oct. 13-13, 1998.
  105. Ronsky, J.L. Graphics in Biomechanics – More than Just Pretty Pictures? *NACOB '98. The Third North American Congress on Biomechanics*, Waterloo, Canada, Aug. 14-18, 1998.
  106. \*Young, D., Sutherland, C., Ronsky, J.L., Mechanical Properties of the Patellar Tendon Measured in –situ. *NACOB '98. The Third North American Congress on Biomechanics*, Waterloo, Canada, Aug. 14-18, 1998, 519-20.
  107. Davies, T., Joughin, E., Hardin, E., Ronsky, J.L., \*Powers, M., Lahey, L., Massey, A., Fick, G., Boag, G., Zernicke, R. Femoral Antetorsion and Gait in Adolescent Females. *NACOM '98. The Third North American Congress on Biomechanics*, Waterloo, Canada, Aug. 14-18, 1998, 193-4.
  108. \*Kralovic, B., \*Boyd, S., Ronsky, J.L., Curvature Characteristics of the Patellofemoral Joint Surfaces. *NACOB '98. The Third North American Congress on Biomechanics*, Waterloo, Canada, Aug. 14-18, 1998, 61-2.
  109. \*Powers, M., Ronsky, J.L., Barnes, K., Bray, R. In-vivo Quantification of Dynamic Three-dimensional Patellar Tracking. *NACOB '98. The Third North American Congress on Biomechanics*, Waterloo, Canada, Aug. 14-18, 1998, 193-4.
  110. Ronsky, J.L., van den Bogert, A., Nigg, B., \*Boyd, S., \*Kralovic, B. In-vivo joint contact determinations using models from MRI data. *3<sup>rd</sup> World Congress on Biomechanics*, Sapporo, Japan, 1998, 115a.
  111. \*Young, D., Ronsky, J.L., Sutherland, C. In-situ stress and strain in cat patellar tendon. *3<sup>rd</sup> World Congress on Biomechanics*, Sapporo, Japan, 1998, 322b.
  112. \*Poncet, P., \*Delorme, S., \*Dudley, R., Ronsky, J.L., Dansereau, J., Harder, J., Dewar, R., Labelle, H., Zernicke, R. 3D Reconstructions of the External and Internal

- Geometries of the Trunk Using Laser and Stereo-radiographic Imaging Technique. *International Research Society of Spinal Deformities*, July, Burlington, VA, 1998.
113. \*Boyd, S., Ronsky, J.L., Normal and ACL-deficient in-situ measurement of Patellofemoral Joint Contact. *24<sup>th</sup> Canadian Medical and Biological Engineering Society Meeting*, Edmonton, Canada, June 28-30, 1998, 8-9.
  114. \*Powers, M.J., Murray, P., Taylor, C., Powell, J., Zernicke, R., Ronsky, J.L. The effects of Tibial Malrotation on Gait. *32<sup>nd</sup> Annual Canadian Orthopaedic Research Society Meeting*, Ottawa, Canada, June, 1998
  115. \*Young, D., Ronsky, J.L., Inter-limb Variability in Patellar Tendon Material Properties from in-vitro Testing. *32<sup>nd</sup> Annual Canadian Orthopaedic Research Society Meeting*, Ottawa, Ontario, June, 1998
  116. \*Powers, M.J., Murray, P., Taylor, C., Powell, J., Zernicke, R., Ronsky, J.L. Relations Between Gait Abnormalities and Tibial Malrotation. *North American Clinical Gait Conference*, San Diego, CA, 1998.
  117. Ronsky, J.L., Barnes, K.B., Bray, R.L., \*Powers, M.J. Alterations in Patellofemoral Joint Mechanics Associated with Anteromedialization of the Tibial Tubercle. *J. Bone and Joint Surgery*, 1998.
  118. Barnes, K.B., Ronsky, J.L., Bray, R.L., Wiley, P. A Patellar Instability Model for Investigating the Surgical Procedure of Anteromedialization of the Tibial Tubercle. *J. Bone and Joint Surgery*, 1998.
  119. Ronsky, J.L., \*Boyd, S.K., Lichti, D., Chapman, M., Salkauskas. Precise measurement of articular cartilage surfaces: comparison of multi-station digital photogrammetry with 3D digitization. *ASME Summer Bioengineering Meeting*. Sun River, Oregon, June 1997, pp.39-40.
  120. \*Boyd, S.K., Ronsky, J.L., Lichti, D., Salkauskas, K. Chapman, M.A., Quantification of articular cartilage thickness of the cat patellofemoral joint with multi-station digital photogrammetry and thin plate spline interpolation. *ASME Summer Bioengineering Meeting*. Sun River, Oregon, June 1997, pp.43-4.
  121. Ronsky, J.L., Barnes, K.B., Bray, R.L., \*Powers, M.J. Alterations in patellofemoral joint mechanics associated with anteromedialization of the tibial tubercle. *31<sup>st</sup> Annual Canadian Orthopaedic Research Meeting*, Hamilton, ON. June, 1997.
  122. Barnes, K.B., Ronsky, J.L., Bray, R.L., Wiley, P. A patellar instability model for investigating the surgical procedure of anteromedialization of the tibial tubercle. *31<sup>st</sup> Annual Canadian Orthopaedic Research Meeting*, Hamilton, ON. June, 1997.
  123. \*Delorme, S., \*Dudley, R., Ronsky, J.L., Dansereau, J., Harder, J., Dewar, R., Zernicke, R. Reconstructions of laser scanned 3D torso topography and stereo-radiographic spine and rib-cage geometry in scoliosis. *Canadian Medical and Biological Engineering Society Meeting*, Toronto, ON., June, 1997.

**Invited Presentations (28)**

1. Ronsky, J.L. "Joint Biomechanics" *Kinesiology Research Centre, Opening Scientific Symposium, Centre for Health & Wellness Research*, University of Calgary, June 2005.
2. Ronsky, J.L. "Lessons Learned from our Aching joints" *Emeritus Professors Society*, University of Calgary, February 2004.
3. Ronsky, J.L. "Designing the Human Body" *Provost Lecture Series*, University of Calgary, Mar. 2003.
4. Ronsky, J.L. "Bioengineering: New Frontiers" Invited Lecture *AHFMR HYRES series*, Calgary, AB, July, 2002.
5. Ronsky, J.L. "Joint Mechanics Research Perspectives" Invited Lecture, *Markin-Flanagan Research Seminar Series*, USRP, University of Calgary, July, 2002.
6. Ronsky, J.L. "Women and Technology" Invited Lecture, *Novacor Chemicals Ltd. Luncheon Speaker Series*, May, 2001.
7. Ronsky, J.L. "Knees and Engineers – What's Up Doc?" Invited Lecture, *AHFMR HYRES series*, Calgary, AB, July, 2000.
8. Ronsky, J.L. "Biomedical Engineering Exploits" Invited Speaker, *Women in Engineering and Science*, AGM, 2000
9. Ronsky, J.L. "Knees – The Inside Track" *Sigma Xi*, University of Calgary, October 1999.
10. Ronsky, J.L., et. al. New Insights into Osteoarthritis Using Novel Imaging Modalities, Joint Dynamics, Biology and Robotics. *13<sup>th</sup> Biennial Meeting of the Canadian Society of Biomechanics*. Halifax, NS, Aug. 2004.
11. Ronsky, J.L. "Lessons Learned from our Aching Joints" *Emeritus Professors Society*, University of Calgary, February 2004.
12. Ronsky, J.L. and Hunter, C. "Bone and Joint Injury and Regeneration." Alberta Bone and Joint Institute Meeting. Calgary, AB, December 2004.
13. Ronsky, J.L., Zernicke, R.F. "Elements of a Successful Research Grant." *13<sup>th</sup> Biennial Meeting of the Canadian Society of Biomechanics*. Halifax, NS, Aug. 2004.
14. Ronsky, J.L., Butterwick, D., Ramage, B. "Thoracic Compression Protection." *Rodeo Research and Clinical Care, 1<sup>st</sup> International Conference*. Calgary, AB, July, 2004.
15. Ronsky, J.L. "Designing the Human Body" Provost Lecture Series, University of Calgary, Mar. 2003.
16. Ronsky, J.L. "Locomotion Research Within an Orthopaedics Framework: Successes and Challenges", Invited Lecture. World Congress of Biomechanics, Calgary, Alberta., August 8, 2002.
17. Ronsky, J.L. "Insights into In-Vivo Knee Mechanics with Magnetic Resonance Imaging", Invited Lecture. World Congress of Biomechanics, Calgary, Alberta., August 8, 2002.

18. Ronsky, J.L. "Bioengineering: New Frontiers" Invited Lecture AHFMR HYRES series, Calgary, AB. July, 2002.
19. Ronsky, J.L. "Joint Mechanics Research Perspectives" Invited Lecture, Markin-Flanagan Research Seminar Series, USRP, University of Calgary, July, 2002.
20. Ronsky, J.L. "Health Geomatics", Invited Lecture, GEOIDE Phase III Planning Meeting, Vancouver, BC, Mar, 2002.
21. Ronsky, J.L. "Women and Technology" Invited Lecture, Novacor Chemicals Ltd. Luncheon Speaker Series, May, 2001.
22. Ronsky, J.L. "Knee Joint Contact Mechanics". Faculty of Human Movement Science, Free University of Amsterdam, Amsterdam, NL., August, 2001.
23. Ronsky, J.L. "Knees and Engineers – What's Up Doc?" Invited Lecture, AHFMR HYRES series, Calgary, AB. July, 2000.
24. Ronsky, J.L. "Biomedical Engineering Exploits" Invited Speaker, Women in Engineering and Science, AGM, 2000
25. Ronsky, J.L. "Knees – The Inside Track" Sigma Xi, University of Calgary, October 1999.
26. Ronsky, J.L., Kralovic, B.J., Boyd, S.K., Vellet, D. Invited Lecture: In-vivo Analysis of Joint Contact. *Biomedical Engineering Society Annual Fall Meeting*, Cleveland, Ohio, USA, Oct. 10-13, 1998.
27. Ronsky, J.L. Invited Lecture: Graphics in Biomechanics – More than Just Pretty Pictures? *NACOB '98. The Third North American Congress on Biomechanics*, Waterloo, Canada, August 14-18, 1998.
28. Ronsky, J.L., van den Bogert, A., Nigg, B., Boyd, S., Kralovic, B. Invited Lecture: In-vivo Joint contact Determinations using Models from MRI Data. *3<sup>rd</sup> World Congress on Biomechanics*, Sapporo, Japan, 1998
29. Young, D., Ronsky, J.L., Sutherland, C. In-situ Stress and Strain in Cat Patellar Tendon. *3<sup>rd</sup> World Congress on Biomechanics*, Sapporo, Japan, 1998.

#### **D. Technology Transfer**

##### **Consulting Service**

- |                |   |
|----------------|---|
| 1995 - present | Injury Biomechanics Consultant, Collision Analysis Ltd., Calgary, AB. Responsibilities include report preparation, expert witness presentations |
| 1996 – 1997    | Calgary Police Service, Accident Reconstruction Unit, biomechanics consultations  |

##### **Patents**

Patent Filed: General Isosurface Equation for Surface Integration in Reverse Engineering. UTI REF # 283.2; General Implicit Equation and Topology Based Method for Range Surface Integration, P. Gu, Y. Zeng, Y. He, R. Zernicke, J. Ronsky. July 2001.

**Research Agreements**

Non-disclosure/Confidentiality Agreement: UTI (Ronsky, Zernicke, Harder, Poncet) and VX Technologies Inc., Calgary, AB for a *Multi-Camera 3D Measurement System*.

**V. SERVICE ACTIVITIES****A. University Service**

2005	NSERC – University Representative, 2 year term effective May 1, 2005.
2004 – present	AIF Scholar in Biomaterials – Position Search Committee
2004	NSERC/Westaim/ASRA Industrial Chair in Biofilms Engineering – Position Search Committee
2004	Alberta/Saxony Research Meetings
2004 – present	Appointment, Promotion & Tenure, Academic Appointment Selection Committee for Dean, Faculty of Kinesiology, elected GFC representative.
2004 – present	Appointment, Promotion & Tenure, Academic Appointment Selection Committee, Biomedical Engineering, Specialization Program Access Positions. (4)
2004 – present	General Faculties Council, Faculty of Engineering (elected) representative.
2004	Academic Appointment, Promotion & Tenure, Faculty of Medicine
2004	The McCaig Centre for Joint Injury and Arthritis Research, “Advanced in Motion”, Annual Newsletter. Article “Osteoarthritis Research Offers Hope”. November issue.
2004	Guest Speaker, UofC WISE (Women in Science and Engineering) Program
2004	Guest Speaker, AHFMR HYRS Program
2004	Guest Speaker, UC Faculty of Engineering Tri-Council Meeting
2004	UofC Chancellor’s Club, CCIT Bioengineering Lab Tours
2004	Guest Speaker, UC Engineering Associates Program
2004	Operation Minerva, planning and mentoring
2004	Contributor, University of Calgary Open House
2003	Faculty of Science, Population Biologist Selection Committee
2003	Experimental Imaging Centre – Position Selection Committee, Clinical

	Neurosciences, Faculty of Medicine, Dean's Representative.
2003	AHFMR / AIF Combined Board of Directors Meeting, Invited Speaker (with Dr. C. Frank (UofC) and Dr. P. Allen (UofA)).
2003	Provosts' Research Series, Invited Speaker, March 2003, University of Calgary.
2003	Faculty of Medicine, Career Days
2003	Heritage Youth Research Series, AHFMR, Invited Speaker
2003 – present	Orthopaedic Paediatric Research Group, Alberta Children's Hospital and Faculty of Medicine, Co-Chair (with Dr. Ramage).
2003 – present	WISE, Fall Meeting, Invited Speaker, WISE Annual General Meeting, University of Calgary, Invited Key Note Speaker.
2002 – present	Joint Injuries and Arthritis Research Group, Faculty of Medicine
2002 – present	Co-Director, Centre for Bioengineering Research and Education, University of Calgary
2002 - present	Markin-Flanagan Undergraduate Student Research Program – Coordinating Committee Member, Engineering Representative, Student Mentor
2002 – 2003	General Promotions Committee Member, University of Calgary
2002 – present	CIHR Alberta Provincial Training Program in Bone and Joint Health – Admissions Committee member
2002 – present	Tri-Faculty Committee on Biomedical Engineering Strategic Planning Initiative, Faculty of Engineering, Kinesiology and Medicine, Engineering Representative (nominated (by Dean) member)
2002 – 2004	Faculty of Medicine- Chair, Experimental Imaging Centre - Selection Committee member (VP Research Designate)
2002 – 2003	Wood Professorship in Joint Injury Research – Review Committee member (VP Academic designate)
2002 – present	Faculty of Science – Population Biologist Selection Committee – Committee member
2002	Experimental Imaging Centre – Position Selection Committee, Clinical Neurosciences – Faculty of Medicine, Member (Dean's Representative)
2002	EULE - Round Table Discussion on Quality of Education, member
2002 - 2003	Provosts' Research Series, University of Calgary (invited speaker)
2000 – present	Chair, Paediatric Orthopaedic Research Group
2000 – 2001	Animal Resource Centre, Planning Committee member
2000 – 2001	Member – Academic Selection Committees Faculty of Medicine

1999 – 2002	Faculty of Graduate Studies Council, Member
1997 - 1998	Faculty of Kinesiology, Dean Selection Committee, member
1996 – 1998, 1999, 2000	Member – General Faculties Council Ethics Committee, University of Calgary
1995 – 1996	Member – Academic Selection Committees: Faculty of Kinesiology

### Faculty Service

2004	Academic Selection Committee, Oil and Gas Position (Chemical & Petroleum Engineering).
2003 – present	Engineering Faculty Council
2004 – present	Kinesiology Research Centre – Business Meetings
2003 – present	Kinesiology Faculty Council
2004 – present	CCIT Management Committee, Bioengineering Theme Leader
2004 – present	Faculty Promotions Committee, Faculty of Engineering
2004	Faculty Promotions Committee, Faculty of Kinesiology
2004 – present	Co-Director, Centre for Bioengineering Research and Education
2004 – present	CCIT Management Review Committee
2004	Faculty of Engineering, Strategic Retreat
2003	CCIT Bioengineering Lab Tour, Presentation to Senior Executives of the Alberta Research Council and Research Leaders of CCIT, Oct. 2003
2003	Faculty Strategic Planning Committee, Faculty of Engineering, Representative for Mechanical & Manufacturing Engineering
2003	CCIT/Alberta Research Council Meeting – Bioengineering Speaker, Faculty of Engineering
2003	CCIT Presentation to the University of Calgary Senate, presentation.
2003	Alberta Ingenuity Fund Scholar in Biomaterials, Member, Proposal Committee, Hiring Committee
2003	Biomedical Engineering Undergraduate Advisory Committee, Fac. of Engineering
2003 – present	Co-Director, Center for Bioengineering Research and Education
2003	Member, BMES Implementation and Hiring Committees, CBRE
2003	Canadian Foundation for Innovation, Musculoskeletal Health and Arthritis Research Consortium, Faculties of Engineering, Medicine, Kinesiology and Science, Bioengineering group representative.

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2003	CCIT Management Committee, Member
2003	Oil and Gas Position Selection Committee, Chemical and Petroleum Engineering
2003	Biomedical Engineering Curriculum Committee
2003	Engineering Associates Program, Member
2003	Human Performance Laboratory, General Faculty Meetings, Member
2002 – present	Faculty Strategic Planning Committee, member
2002	CCIT Opening Ceremonies, Researcher Representative Speaker
2002	CCIT/Alberta Research Council Meeting – Bioengineering Speaker
2002	Undergraduate Research Action Plan Committee, Faculty of Engineering
2002	Faculty of Engineering – Benchmarking Review Team (Bioengineering and meeting with external reviewers)
2002	Faculty of Kinesiology – Benchmarking Review Team (Human Performance Laboratory) and meeting with external reviewers
2001 - present	Biomedical Engineering Undergraduate Advisory Committee
2001 – present	Calgary Centre for Innovative Technology Management Committee, member
2001	Biomedical Engineering Coordinating Committee, Faculty of Engineering, Member
2001	Faculty (Engineering) Strategic Planning Committee, Member representative for Mechanical & Manufacturing Engineering
2001	Biomedical Engineering Curriculum Committee, Chair, Faculty of Engineering
2001	Engineering Associates Program, Faculty of Engineering
2001	CCIT Opening Ceremonies, Researcher Representative Speaker, Faculty of Engineering
2001	CCIT/Alberta Research Council Meeting – Bioengineering Speaker, Faculty of Engineering
2001	Undergraduate Research Action Plan Committee, Faculty of Engineering
2001	Benchmarking Review Team (Bioengineering & Meeting with External Reviewers), Faculty of Engineering
2001	Benchmarking Review Team (Bioengineering & Meeting with External Reviewers), Faculty of Kinesiology
2001	Faculty of Engineering – AIF Proposal for Centre in Bioengineering,

	Coordinator (with N. Shrive).
2001	CCIT/ CFI Proposal Review Site visit, representative
2001	Westaim/ASRA Chair in Bioengineering/Biomaterials – Selection Committee (Member)
2001	Knee Rounds of the Sports Medicine Centre, Faculty of Kinesiology, Participant
2001	Canadian Foundation for Innovation – Musculoskeletal Health and Arthritis Research Consortium, Faculties of Engineering, Medicine, Kinesiology and Science, Bioengineering Group representative.
2001	Human Performance Laboratory, General Faculty Meetings, Member
2000 – 2001	Annual Merit, Increment and Promotion Revisions Committee, Chair (document preparation)
2000 – present	Westaim/ASRA Chair in Bioengineering/Biomaterials – Selection Committee, member
1999	CCIT/ CFI Proposal Review Site visit, representative
1999	Great Teachers Project, University of Calgary, Learning Enhancement and Professional Development
1998 – 2002	CCIT Planning Committee CFI Proposal Preparation Team – (Bioengineering)
1999 – 2000	Member – Faculty of Engineering Internship Program Advisory Board
1999 – 2000	Engineering Faculty Council Representative for the Faculty of Kinesiology
1999 – 2000	Engineering Internship Program Steering Committee, member
1999 – 2000	Engineering Internship Program Advisory Council, member
1998 - 2000	Women in Engineering Committee of Faculty of Engineering, Chair
1998	ASRA Centre for Bioengineering, Proposal Preparation, Principal Applicant
1998 – present	Participant – Knee Rounds of the Sports Medicine Centre, University of Calgary
1988 – present	Participant – Joint Injuries and Arthritis Research Group Seminar Series, University of Calgary
1997 – 2002	Member – Faculty of Engineering Research and Graduate Program Committee
1997 - present	Graduate Biomedical Engineering Executive Committee, member
1997 - present	Graduate Biomedical Engineering Curriculum Committee, chair
1999 – present	Undergraduate Biomedical Engineering Program Proposal Committee,

	member/lead
1997 – 1999	Member – Academic Selection Committees: Department of Chemical Engineering
July 1996	Primary Organizer – Women in Engineering Committee - Strategic Planning Retreat
1996	Participant – Faculty of Engineering Strategic Planning Retreat, May
1996 – 1999	Member – Academic Selection Committees: Department of Electrical Engineering
1996 – 1997	Member – Academic Selection Committees: Department of Civil Engineering
1996- 1998	Young Professor’s Group, member
1996	Chair – Human Performance Laboratory Weekly Seminar Series
1995 – present	Joint Injuries and Arthritis Research Group, member
1995 - present	Human Performance Laboratory Faculty Committee, member
1995 – 1998	Engineering Faculty Council Representative for the Faculty of Medicine
1995 – present	Member – Engineering Associates Program, University of Calgary
1994 – 2000	Women in Engineering Committee of Faculty of Engineering, Member
1994 – 1997	High school recruitment committee, high school visits.
1995 – present	Kinesiology Faculty Council, member
1994 – present	Engineering Faculty Council, member

### Departmental Service

2005	Co-Chair, Chair, Research Coordination Committee, Mech. & Mfg. Eng’g.
2005	Chair, Adjunct Professor Appointment Committee
2005	Student Liaison Committee
2005	Undergraduate Studies Committee
2004	Co-Chair, Applied Mechanics and Biomechanics Committee
2004	Co-Chair Adjunct Professor Committee
2004 – present	Internal NSERC Grant Reviews (for 2 applicants)
2004 – present	Assessment of Annual Merit and Increment Committee, Member
2004 – present	Assessment of Tenure application committee, Member

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2004 – 2005	Academic Selection Committee, CRC Tier II Pipeline Engineering, Member
2003	Member, IRAP / Industry Focus Group for Mechanical & Manufacturing Engineering
2003 – present	Selection committee, Research Excellence Award, Member
2003	Department Strategic Planning Retreat
2003	Speaker, Department Industry Day
2003	Biomaterials Chair Selection Committee
2003	Department Headship Review Committee
2003 – 2004	Chair, Research Coordination Committee, Mech. & Mfg. Eng'g.
2003	Internal NSERC Grant Reviews (for 3 applicants)
2003	Health and Wellness / Engineering Research Coordinator, Mech. & Mfg. Eng'g.
2001 - 2003	Applied Mechanics and Biomechanics Position Selection Committee
2003 – Present	Departmental Planning Committee
2003	Graduate Studies and Research Program Committee
2002	Chair and speaker, Round Table Discussion in Effective Undergraduate Teaching (Mechanical and Manufacturing Engineering)
2002 – present	Health and Wellness/Engineering Research Coordinator
2001 - present	Automation, Control, Robotics and MEMS, Mechanical & Manufacturing Engineering
2001	Chair, Research Coordination Committee, Mechanical & Manufacturing Engineering
2001	Internal NSERC grant reviewer (new applications), Mechanical & Manufacturing Engineering
2001	Health and Wellness/Engineering Research Coordinator, Mechanical & Manufacturing Engineering
2001	Chair and speaker, Round Table Discussion in Effective Undergraduate Teaching, Mechanical & Manufacturing Engineering
2001	Graduate Studies and Research Program, Mechanical & Manufacturing Engineering
2001	Departmental Planning Committee, Mechanical & Manufacturing Engineering
2001-2002	Internal NSERC grant reviewer (new applicants)
1998 – present	Engineering Internship Mentorship (typically 4-6 students per term)

1997 - present	Member, Graduate Studies Committee, Mechanical & Manufacturing Engineering, University of Calgary
2002 - present	Chair, Research Coordination Committee, Mechanical & Manufacturing Engineering, University of Calgary
1999 – 2002	Departmental Planning Committee, member
1999 – 2002	Graduate Studies and Research Program, Director
2001	Merit, Increment and Promotions Committee (Ad-hoc), Chair
2001	Departmental Merit Increment Review Committee, member
1999	Research Excellence Award Selection Committee, member
1997	Department Strategic Planning Workshop, member
1996 – 1999	Graduate Scholarship Review Committee
1996 – present	Member – Academic Selection Committees: Department of Mechanical Engineering
1996	Ad-hoc Final Exam Review (ENME 381)
1994 - present	Applied Mechanics Group, Mechanical and Manufacturing Engineering, member.

## **B. Professional Service**

### **National/ International Committees/societies**

2003 – 2004	Canadian Society of Biomechanics, Executive Committee, Co-Chair, Arthritis and Biomechanics Symposium (Aug. 2004)
2003	GEOIDE NCE Board of Directors, Board Member
2002	Canadian Arthritis network NCE Annual Meeting
2002	Osteoarthritis Consensus Meeting, CIHR Institute of Musculoskeletal Health and Arthritis, April 2003, Invited participant
2002	2 <sup>nd</sup> Annual Alberta Provincial Biomedical Engineering Conference, Banff, Oct. 2002, Session Chair, Participant
2002	GEOIDE NCE Annual Conference and Meeting, Session Chair and Participant
2002	GEOIDE NCE Board of Directors, Board Member
2000 - present	Canadian Society of Biomechanics Executive Committee – Member
1999 – 2000	Canadian Society of Biomechanics Executive Committee – Member-at-large.

**Grant Review Panels**

2003 – 2004	Canada Foundation for Innovation – MAC 7, member
2003 – present	NSERC Research Tools and Instruments Grants
2004 – present	NSERC Discovery Grants
2004 – present	NSERC CHRP Grants
2004 – present	NSERC IRAP Program Grants
2003 – 2004	CFI Multidisciplinary Advisory Committee (MAC 7)
2002 – 2003	NSERC Grant Selection Committee (GS13), Chair
2000 – 2003	NSERC Grants Selection Committee (13), Member
1997 - present	Canadian Institutes of Health Research (Medical Research Council of Canada) Research Grant, reviewer
1998 - present	NSERC IRAP Program Grant, Reviewer
1996 - present	NSERC Operating Grants, Reviewer
1995 - present	Whitaker Foundation Grant Applications, Reviewer
2000 - present	Canada Research Chairs, Reviewer
2000 - present	Canada Foundation for Innovation, Reviewer

**Board Memberships**

2000 - present	GEOIDE NCE Board of Directors, Research representative (elected member)
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**Journal Reviews**

2004 – present	Journal of Orthopaedic Research, Reviewer
1994 - present	Journal of Biomechanics, Reviewer
1996 - present	Journal of Biomechanical Engineering, Reviewer
1995 - present	Clinical Biomechanics, Reviewer
1997 - present	Computer Methods in Biomechanics and Biomedical Engineering, Reviewer
1995 - present	Medical Engineering and Physics, Reviewer

**Memberships**

1984 – present	APEGGA
1990 – present	Canadian Society of Mechanical Engineers
1985 – present	American Society of Mechanical Engineers
1991 – present	International Society of Biomechanics
2004 – present	Association for Advancement of Automotive Medicine
1994 – present	Association for Women in Science Network
1994 – present	Canadian Orthopaedic Research Society

**Conferences**

2004	2 <sup>nd</sup> Annual CIHR Provincial Training Grant in Bone and Joint Health Scientific Conference, Banff, Alberta, Oct., 2004
2004	5 <sup>th</sup> Annual Provincial Alberta Biomedical Engineering Conference, Banff, Alberta, Oct., 2004
2004	Canadian Orthopaedic Research Society, Calgary, AB, June, 2004
2004	International Research Society for Spinal Deformities., Vancouver, BC., June, 2004
2004	6 <sup>th</sup> Annual Scientific Conference of the GEOIDE Network, June 2004. Session Chair – Geomatics in Health Systems
2004	5 <sup>th</sup> Combined Meeting of the ORS, Oct. 2004. Session Chair – Spine Biomechanics, Invited Lecturer
2004	13 <sup>th</sup> Biennial Meeting of the Canadian Society of Biomechanics, August 2004. Session Chair – Cardiovascular Mechanics
2003	CIHR Scoliosis Network Meeting, Sept. 2003, Invited Participant
2003	CIHR MIME ICE, Grant Initiation Meetings
2003	CIHR Rehabilitation Engineering Workshop, Invited Participant
2003	Osteoarthritis Consensus Meeting, CIHR Institute of Musculoskeletal Health and Arthritis, Invited Participant, Calgary, AB.
2003	4 <sup>th</sup> Annual Alberta Provincial Biomedical Engineering Conference, Session Chair, Executive Meeting
2003	GEOIDE NCE Annual Conference and Meeting, May 2003, Invited Speaker
2003	Canadian Society of Biomechanics – World Congress on Biomechanics CSB Liaison. CSB and WCB organizing committee liaison.
2002	4 <sup>th</sup> World Congress on Biomechanics, Abstract Reviewer

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- 2002 GEOIDE NCE Annual Conference, Session chair, Toronto, ON. May, 2002
- 2002 3<sup>rd</sup> Annual (Alberta) Provincial Biomedical Engineering Conference, Session Chair, Banff, Nov. 2002
- 2002 Osteoarthritis Consensus Meeting, CIHR Institute of Musculoskeletal Health and Arthritis, Toronto, ON, April 2002. Invited Participant.
- 2002 Canadian Arthritis Network, NCE Annual Meeting, Calgary, AB, Sept. 2002. Invited Participant.
- 2001 4<sup>th</sup> Annual Alberta Provincial Biomedical Engineering Conference, Oct. 2001
- 2001 International Society of Biomechanics, Session Chair, July 8-13, 2001
- 2001 International Society of Biomechanics, , Abstract Reviewer
- 2001 2nd Annual Provincial Biomedical Engineering Conference, Session Chair, Banff, Oct, 2001
- 2001 GEOIDE NCE Annual Conference, Session chair, Fredricton, NB. June 2001
- 2000 – 2002 Canadian Society of Biomechanics Executive Committee – Member Conference Chair (liaison for 4<sup>th</sup> World Congress on Biomechanics 2002), elected member.
- 2000 Canadian Society of Biomechanics, Session Chair, Aug, 23-6, 2000
- 2000 1st Annual Provincial Biomedical Engineering Conference, Session Chair, Banff, Oct, 2000
- 1999 XVIIth International Society of Biomechanics Congress, Session Chair, Calgary, Alberta, Aug, 8-13, 1999
- 1999 XVIIth International Society of Biomechanics Congress, Abstract Review
- 1999 XVIIth International Society of Biomechanics Congress, Organizer for Calgary Awards (Orthopaedics and Clinical)
- 1997 – 1999 Chair, Symposia – Organizing Committee, XVIIth International Society of Biomechanics Congress, Calgary, Alberta, Aug 8-13, 1999 (organized over 25 symposia)
- 1998 Canadian Medical and Biological Engineering Society Annual Meeting – Session Chair, Student Paper Competition Judge, Edmonton, Alberta, June 1998
- 1997 ASME Summer Bioengineering Meeting, Session Chair, Sun River, Oregon, June, 1997
- 1996 Canadian Society for Biomechanics, Session Chair, Vancouver, BC., Aug., 1996

1996 New Advances in Undergraduate Engineering Education Conference, Session Chair., Kingston, ON. July, 1996.

### Other

2004 Alberta Innovation and Science, Featured Researcher, Calender  
 2004 SHAD Valley Program, Guest Speaker  
 2002 Biomedical Engineering Graduate Program University of Saskatchewan, External Program Reviewer, Feb, 2002.  
 2002 GEOIDE NCE Phase III Planning Meeting, Invited Participation, Vancouver, BC, Mar, 2002.  
 2002 CIHR OA Consensus Meeting, Invited Participation, Toronto, ON, April, 2002  
 2002 Canadian Arthritis Network, Invited Participation, Calgary, AB, Sept, 2002  
 2002 University of British Columbia, Position Selection Committee reference

### C. Public Service

#### University Related Contributions

2004 University of Calgary Chancellor's Club, CCIT Bioengineering Lab Tours (>15)  
 2004 SHAD Valley, Guest Lecturer  
 2004 Operation Minerva, Mentoring  
 2004 Guest Speaker, Cochrane High School  
 2004 Alberta Innovation and Science, Featured Researcher, 2005 Calendar  
 2004 Ecole Westgate School, Machines and Motion Workshop  
 2003 The Canadian Medical Hall of Fame presents Pfizer Canada Discovery Days in Health Sciences, Participant  
 2002 Faculty of Graduate Studies, Recruitment brochure  
 2002 Global TV commercial, Science and Innovation Focus  
 2001 Novacor Chemicals Lunch Presentation – Women and Technology (Invited Presentation)  
 1998 – present Alberta Women in Science Network, member  
 1997 High school science demonstration, Elboya School, Calgary, AB  
 1996 – 1998 SHAD Valley, Guest Lecturer and research group team volunteer  
 1995 – present Operation Minerva – Job Shadowing mentor

**Community Related Contributions**

2003 - 2005	Volunteer, Alberta Heart and Stroke Foundation, Calgary, AB
2002 – 2004	Treasurer, Calgary Centennial Arena Skating Club, Calgary, AB.
2002 – present	Volunteer, South Calgary Ringette Association, Calgary, AB.
2002 – present	Volunteer, Bishop Pinkham Band Society, Calgary, AB.
2002 – present	Volunteer, Bishop Pinkham School, Calgary, AB
1998 – 1999	Fund Raising Committee, Westgate School, Calgary, AB
1997 – 1999	Volunteer, 182 <sup>nd</sup> Brownie Group, Calgary, AB
1997 – present	Sunday School teacher, Woodcliff United Church, Calgary, AB
1995 – present	Volunteer, Ecole Westgate School, Calgary, AB
1995 – 1999	Volunteer, Alberta Heart and Stroke Foundation, Calgary, AB.
1995 – present	Volunteer, Ecole Westgate School Parent Council, Calgary, AB
1993 - 1998	Volunteer, Wildwood Playschool, Calgary, AB

**VI. OTHER ACTIVITIES**

Hiking, skiing, canoeing, sailing, cycling, travel, music, reading, theatre.