



Laboratory of Biomechanics and Human Movement

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CURRICULUM VITAE

1. PERSONAL INFORMATION

Name: Mario Lamontagne, PhD
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Nationality: Canadian
Birth date: 26/11/1955
Languages: French, English, Italian



2. PROFESSIONAL INFORMATION

Rang: Full Professor, Tenured, Faculty of Health Sciences, School of Human Kinetics
Position: Member of the Faculty of Graduate Studies and Research (1986 up to now)
 Cross-appointed at the Dept. of the Anatomy and Neurobiology (1992-1997)
 Cross-appointed at the Dept. of Mechanical Engineering (1998- up to now)

2. DEGREES

Degrees	Field of study	Institutions	Years
Ph.D.	Biomedical Engineering (École Polytechnique)	U. of Montreal	1981-1986
M.Sc.	Sciences of Physical Activity	U. of Montreal	1978-1981
B.Sc.	Physical Education	U. of Montreal	1975-1978
D.E.C.	Health Sciences	CEGEP L. Groulx	1973-1975

3. EMPLOYMENT HISTORY

Institution	Rank/Position	Department	Years
U. of Ottawa	Full Professor	School of Human Kinetics	1998-
U. of Ottawa	Acting Director and Associate Dean	School of Human Kinetics	2003-2004
U. of Ottawa	Full Professor (cross-appointed)	Dept. Mechanical Eng.	1998-
U. of Ottawa	Associate Professor (cross appointed)	School of Human Kinetics	1990-1998
U. of Ottawa	Associate Professor	Dept Anatomy and Neurobiology	1997-2001
U. of Ottawa	Assistant Professor	Dept. of Kinanthropology	1986-1990
U. Concordia	Assistant Professor	Dept. of Exercise Sciences	1984-1986

4. HONOURS

Agencies	Distinction	Institutions	Years
IRSST	Scholarship (Ph.D.)	U. of Montreal	1982-1984
FCAC	Scholarship (M.Sc.)	U. of Montreal	1981-1982
DGES	Scholarship (M.Sc.)	U. of Montreal	1980-1981

5. SCHOLARLY AND PROFESSIONAL ACTIVITIES**Professional Activities**

Responsibility	Organisations	Year
Editorial Board	Journal Knee Surgery Sports Traumatology Arthroscopy”	2003-
Editorial Board	Journal Research in Sports Medicine: An International Journal”	2003-
VP Conference	International Society of Biomechanics on Sports	2006-
Director	International Society of Biomechanics on Sports	2005-2006
President	International <u>Symposium</u> of Biomechanics on Sports	2002-2004
VP Public Relation	International Society of Biomechanics on Sports	2002-2004

6. GRADUATE STUDENT SUPERVISION (Life Time)

STATUS	PhD*	M.Sc.	M.A.
Completed	3	8	4
In progress	1	6	1
TOTAL	4	13	4

7. RESEARCH FUNDING (^F Active Funding and ^A applied for Funding)

Source	Researchers /associates /Title	Date start-end	Amount/year (Total)
^F Maquet-Dynamed	Lamontagne, M Beaulé, P Effect of Surgical Techniques on the Mobility of Hip Resurfacing Arthroplasty Patients	2008-09	\$20,000
^F MICROSPORT TECH INC.	Lamontagne Mario Validation of the Revolution Cycling Power Measurement System	2007-08	(\$6409)

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^F CIHR	Lamontagne, M (PI) Li, JX; Beaulé, P.; Cranney, A Benoit, D, Lee WS Mobility assessment of patients with THA: Joint mechanics and rehabilitation	2006-2007	(\$90,000)
^F NSERC	Lamontagne, M Mechanics and Neuromuscular dynamic control of the knee joint.	2006-11	\$22,000 (\$110,000)
		(Discovery)	

8. PUBLICATIONS (Lifetime)

8.1 BOOKS AND MONOGRAPHS	: 4
8.2 CHAPTERS IN BOOKS	: 5
8.3 PAPERS IN REFEREED JOURNALS	: 49
8.4 PAPERS IN REFEREED PROCEEDINGS	: 138
8.5 ABSTRACTS IN REFEREED JOURNALS	: 10
8.6 TECHNICAL REPORTS	: 5
8.7 INVITED PAPER PRESENTATIONS	: 62

8.1 Books and Monographs

- 8.1 Lamontagne, M.,** Robertson, D. G. E., & Sveistrup, H. (Eds.). (2004c). Proceedings of XXII International Symposium of Biomechanics in Sports. Ottawa: Faculty of Health Sciences. ISBN: IN00206134

8.2 Book Chapters

- Lamontagne, M.,** Benoit, D. L., Ramsey, D.K. Caraffa, A., and Cerulli, G. (2008). "In Vivo Biomechanical Study for Injury Prevention." In: Routledge Handbook of Biomechanics and Human Movement Science, Y. Hong and R. Bartlett, eds., Routledge, London, UK. p. 428-445.
- Lamontagne, M.** (2002). The Application of Electromyography in Movement Studies. In Y. Hong (Ed.), International Research in Sports Biomechanics (pp. 352). London: Routledge.
- Ramsey, D., **Lamontagne, M.,** Wretenberg, P., & Németh, G. (2002). Skeletal Kinematics of The Anterior Cruciate Ligament Deficient Knee with and without Functional Braces. In Y. Hong (Ed.), International Research in Sports Biomechanics (pp. 352). London: Routledge.
- Lamontagne, M.** (2001). Electromyography in sport medicine. In Rehabilitation of Sports Injuries (Eds. G. Puddu, A. Giombini and A. Selvanetti), Springer-Verlag, Heidelberg, pp.240.

8.3 Refereed Journal Publications (Last six years)

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1. Beaulieu, **M, Lamontagne** & Xu L (2008) Gender differences in time-frequency EMG analysis of unanticipated cutting maneuvers. *Med Sci Sports Exerc.* (Accepted)
2. MSinger J, **Lamontagne M.** (2008) The effect of functional knee brace design and hinge misalignment on lower limb joint mechanics. *Clin Biomech (Bristol, Avon).* 23(1), 52-9.
3. Benoit DL, Ramsey DK, **Lamontagne M,** Xu L, Wretenberg PF, Renström P. (2007) Knee joint kinematics during gait: new insights from in vivo measurement. *Clinical Orthopaedics and Related Research.* 454 (Jan): 81-88.
4. Théoret, D., & **Lamontagne, M.** (2006). Preliminary study on knee joint kinematic and lower limb emg of the acl deficient knee joint wearing a functional knee brace during running. *Journal of Knee Surgery Sports Traumatology Arthroscopy,* 14 (6) 555-63.
5. Benoit, D. L., **Lamontagne, M.,** Greaves, C., Liti, A., & Cerulli, G. (2006a). Effect of alpine ski boot cuff release on knee joint force during the backward fall. *Research in Sports Medicine: An International Journal* 13(4), 317-330.
6. Benoit, D. L., Ramsey, D. K., **Lamontagne, M.,** Xu, L., Wretenberg, P., & Renström, P. (2006b). Effect of skin movement artifact on knee kinematics during gait and cutting motions measured in-vivo. *Gait & Posture* 24 (2): 152-64.
7. Delorme, S., Tavoularis, S., & **Lamontagne, M.** (2005). Kinematics of the ankle joint complex in snowboarding. *Journal of Applied Biomechanics* , 21, 394-403.
8. Lafontaine, D., & **Lamontagne, M.** (2003). Three Dimensional Kinematics Determined using a Mobile Camera Array Part 1: Development and Validation of the Mobile data- acquisition System. *Journal of Applied Biomechanics* 19(4), Nov 2003, 372-377
9. Cerulli, G., Benoit, D., **Lamontagne, M.,** Caraffa, A., Liti, A., & Brué, S. (2003). In-Vivo anterior cruciate ligament strain behaviour during a rapid deceleration movement: case report. *Journal of Knee Surgery Sports Traumatology Arthroscopy,* 11(5), 307-311.
10. Ramsey DK, Wretenberg PK, Benoit D, **Lamontagne M,** & Németh G. (2003). Methodological Concerns Using Intra-cortical Pins to Measure Tibiofemoral Kinematics. *Journal of Knee Surgery Sports Traumatology Arthroscopy,* 11(5), 344-349.
11. Ramsey, D. K., Wretenberg, P., **Lamontagne, M.,** Németh, G. (2003). Electromyographic and biomechanics analysis of anterior cruciate ligament deficiency and functional knee bracing. *Clinical Biomechanics,* 18, 28-34.
12. Benoit, D., **Lamontagne, M.,** Cerulli, G., & Liti, A. (2003). The Clinical Significance of Electromyography Normalisation Techniques in Subjects with Anterior Cruciate Ligament Injury During Treadmill Walking. *Gait & Posture* 18, 56-63.
13. Ramsey, D. K., **Lamontagne, M.,** Wretenberg, P., Valentin, A., Engström, B., & Németh, G. (2001). Assessment of Functional Knee Bracing: An In-vivo Three-dimensional Kinematic Analysis of the Anterior Cruciate Deficient Knee. *Clinical Biomechanics,* 16(1), 61-70.
14. Boucher, V., & Lamontagne, M. (2001). Effects of speaking rate on the control of vocal fold vibration: Clinical implications of active and passive aspects of devoicing. *J Speech Lang Hear Res,* 44(5), 1005-1014.

8.4 Papers in refereed Proceedings (Last six years)

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1. Beaulieu, M.L., **M. Lamontagne** & L. Xu. Gender differences in time-frequency EMG analysis of unanticipated cutting maneuvers. Research Retreat IV – ACL Injuries: The Gender Bias, April 3-5, 2008, Greensboro, NC, USA (Accepted Oral Presentation).
2. Kennedy, M., **M. Lamontagne** & P. Beaulé. The effect of Femoroacetabular Impingement on Hip Kinematics, The 2nd Combined Meeting of the AOA and COA/COR, Quebec City, QC, June 2008 (Accepted Poster)
3. **Lamontagne, M.**, S. Delorme & S. Tavoularis. Biomechanics of ankle joint complex in snowboarding. The 4th International Congress on Science and Skiing 2007, St. Christoph a. Alberg- Austria p.32.
4. Larose Chevalier T, Hart G, **Lamontagne M.** Comparison of biomechanical performances of Flatfree™ Amerityre and traditional pneumatic bicycling tire. Paper presented at: 25th International Symposium on Biomechanics in Sports; August 23-27, 2007; Ouro Preto, Brazil.
5. **Lamontagne M.**, Beaulieu M. Biomechanical analysis of the lower limb of male and female elite soccer players performing an unanticipated cutting manoeuvres. Paper presented at: 6th Biennial ISAKOS Congress, 2007; Florence, Italy.
6. Cerulli G, **Lamontagne M.**, Beaulieu M, Archilietti T, Orsolino M. Effects of football shoe cleat configurations on plantar pressure distribution patterns. Paper presented at: 6th Biennial ISAKOS Congress, 2007; Florence, Italy.
7. Benoit DL, Ramsey DK, **Lamontagne M.**, Xu L, Wretenberg P, Renstrom P. In vivo knee kinematics during gait reveals new rotation profiles and smaller translations. Clin Orthop Relat Res. Jan 2007;454:81-88.
8. **Lamontagne, M.** & J. Singer (2006) Functional Knee Brace Migration: Biomechanical Parameter Changes. 12th ESSKA 2000 Congress, Innsbruck, Austria p. 181.
9. Cerulli G., **M. Lamontagne**, A. Caraffa, D. Checcarelli, A. Architeti (2006) Effect of Football Cleat Configuration and Playing Surfaces on Plantar Pressure Distribution Patterns. 12th ESSKA 2000 Congress, Innsbruck, Austria p. 465.
10. **Lamontagne, M.**, A. Caraffa, G. Cerulli (2006) Neuromuscular Control of the Hamstrings to Protect the ACL: In Vivo Experimentation. 5th World Congress of Biomechanics, Munich Germany.
11. Singer, J. & **M. Lamontagne** (2006) Functional Brace Design and Hinge Placement: Effects on Lower Limb Joint Mechanics 14th Biennial Conference for the Canadian Society for Biomechanics, Waterloo, Canada.
12. Beaulieu M & **M. Lamontagne** (2006) EMG and 3D kinematics of the lower limb of male and female elite soccer layers performing an unanticipated cutting task. Proceedings of the XXIV International Symposium on Biomechanics in Sports (Volume 1) Salzburg, Austria, p.183.
13. Beaulieu, M., **M. Lamontagne** & L. Xu (2006) Three-Dimensional Kinematics and Electromyography of The Lower Limb of Male and Female Elite Soccer Players Performing an Unanticipated Cutting Manoeuvre. 10th International Conferente Orthopaedics, Biomechanics, Sports Rehabilitation (December) Assisi, Italy.
14. **Lamontagne, M.**, A. Caraffa & G. Ceruli (2005). Organizzazione e scopi in biomeccanica. 90° Congresso Nazionale della Società di ortopedia e traumatologia, Florence, Italy.

15. Beaulieu, M., & **Lamontagne, M.** (2005). Three-dimensional kinematics and emg of the lower limb of male and female athletes performing a single limb landing. Paper presented at the XXIIIrd International Symposium on Biomechanics in Sports, Beijing, China.
16. Benoit, D. L., Ramsey, D. K., **Lamontagne, M.**, Xu, L., Wretenberg, P., & Renström, P. (2005, May 29-June 2, 2005). Skin movement artifact during gait and cutting movements measured in vivo. Paper presented at the XXth Congress of the International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, USA.
17. **Lamontagne, M.**, Benoit, D., Ramsey, D., Caraffa, A., & Cerulli, G. (2005). What can we learn from in vivo biomechanical investigations of lower extremity? Paper presented at the XXIIIrd International Symposium on Biomechanics in Sports, Beijing, China.
18. Larose Chevalier, T., Théoret, D., & **Lamontagne, M.** (2005). Three dimensional kinematics and lower limb emg of acl deficient knee joint wearing a functional knee brace during running. Paper presented at the XXIIIrd International Symposium on Biomechanics in Sports, Beijing, China.
19. Théoret, D., & **Lamontagne, M.** (2005, July 31 - August 5). Three dimensional knee joint kinematics and lower limb muscle activity of anterior cruciate ligament deficient knee joint participants wearing a functional knee brace during running. Paper presented at the XXth Congress of the International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, USA.
20. Benoit, D. L., Ramsey, D. K., **Lamontagne, M.**, Xu, L., Wretenberg, P., & Renström, P. (2005). Effect of Skin Movement Artifact on Knee Kinematics during Gait and Cutting Motions Measured In-Vivo. Paper presented at the XVIIth Conference of International Society for Posture and Gait Research, Marseille, France.
21. Cerulli, G., **M. Lamontagne**, A. Caraffa, A. Liti, F. Vercillo and M. Beaulieu (2005) The Role of Hamstrings Muscle to Protect the ACL. International Symposium on Ligaments and Tendon –V. Washington DC, USA. P55.
22. **Lamontagne, M.**, Cerulli, G., Caraffa, A., Liti, A., Brué, S., Vercillo, F., et al. (2004). Biomechanics of knee ligament reconstructions. Paper presented at the 7th Congress of Turkish Society of Sports Traumatology Arthroscopy and Knee Surgery combined with the 3rd Congress of Asia-Pacific Knee Society, Ankara (Turkey).
23. Lafontaine, D., & **Lamontagne, M.** (2004). Knee and Boot 3d Kinematics During Forward Acceleration In Ice Hockey Skating Measured With A Mobile Camera Array. The XXIIInd International Symposium on Biomechanics in Sports, Ottawa, Canada. p.556
24. Singer, J. & **Lamontagne M.** (2004). The Effect of Functional Knee Brace Migration on The Knee Joint Moment and Power Patterns During Walking. The XXIIInd International Symposium on Biomechanics in Sports, Ottawa, Canada. P. 179
25. Cerulli, G., Lamontagne, M., Caraffa, A., Brué, S., Liti, A., & Raggi, A. (2004). Biomechanics of injury: It's role in prevention, rehabilitation and orthopedics outcomes. XXIIInd International Symposium on Biomechanics in Sports, Ottawa. p. 417
26. **M. Lamontagne**, D. Lafontaine, D. L. Benoit, and L Xu. (2004) A Simple Marker Set for 3D Kinematic of The Lower Limb. The Eighth International Symposium On The 3-D Analysis Of Human Movement, Tampa, Fld, USA

27. Cerulli, G., **Lamontagne, M.**, Raggi, A., Liti, A., Carrafa, A., Vercillo, F., and Beaulieu, M. (2004) In Vivo Strain of ACL and Neuromuscular Response during Jumping, Quick Stop and Cut Motions. 11th ESSAK Congress (4th World Congress on Sports Trauma) May 5-8, Athens Greece
28. Cerulli, G., **Lamontagne, M.**, Raggi, A., Liti, A., Carrafa, A., Vercillo, F., and Beaulieu, M. (2004) In Vivo Strain of ACL and Neuromuscular Response during Jumping, Quick Stop and Cut Motions 7th Scandinavian Congress of Medicine and Science in Sports, March 25th-27, Stockholm, Sweden
29. Kendall, M., & **Lamontagne, M.** (2003). Determination of Residual Errors in Three-Dimensional Videography using Still, Moving and Panning Camera Techniques. Paper presented at the The 12th Annual Meeting of European Society of Movement Analysis for Adults and Children, Marseille, France.
30. Lafontaine, D., Benoit, D., Xu, L., & **Lamontagne, M.** (2003). Validation of Joint Rotation and Translation Calculations using a Joint Coordinate System Approach. Paper presented at the The 12th Annual Meeting of European Society of Movement Analysis for Adults and Children, Marseille, France.
31. **Lamontagne, M.**, Singer, J., & Xu, L. (2003 (accepted)). Knee Brace Migration: Determining the Relative Kinematics of the Leg And Brace during Cycling. Paper presented at the The 12th Annual Meeting of European Society of Movement Analysis for Adults and Children, Marseille, France.
32. Delorme, S., Tavoularis, S., & **Lamontagne, M.** (2003). Rotation of the Ankle Joint Complex in Snowboarding. Paper presented at the The International Association of Science and Technology for Development, Rhodes, Greece.
33. **Lamontagne, M.**, Xu, L., Singer, J., Lafontaine, D., & Théoret., D. (2003). Comparison Of Different Methods on The Estimation of Human Joint Kinematics. Paper presented at the American Society of Biomechanics, Toledo USA.
34. Delorme, S., **Lamontagne, M.**, & Tavoularis, S. (2002). Kinematic measurements of snowboarders' ankles. Paper presented at the IVth World Congress of Biomechanics, Calgary (Canada).
35. Benoit DL, R. D., Wretenberg PF, **Lamontagne M**, Németh G. (2002). Methodological concerns using intra-cortical pins to measure tibiofemoral kinematics. Paper presented at the Conference Proceedings of the World Congress of Biomechanics, ,Calgary, Canada.
36. Theoret D, **M. Lamontagne.**, Marshall Kendall, Stefan Potoczny. (2002). The Effect Of Stick Curvature On Wrist Shot Execution Of Peewee And Junior Aged Ice Hockey Players. Paper presented at the The XIX International Symposium on Biomechanics in Sports, Càceres, Spain.
37. **Lamontagne, M.** (2002). Pressure Measurement Between A Functional Knee Brace And The Leg. Paper presented at the The XIX International Symposium on Biomechanics in Sports, Càceres, Spain.
38. Fong, D. T. P., Youlian Hong, **Mario Lamontagne**, Jingxian Li. (2002). A Pilot Study On Comparison Of Cushioning Ability Of Cloth Sport Shoe With Other Athletic Footwear. Paper presented at the The XIX International Symposium on Biomechanics in Sports, Càceres, Spain.
39. Al Hadi M , **M. Lamontagne.** (2002). Differences Amongst Bone, Skin, And Skate Marker-Based Rotations Of The Foot During Push-Off In Skating. Paper presented at the The XIX International Symposium on Biomechanics in Sports, Càceres, Spain.

40. Caraffa, A., **M. Lamontagne**, E. Trinchese and P. L. Antinolfi (2001). Sport Specific Movement that lead to Overuse. Fifth International Conference Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi (Perugia), Italy.
41. **Lamontagne, M.**, D. Benoit, A. Liti, S. Brue, G. Favilli and F. Lamperini (2001). Biomechanical Diagnosis. Fifth International Conference Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi (Perugia), Italy
42. Ramsey, D., **M. Lamontagne**, P. Wretenberg and G. Németh (2001). Neuromuscular Response to bracing ACL Knee Deficient during One-Legged Jump. Fifth International Conference Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi (Perugia), Italy.
43. Benoit, D., G. Cerulli, A. Caraffa, A. Liti, **M. Lamontagne** and C. Greaves (2001). Effect of the Backward Fall in Skiing on the ACL. Fifth International Conference Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi (Perugia), Italy.
44. D. Benoit, G. Cerulli, **M. Lamontagne**, A. Caraffa, C. Greaves, A. Liti, H. Schonuber (2001). The Effect of Rear Spoiler Release on Knee Joint Kinetics during the Backward Fall in Skiing. Proceedings of the XVIIIth of the International Society of Biomechanics Congress, 2001, Zurich/Switzerland, p. 371-372
45. D. Benoit, G. Cerulli, **M. Lamontagne**, A. Caraffa, C. Greaves, A. Liti, H. Schonuber (2001) In-Vivo Acl Strain Behaviour during the Backward Fall in Skiing. Proceedings of the XVIIIth of the International Society of Biomechanics Congress, 2001, Zurich/Switzerland, p.294.
46. Ramsey D, P Wretenberg , **M Lamontagne**, G Németh (2001). Electromyographic activity of subjects with ACL deficiency wearing a functional knee brace. Proceedings of the XVIIIth of the International Society of Biomechanics Congress, Zurich/Switzerland, p.313
47. **M. Lamontagne** (2001) Plantar Pressure Distribution And Forces Measured During Slalom And Giant Slalom Turns Performed By Elite Skiers. Proceedings of the XIX International Symposium on Biomechanics in Sports, San Francisco, USA, p. 211-214.
48. **M. Lamontagne**, J.P. Stothart, H. Sveistrup, N. Murphy, I. El Maach (2001) Motion Analysis (3D) of Skating Skills with an Ice Hockey Skate Prototype and Current High-End Models.. Proceedings of the XVIIIth of the International Society of Biomechanics Congress, Zurich/Switzerland, p.56-57.
49. M. Kendall, D. Théoret, **M. Lamontagne** (2001) Residual errors of three dimensional coordinates obtained using analog and digital video cameras. Proceedings of the XVIIIth of the International Society of Biomechanics Congress, Zurich/Switzerland, p.97.