



**Rob Parkinson, B.Sc., M.Sc., Ph.D.** *(he/him)*

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## EXPERT SUMMARY

Dr. Rob Parkinson is an Injury Biomechanics specialist, and the Vice President & Practice Lead of the Biomechanics and Personal Injury Assessment group at 30 Forensic Engineering. During his time in the forensics industry, Rob has investigated claims involving motor vehicle collisions, slips, trips and falls, seatbelt and helmet use, product failure, and work-related claims, assaults and homicides and authored hundreds of expert reports from clients in law enforcement, legal and insurance industries. Rob holds an adjunct faculty position at the University of Waterloo and remains active in the teaching and research community, currently examining biomechanical issues such as helmet effectiveness and low back injury in motor vehicle collisions.

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## SPECIALIZED PROFESSIONAL COMPETENCIES

- Biomechanical Modelling of Human Movement
- Injury Biomechanics
- Occupational Injury and Ergonomics

## ACADEMIC BACKGROUND

Doctor of Philosophy (Biomechanics), University of Waterloo, Waterloo, Ontario, 2008

PhD Thesis: Refining the Relationship between the Mechanical Demands on the Spine and Injury Mechanisms through Improved Estimates of Load Exposure and Tissue Tolerance.

Master of Science (Biomechanics), University of Waterloo, Waterloo, Ontario, 2004

MSc Thesis: The Role of Load Magnitude as a Modifier of the Cumulative Load Tolerance of Porcine Intervertebral Joints.

Bachelor of Science, Honours (Human Kinetics), University of Guelph, Guelph, Ontario, 2002

## ADDITIONAL COURSES

Joint Health and Safety – Industrial Establishments, 2010

Event Data Recorders (EDRs), 2010

Joint Health and Safety Committee Training, 2010

Head Injury and Concussion Symposium, August 2008



## PROFESSIONAL EXPERIENCE

### **30 Forensic Engineering**

Vice President & Practice Lead, Biomechanics and Personal Injury Assessment  
2018 – Present, Toronto, ON

- Member of the executive leadership team responsible for the management, strategic planning, and governance of 30 Forensic Engineering
- Conducting and managing technical investigations involving the determination of the mechanics of injury, and performance of restraint systems and protective devices

Principal, Biomechanics and Personal Injury Assessment  
2015 – 2018, Toronto, ON

- Conducting and managing technical investigations involving the determination of the mechanics of injury, and performance of restraint systems and protective devices

Biomechanical Forensic Scientist  
2008 – 2015, Toronto, ON

- Conducting and assisting with technical investigations involving the determination of the mechanics of injury, and performance of restraint systems and protective devices

### **The University of Waterloo, Department of Kinesiology**

Course Developer and Instructor  
2016 – Present, Waterloo, ON

Established and developed course content for a fourth year undergraduate/graduate course examining the concepts underlying forensic biomechanics. Development and delivery of material and evaluations related to course concepts, writing, and verbal communication.

Adjunct Professor  
2009 – Present, Waterloo, ON

Holds a research and teaching appointment within the Department of Kinesiology.

Course Instructor  
2009 – 2009, Waterloo, ON

Second year undergraduate course in advanced biomechanics. Development and delivery of course material relating to concepts and methods employed in biomechanics.

Course Instructor  
2007 – 2007, Waterloo, ON

Fourth year undergraduate course in the biomechanical modelling of human movement. Development and delivery of material and evaluation of student performance.



Teaching Assistant

2006 – 2007, Waterloo, ON

Taught laboratories for first and second year students and oversaw fourth year ergonomic assessment projects. Responsible for delivering material and guiding students on practical use of laboratory equipment. Project advisement required that I assessed the merits of ergonomic interventions and ensured effective communication of the findings to management.

**The University of Guelph, Department of Human Health and Nutritional Sciences**

Course Instructor

2014 – 2014, Guelph, ON

Fourth year undergraduate lab based course exploring the concepts of EMG-fatigue, clinical gait and balance, and inverse dynamics. Development and delivery of lecture materials relating to data collection and analysis methods employed in biomechanics.

**The University of Guelph, Department of Human Biology and Nutritional Sciences**

Teaching Assistant

2002 – 2003, Guelph, ON

Was responsible for teaching laboratory material related to Gait dysfunction, measurement and clinical interventions. Also oversaw research projects aimed at development of clinical aides. Acted in an advisory role for fourth year ergonomic assessments in and around the Guelph community.

**COURT AND OTHER APPEARANCES**

- Qualified in the License Appeal Tribunal as an Expert in Biomechanics
- Qualified in the Ontario Superior Court of Justice in matters relating to Biomechanics, Kinesiology and safe pedestrian walking surfaces
- Consulted by the Ontario Provincial Police regarding injury causation analysis

**PROFESSIONAL AFFILIATIONS**

Services

- Invited Grant Reviewer, Canadian Foundation for Innovation, 2021 and 2022
- Reviewer for Canadian Society of Forensic Science Journal
- Reviewer for Annals of Orthopedics and Rheumatology
- Reviewer for Journal of Engineering in Medicine
- Education Committee Member, Canadian Kinesiology Alliance
- Reviewer for Canadian Journal of Kinesiology
- Reviewer for Ergonomics
- Reviewer for the Journal of Biomechanics
- Association of Canadian Ergonomists, Conference Abstract Reviewer, 2006 – 2011



- Human Research Ethics Committee, University of Waterloo, 2004 – 2008
- Session Chair, Ontario Biomechanics Conference, 2005

### AWARDS AND ACHIEVEMENTS

- University of Waterloo Doctoral Completion Award
- University of Waterloo Graduate Scholarship
- NSERC Canadian Graduate Scholarship (Doctoral)
- Canadian Society for Biomechanics Student Research Award
- Graduate Incentive Award
- University of Guelph Academic Scholarship
- Graduate Research Assistantship
- NSERC Postgraduate Scholarship A
- NSERC Student Research Assistantship
- Graduated with Distinction
- Boyd Award for Human Anatomy (University of Guelph)

### PUBLICATIONS AND SPEAKING ENGAGEMENTS

#### Peer-Reviewed Research Publications

- Tennant, L.M., Fok, D.J., Kingston, D.C., Winberg, T.B., Parkinson, R.J., Laing, A.C., and Callaghan, J.P. (2021). Analysis of invoked slips while wearing flip-flops in wet and dry conditions: Does alternative footwear alter slip kinematics? *Applied Ergonomics*. doi: 10.1016/j.apergo.2020.103318.
- Fewster, K.M., Viggiani, D., Gooyers, C.E., Parkinson, R.J., Callaghan, J.P. (2019). Author response: Re: Re: Fewster et al. (2019). Characterizing trunk muscle activations during simulated low-speed rear impact collisions. *Traffic Injury Prevention*, 20(8): 887-890. \*Response to Dr. Siegmund's 'Letter to the Editor' DOI: 10.1080/15389588.2019.1656454.
- Fewster, K.M., Viggiani, D., Gooyers, C.E., Parkinson, R.J., Callaghan, J.P. (2019). Characterizing trunk muscle activations during simulated low-speed rear impact collisions. *Traffic Injury Prevention*, 20:314-319.
- Fewster, K. M., Parkinson, R. J., & Callaghan, J. P. (2019). Low-velocity motor vehicle collision characteristics associated with claimed low back pain. *Traffic Injury Prevention*, 1-5. doi:10.1080/15389588.2019.1601716
- Zehr, J. D., Fewster, K. M., Gooyers, C. E., Parkinson, R. J., & Callaghan, J. P. (2019). Partitioning the total seatback reaction force amongst the lumbar spine motion segments during simulated rear impact collisions. *International Journal of Occupational Safety and Ergonomics*, 1-20.
- Warnica, M.J., Park, J., Cook, G., Parkinson, R.J., Callaghan, J.P., and Laing, A.C. 2015. The influence of repeated chin-bar impacts on the protective properties of full-face mountain biking helmets. *Journal of Sports Engineering and Technology*. In Press.

- Parkinson, R.J., Bezaire, M., Callaghan, J.P. (2011). A comparison of low back kinetic estimates obtained through posture matching, rigid link modelling and an EMG assisted model. *Applied Ergonomic*. 42(5): 644-651.
- Parkinson, R.J., and Callaghan, J.P. (2009). The use of Artificial Neural Networks to reduce data collection demands in determining spine loading: A laboratory based analysis. *Computer Methods in Biomechanics and Bioengineering*. 12, 511-522.
- Parkinson, R.J., and Callaghan, J.P. (2009). The role of dynamic flexion in spine injury is altered by increasing dynamic load magnitude. *Clinical Biomechanics*. 24, 148-154.
- Parkinson, R.J., and Callaghan, J.P. (2008). Quantification of the relationship between load magnitude, rest duration and cumulative compressive tolerance of the spine: Development of a weighting system for adjustment to a common injury exposure level. *Theoretical Issues in Ergonomics Science*. 9, 225-268.
- Parkinson, R.J., and Callaghan, J.P. (2007). Can periods of static load be used to enhance the resistance of the spine to cumulative compression? *Journal of Biomechanics*. 40, 2944-2952
- Parkinson, R.J., and Callaghan, J.P. (2007). The role of load magnitude as a modifier of the cumulative load tolerance of porcine cervical spinal units: progress towards a force weighting approach. *Theoretical Issues in Ergonomics Science*. 8, 171-184
- Parkinson, R.J., Durkin, J.L., and Callaghan, J.P. (2005). Predicting intervertebral joint compressive strength using DXA obtained measures of bone mineral content: An assessment of error. *Spine*. 30, E492-E498
- Beach, T.A.C., Parkinson, R.J., Stohart, J.P., and Callaghan, J.P. (2005). The effects of prolonged sitting on the passive flexion stiffness of the in vivo lumbar spine. *The Spine Journal*. 5, 145-154
- Parkinson, R.J., Beach, T.A.C., and Callaghan, J.P. (2004). The time-varying response of the in-vivo lumbar spine to dynamic repetitive flexion. *Clinical Biomechanics*. 19, 330-336

#### Peer-Reviewed Conference Proceedings

- Tennant, L. M., Fok, D. J., Winberg, T. B., Kingston, D. C., Parkinson, R. J., Laing, A. C., Callaghan, J. P. (2019) Kinematic and Frictional Analysis of Controlled Slips From Standing in Alternative Footwear – Flip-Flops May Pose Additional Risk. Presented at the 9th Annual Rocky Mountain American Society of Biomechanics Conference, April 5-6, 2019, Estes Park, CO, USA (poster).
- Zehr, J.D., Fewster, K.M., Kingston, D.C., Gooyers, C.E., Parkinson, R.J., Callaghan, J.P. (2018) The Influence of Lumbar Support on the Seat-Occupant Interface During a Moderate Velocity Rear-Impact Collision In proceedings of the 2018 Canadian Society of Biomechanics Conference. Halifax, Nova Scotia, Canada.
- Barrett, J.M., Fewster, K.M., Gooyers, C.E., Parkinson, R.J., Callaghan, J.P. (2018). Model-Aided Design of a Rear-Vehicle Impact Testing System for in-vivo Investigations. In proceedings of the 2018 Ohio State Injury Biomechanics Symposium. Columbus, OH, USA.
- Fewster, K.M., Parkinson, R.J., and Callaghan, J.P. (2017). Low Velocity Collision Characteristics Associated with Claimed Low Back Pain. In Proceedings of the 2017 Meeting of the American Society of Biomechanics. Boulder, Colorado.
- Fewster, K.M., Viggiani, D., Gooyers, C.E., Parkinson, R.J., Callaghan, J.P. (2017) Characterizing in-vivo exposures of the lumbar spine during simulated low-speed rear impact collisions. In proceedings of the 2017 Ohio State Injury Biomechanics Symposium. Columbus, OH, USA

- Callaghan, J.P., Gooyers, C.E., Gregory, D.E., Gruevski, K.M., Karakolis, T., Parkinson, R.J. (2014). Prolonged Testing of the Annulus Fibrosus to Represent In-Vivo Injury Mechanics. In Proceedings of the 7th World Congress of Biomechanics. Boston, Massachusetts.
- Warnica, M.J., Park, J., Cook, C., Parkinson, R.J., and Laing, A.C. (2014). Energy Absorption Mechanisms of Four Common Mountain Biking Helmets During Frontal Impacts. In Proceedings of the 7th World Congress of Biomechanics. Boston, Massachusetts.
- Coombs, M., Davis, K. Kotowski, S., Parkinson, R.J., and Callaghan, J.P. (2013). Increase in Broadband Excitation Identifies Vertebral Endplate Fractures. In Proceedings of the 2013 Meeting of the American Society of Biomechanics. Omaha, Nebraska.
- VandenBussche, J., Gallagher, K.M., Parkinson, R.J., Young, J., Callaghan, J.P. (2011) Foot Placement in Oblique Stair Descent. In Proceedings of the 55th Annual Human Factors and Ergonomics Society Meeting, Las Vegas, Nevada.
- Nairn, B.C., Parkinson, R.J., Callaghan, J.P., and Drake, J.D.M. (2009). Comparing load and posture on industrial based lifting tasks: effects of gender, spinal load magnitude and postural asymmetry. In Proceedings of the 33rd Annual Meeting of the American Society of Biomechanics. State College, Pennsylvania.
- Parkinson, R.J., and Callaghan, J.P. (2008). The Use of Artificial Neural Networks as a Data Reduction Approach in Determining Cumulative Exposures. In Proceedings of the 4th North American Congress On Biomechanics. Ann Arbor, Michigan.
- Parkinson, R.J., and Callaghan, J.P. (2007). Can height loss across a functional spinal unit modified by static rest breaks mitigate cumulative compression induced injury? In Proceedings of the 28th Annual Meeting of the American Society of Biomechanics. Palo Alto, California.
- Davis, K.G., Kotowski, S.E., Callaghan, J.P., and Parkinson, R.J. (2007). Use of Acceleration to Identify Endplate Fractures. In Proceedings of the 21st Annual Meeting of the International Society of Biomechanics. Taipei, Taiwan: International Society of Biomechanics Promising Young Scientist Award Plenary Session.
- Kotowski, S.E., Parkinson, R.J., Davis, K.G., Callaghan, J.P. (2007). Taking an Acceleration Approach to Identifying Vertebral Endplate Failures. In Proceedings of the Human Factors and Ergonomics Society 51st Annual Meeting. Baltimore, Maryland: The Human Factors and Ergonomics Society.
- Parkinson, R.J. and Callaghan, J.P. (2006). Can an Increase in Rest Period Length Alter the Cumulative Load Tolerance of the Spine. In Proceedings of the 14th Biennial Conference for the Canadian Society for Biomechanics. Waterloo, Ontario.
- Parkinson, R.J. and Callaghan, J.P. (2005). Does load magnitude alter cumulative load tolerance? "Weighting" for an answer. In Proceedings of the 20th Annual Meeting of the International Society of Biomechanics. Cleveland, Ohio.
- Parkinson, R.J., Brown, S.H.M., Flynn, J., Noble, J.W., Powell, M.L., and Callaghan, J.P. (2005). Is unconstrained loading of spinal segments more physiologic? In Proceedings of the 24th Canadian Biomaterials Conference. Waterloo, Ontario.
- Parkinson, R.J., and Callaghan, J.P. (2005). The use of an animal model can improve results in spinal fatigue testing. In Proceedings of the 24th Canadian Biomaterials Conference. Waterloo, Ontario.
- Parkinson, R.J., Durkin, J.L., and Callaghan, J.P. (2004). Predicting the failure strength of porcine cervical spinal units using bone mineral content and endplate area. In Proceedings of the 13th Biennial Conference for the Canadian Society for Biomechanics. Halifax, Nova Scotia.

- Beach T.A.C., Parkinson R.J., Stothart J.P., and Callaghan J.P. (2004). Prolonged sitting alters the passive flexion stiffness of the low back in flexion. In Proceedings of the 13th Biennial Conference for the Canadian Society for Biomechanics. Halifax, Nova Scotia.
- Parkinson, R.J., Beach, T.A.C., and Callaghan, J.P. (2003). Investigation of the lumbar spine passive tissue response to repetitive lifting. In Proceedings of the 27th Annual Meeting of the American Society of Biomechanics. Toledo, Ohio.

#### Other Conference Proceedings

- Fewster, K.M., Viggiani, D., Gooyers, C.E., Parkinson, R.J., and Callaghan, J.P. (2017). Characterizing In-Vivo Exposures of the Lumbar Spine During Simulated Low-Speed Rear Impact Collisions. The 2017 Ohio State Injury Biomechanics Symposium.
- VandenBussche, J., Gallagher, K.M., Parkinson, R.J., Young, J., Callaghan, J.P. (2011) Foot Placement in Oblique Stair Descent. Proceedings of the 8th Annual Ontario Biomechanics Conference (OBC), Barrie, Ontario.
- Nairn, B.C., Parkinson, R.J., Callaghan, J.P., Drake, J.D.M. (2009) Comparing Load and Posture on Lifting Tasks: Effects of Gender, Spinal Load Magnitude and Postural Asymmetry. Proceedings of the Sixth Annual Ontario Biomechanics Conference (OBC), Barrie, Ontario.
- Parkinson, R.J. and Callaghan, J.P. (2007). Is load redistribution due to static loading a viable mechanism to enhance tolerance to cumulative compression in the spine? In Proceedings of the 4th Annual Ontario Biomechanics Conference. Barrie, Ontario.
- Beach T.A.C, Drake J.D.M., Gregory D.E., Howarth S.J., Jackson J.A., Nelson-Wong E., Parkinson R.J., Callaghan J.P. (2007). Cumulative Loading Exposure and Low Back Pain: Industrial health and Safety in the Automobile Industry. 6th Annual Auto21 Network of Centres of Excellence HQP Conference. Windsor, Ontario.
- Parkinson, R.J. and Callaghan, J.P. (2006). The effects of rest duration and load magnitude on cumulative load tolerance. In Proceedings of the 3rd Annual Ontario Biomechanics Conference. Barrie, Ontario.
- Mogk, J.P., Callaghan, J.P., Keir, P.J., and Parkinson, R.J. (2006). Elastic properties of the transverse carpal ligament: A cadaveric study with application to modeling. In Proceedings of the 3rd Annual Ontario Biomechanics Conference. Barrie, Ontario.
- Beach, T.A.C, Drake, J.D.M, Dunk, N.M, Durkin, J.L, Gregory, D.E., Hogan, K, Jackson, J, Parkinson, R.J., Callaghan, J.P. (2006). Cumulative Loading Exposure and Low Back Pain: Industrial Health and Safety in the Automobile Industry. 5th Annual Auto21 Network of Centres of Excellence HQP Conference. Barrie, Ontario.
- Parkinson, R.J. and Callaghan, J.P. (2005). Does load magnitude modify cumulative load tolerance? In Proceedings of the 2nd Annual Ontario Biomechanics Conference. Barrie, Ontario.
- Beach T.A.C, Coke S.K., Drake J.D.M., Dunk N.M., Gregory D.E., Parkinson R.J., Callaghan J.P. (2005). Industrial Health and Safety: Cumulative loading exposure and low back pain. 4th Annual Auto21 Network of Centres of Excellence HQP Conference. Oshawa, Ontario.
- Beach T.A.C., Drake J.D.M., Dunk N.M., Durkin J.L., Gregory D.E., Jackson J., Parkinson R.J., Callaghan J.P. (2004). Industrial Health and Safety: Cumulative loading exposure and low back pain. 3rd Annual Auto21 Network of Centres of Excellence HQP Conference. Windsor, Ontario.



- Beach T.A.C., Drake .J.D.M., Dunk N.M., Gregory D.E., Jackson J., Parkinson R.J., Callaghan J.P. (2003). Industrial Health and Safety: Cumulative loading exposure and low back pain. 2nd Annual Auto21 Network of Centres of Excellence HQP Conference. Brampton, Ontario.

#### Speaking Engagements

- Occupant and Pedestrian Kinematics. (2021). Waterloo Regional Police Service, Waterloo, ON.
- Helping your Expert Witness. (2021). The Advocates Society, Virtual Conference.
- Injuries in Motor Vehicle and Pedestrian Collisions. (2021). University of Toronto, Toronto, ON.
- Examining and Cross-Examining Experts. (2020). The Advocates Society, Virtual Conference.
- Occupant and Pedestrian Kinematics and Biomechanics of Injury. (2020). Ontario Provincial Police College, Aylmer, ON.
- Investigation of Slips, Trips and Falls and Ladder Incidents. (2020). Ministry of Labour, Virtual Course.
- Forensic Biomechanics. (2020). The University of Guelph. Guelph, ON.
- Careers Outside of Academia. (2020). The University of Waterloo. Waterloo, ON.
- The Biomechanics of Concussion. (2020). The Hockey Hall of Fame. Toronto, ON.
- The Biomechanics of Injury. (2020). York University. Toronto, ON.
- Injuries in Motor Vehicle and Pedestrian Collisions. (2020). University of Toronto, Toronto, ON.
- Occupant and Pedestrian Kinematics and Biomechanics of Injury. (2019). Ontario Provincial Police College, Aylmer, ON.
- The Science of Concussion. (2019). Ontario Insurance Adjusters Association. Kitchener, ON.
- Examining and Cross-Examining Experts. (2019). The Advocates Society, Toronto, ON.
- Injuries in Motor Vehicle and Pedestrian Collisions. (2019). University of Toronto, Toronto, ON.
- Occupant and Pedestrian Kinematics and Biomechanics of Injury. (2018). Ontario Provincial Police College, Aylmer, ON.
- Injuries in Motor Vehicle and Pedestrian Collisions. (2018). University of Toronto, Toronto, ON.
- Advanced Investigation of Slips, Trips and Falls. (2017). CURIE regional meeting, Halifax, NS.
- Low Speed Injury Causation. (2016). CDL Boot Camp. Toronto, ON.
- Using Biomechanical Engineering Evidence to Advantage Demonstration. (2015). OTLA Fall Conference. Toronto, ON.
- Thinking Beyond the Vehicle: Biomechanics and Human Factors. (2015). Stewart McKelvey Client Education Day. Halifax, NS.
- Injury and Pain: A Biomechanical Perspective. (2015). Canadian Defence Lawyers Annual General Meeting and Conference.
- Forensic Biomechanics in Accident Investigation Webinar (2014), Association of Canadian Ergonomists, Toronto, ON
- Forensic Injury Biomechanics (2014), University of Toronto, Toronto, ON





- Biomechanics: Injury and Design Considerations (2014), The 28th Annual Joint Insurance Seminar, Hamilton, ON
- PhD Careers Outside of Academia (2014), Wilfrid Laurier University, Waterloo, ON
- Biomechanics and Insurance Claims: When, Why and How are People Injured (2014) Ontario Insurance Adjusters Association Claims Conference, Toronto, ON
- Biomechanics in Non-MVA Claims: Legal and Scientific Viewpoints (2014), Kitchener Waterloo Ontario Adjusters Association Dinner Meeting, Kitchener, ON
- Chronic Pain and Low Speed Collisions Seminar (2014), Hosted by Aviva Insurance, Toronto, ON
- Forensic Biomechanics and Kinesiology (2013), York University, Toronto, ON
- Forensic Biomechanics in Canada (2013), University of Cincinnati
- Forensic Biomechanics (2012), Department of Kinesiology, University of Toronto
- Forensics Investigations of Slips, Trips, and Falls (2012), Department of Kinesiology, University of Waterloo
- From Lab to Litigation (2012), Student Workshop, 17th Biennial Meeting of the Canadian Society of Biomechanics/Societe Canadienne de Biomechanique (CSB/SBC), Burnaby, B.C.
- Co-organizer and Speaker, Advanced Investigations of Slip, Trips & Falls and Personal Injury Claims (2012) Insurance Institute, Toronto, ON
- Co-organizer and Speaker, Whiplash: Myths and Misunderstandings (2010) Ontario Bar Association, Toronto, ON
- Biomechanics and Kinesiology in Forensics (2010) Department of Kinesiology, University of Waterloo
- Bring the Lab to Work – An Examination of Data Reduction Approaches to Document Spine Loading, Occupational Biomechanics Symposium at the 4th North American Congress on Biomechanics, Ann Arbor, Michigan
- Spine Biomechanics (2006), Department of Civil Engineering, University of Waterloo

#### Additional Authored Materials

- Parkinson, R.J., Sinclair, B. (May 2017). Escalators Not Always a Walk in the Park. The Lawyer's Daily. <https://www.thelawyersdaily.ca/articles/3069/print?section=civillitigation>
- Parkinson, R.J., and Denbeigh, K. (April 2016). Anatomy of a Slip and Fall. The Lawyer's Daily. [https://www.thelawyersdaily.ca/articles/2106/anatomy-of-a-slip-and-fall?article\\_related\\_content=1](https://www.thelawyersdaily.ca/articles/2106/anatomy-of-a-slip-and-fall?article_related_content=1)
- Gooyers, C.E., Parkinson, R.J. (2015). Latest Helmet Research Good for the Brain. The Lawyer's Weekly, Vol 35(31): 13-19.
- Co-author with Dr. Jack Callaghan and Ms. Gillian Cook – Course Materials (2012), Biomechanical Modelling of Human Movement (KIN 425).
- Parkinson, R.J. (2010). A Mistaken Understanding of Injury. Claims Canada.
- Rob Parkinson and Michael Sinnott (2009). The Role of the Injury Biomechanist. CIAA National Claims Manual.



- Parkinson, R.J. and Callaghan, J.P. (2008). Cumulative loading: Implications and background for low back pain assessments. Centre of Research Expertise for the Prevention of Musculoskeletal Disorders, an agency funded by the Workplace Safety and Insurance Board.

#### Media Appearances and Contributions

- Featured expert/contributor: Kirbyson, Geoff. No More Head Games: Awareness of Head-Related Injuries on Rise. Lawyers Weekly, Vol (): 21 – 24.

#### Projects

- Estimating internal lumbar joint loads in simulated low speed rear-end collisions (on-going): Co-investigators Dr. Jack Callaghan and Ms. Kayla Fewster (NSERC IPS scholar).
- Examining the impact attenuation effectiveness of chin bar equipped bicycling helmets (on-going): Co-investigators Dr. Andrew Laing, Dr. Jack Callaghan, Ms. Meagan Warnica, and Ms. Gillian Cook.
- An investigation into angled stair descent (2011). Co-investigators, Dr. Jack Callaghan, Ms. Kaitlin Gallagher, Ms. Jessica VandenBussche and Mr. Jason Young.
- WSIB CRE-MSD (2007-2008) - \$9,960.00 Quantifying spinal loading and mechanics in industrial tasks: effects of load magnitude, gender, and coupled postures, Co-investigator: Dr. J. Drake, University of Windsor.

#### Student Advisory Committees

- Chad Gooyers, PhD Candidate (2013). Thesis title – Exploring Interactions between Physical Exposures on Low Back Injury. University of Waterloo.
- Meagan Warnica, M.Sc. Candidate (2014). Thesis title – Bicycle Collisions: Crash Characteristics of High Severity Accidents, and a Comparison of the Dynamic Responses of Surrogate Headforms and the Effectiveness of Helmets. University of Waterloo.