

**LOUIS F. DRAGANICH, Ph.D.**

President  
 Draganich Consulting, Inc.  
 5743 S Kimbark Ave  
 Chicago, IL 60637  
 (773) 667-5747  
 Fax (773) 667-5747  
 E-mail: [louis@draganichconsulting.com](mailto:louis@draganichconsulting.com)  
 Web: [www.drganichconsulting.com](http://www.drganichconsulting.com)

**EDUCATION**

<u>Year</u>	<u>Degree</u>	
1971	B.A.	Biology, Southern Illinois University
1979	M.S.	Bioengineering, University of Illinois at Chicago
1985	Ph.D.	Bioengineering, University of Illinois at Chicago
2005		REC-TEC EDSMAC / EDCRASH course, Cocoa Beach, FL (Instructor: George Bonnet, February 6-11)

**PROFESSIONAL EXPERIENCE**

7/17/77 to 3/19/79	Research Technician, Department of Orthopaedic Surgery, Rush Presbyterian-St. Luke's Medical Center in Chicago
3/19/79 to 9/19/79	Research Assistant II, Department of Orthopaedic Surgery, Rush Presbyterian-St. Luke's Medical Center in Chicago
9/19/79 to 3/25/85	Research Engineer II, Department of Orthopaedic Surgery, Rush Presbyterian-St. Luke's Medical Center in Chicago
5/1/85 to 12/31/96	Adjunct Assistant Professor, Pritzker Institute of Medical Engineering, Illinois Institute of Technology
3/25/85 to 7/1/92	Assistant Professor & Director of Orthopaedic Biomechanics, Department of Surgery, Section of Orthopaedic Surgery and Rehabilitation Medicine, The University of Chicago
7/1/92 to 6/30/07	Associate Professor & Director of Orthopaedic Biomechanics, Department of Surgery, Section of Orthopaedic Surgery and Rehabilitation Medicine, The University of Chicago
6/30/07	Retired with Emeritus status from University of Chicago

**TEACHING EXPERIENCE**

9/75 to 6/76	Mathematics Tutor, Mathematics Department, Southern Illinois University
3/80 to 6/80	Research Assistant, Department of Mechanical Engineering, University of Illinois at Chicago
9/85 – 3/04	Orthopaedic Biomechanics Lecturer for Orthopaedic Residency Program, University of Chicago
1/86 – 6/04	Biomechanics Readings Course: 342-01 and Biomechanics Research Course 343-01 for Medical Students, University of Chicago

## **HONORS and AWARDS**

- 7/1/80 – 3/25/85 National Institute of Health Research Service Award  
5/94 American Orthopaedic Society for Sports Medicine Cabaud Memorial Award  
8/00 American Society of Biomechanics Clinical Biomechanics Award  
3/01 Foot & Ankle Society Leonard Goldner Award

## **PATENTS**

- 1) Floating Bearing Prosthetic Knee, United States patent number: 5,387,240
- 2) Stabilized Prosthetic Knee, United States patent number: 5,658,342
- 3) Improved Floating Bearing Prosthetic Knee, European patent number: 051078 Great Britain, France, Germany, Spain, Italy (Italian patent number: 20466BE/98)
- 4) Improved Floating Bearing Prosthetic Knee, Canadian patent number: 2,078,228
- 5) Stabilized Prosthetic Knee, Australian patent number: 710550
- 6) Prosthetic Knee with Adjusted Center of Internal/External Rotation, U.S. Serial Number: 08/912,506

## **MEMBERSHIPS IN ORGANIZATIONS**

- 1982 – Present American Society of Mechanical Engineering  
1985 – Present American Society of Biomechanics  
1986 – Present Orthopaedic Research Society  
2005 – Present SAE International

## **INVITED REVIEWER FOR JOURNALS**

1. American Journal of Sports Medicine
2. Archives of Physical Medicine and Rehabilitation
3. Arthritis & Rheumatism
4. Clinical Orthopaedics and Related Research
5. Foot & Ankle International
6. IEEE Transactions On Rehabilitation Engineering
7. Journal of Applied Biomechanics
8. Journal of Biomechanics
9. Journal of Biomechanical Engineering
10. Journal of Orthopaedic Research
11. Medicine and Science in Sports and Exercise
12. Motor Control

## **ASSOCIATIVE REVIEWING EDITOR**

- 1 Foot & Ankle International

## **NATIONAL AND INTERNATIONAL SERVICE**

1. Invited participant in the Foundation for Sports Medicine Education and Research Conference to define the role of extra-articular augmentation in the anterior cruciate deficient knee by consensual validation in Aspen, Colorado. July 13-15, 1989.
2. Organizing Committee Chairman for the 1992 North American Congress on Biomechanics.

3. Member of NIH Ad Hoc Review Group: ORTH (AHR-A1), May 22, 1992.
4. Ad Hoc Grant Reviewer for United States Department of the Army, AIBS/Defense Women's Health Army Research Program, November 21, 1994
5. External Grant Reviewer for Canadian Institutes of Health Research, November 23, 2000
6. External Grant Reviewer for Canadian Michael Smith Foundation for Health Research, March, 2003

#### **SERVICE FOR UNIVERSITY OF CHICAGO DEPARTMENT OF SURGERY**

1. Department of Surgery Research Committee (1994-2002) Review grants for internal funding. The committee also makes recommendations to the Chairman of Surgery on internal funding issues.

#### **SCIENTIFIC SESSIONS MODERATED**

1. Moderator for session entitled "Anterior Cruciate Ligament" at the Orthopaedic Research Society Annual Meeting on February 15, 1993.
2. Moderator for session entitled "Gait" at the American Society Of Biomechanics on October 23, 1993.
3. Moderator for session entitled "Joints" at the American Society Of Biomechanics on October 15, 1994.
4. Moderator for session entitled "Gait And Lower Extremity Joint Mechanics" at the 1996 ASME Mechanical Engineering Congress and Exposition on November 22, 1996.
5. Moderator for session entitled "Knee Kinematics" at the Orthopaedic Research Society Annual Meeting on February 12, 1997.
6. Moderator for session entitled "Gait Analysis Applications" at the Summer Bioengineering Conference of the American Society of Mechanical Engineers on June 15, 1997.
7. Moderator for session entitled "Knee Mechanics" at the Orthopaedic Research Society Annual Meeting on March, 1998.
8. Moderator for session entitled "THR Kinematics at the 12th International Symposium For Technology in Arthroplasty in Chicago on September 25, 1999.
9. Moderator for session entitled "Orthopaedics" at the American Society Of Biomechanics on July 20, 2000.

#### **PEER REVIEW JOURNAL ARTICLES PUBLISHED OR IN PRESS**

1. Draganich LF, Andriacchi TP, Strongwater AM and Galante JO: Electronic Measurement of Instantaneous Foot-Floor Contact Patterns During Gait. *Journal of Biomechanics*, 13:875-880, 1980.
2. Draganich LF, Andriacchi TP, and Galante JO: (Technical Note). Technique of Embedding Strain Gages Within Curing Bone Cement. *Journal of Biomechanics*. 10:789, 1982.
3. Draganich LF, Andriacchi TP, and Andersson GBJ: Interaction Between Intrinsic Knee Mechanics and the Knee Extensor Mechanism. *Journal of Orthopaedic Research*, 5:539-547, 1987.

4. Draganich LF, Reider B, Miller P: An In Vitro Study of the Mueller ALFTL Reconstruction in the Anterior Cruciate Ligament Deficient Knee. *American Journal of Sports Medicine*, 17(3):357-362, 1989.
5. Draganich LF, Jaeger R and Kralj A: Coactivation of the Hamstrings and Quadriceps During Extension of the Knee. *Journal of Bone and Joint Surgery*, 71A:1075-1081, 1989.
6. Draganich LF and Vahey J: An In Vitro Study of Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstrings Forces. *Journal of Orthopaedic Research*, 8:57-63, 1990.
7. Draganich LF, Reider B, Ling M, and Samuelson M: An In Vitro Study of a Combined Intra and Extraarticular Reconstruction in the Anterior Cruciate Ligament Deficient Knee. *American Journal of Sports Medicine* 18:262-266, 1990.
8. Pottenger LA, Phillips FM, and Draganich, LF: The Effect of Marginal Osteophytes on Reduction of Varus-Valgus Instability in Osteoarthritic Knees. *Arthritis and Rheumatism* 33:853-858, 1990.
9. Draganich LF, Nicholas RW, Shuster JK, Sathy MR, Chang AF, and Simon MA: The Effects of Resection of the Proximal Fibula on Knee Stability and Gait. *Journal of Bone and Joint Surgery* 73A:575-583, 1991.
10. Vahey J and Draganich LF: Tensions in the Anterior and Posterior Cruciate Ligaments of the Knee During Passive Loading. *Journal of Orthopaedic Research*, 9:529-538, 1991.
11. Raasch WG, Larkin JJ, and Draganich LF: Assessment of the Posterior Malleolus as a Restraint to Posterior Subluxation of the Ankle. *Journal of Bone and Joint Surgery*, 74A:1201-1206, 1992.
12. D'Agata SD, Pearsall AW, Reider B, and Draganich LF: An In Vitro Analysis of Patellofemoral contact Pressures Following Procurement of the Central One-Third Patellar Tendon. *American Journal of Sports Medicine*, 21:212-219, 1993.
13. Grabiner MD, Koh TJ, and Draganich LF: Neuromechanics of the Patellofemoral Joint. *Medicine and Science in Sports and Exercise*, 26:10-21, 1994.
14. Brage ME, Draganich LF, Pottenger LA, and Curran JJ: Knee Laxity in Symptomatic Osteoarthritis. *Clinical Orthopaedics and Related Research*, 304:184-189, 1994.
15. Draganich LF, Sathy MR, and Reider B: The Effect of Thigh and Goniometer Restraints on the Reproducibility of the Genucom Knee Analysis System. *American Journal of Sports Medicine*, 22:627-631, 1994.
16. Chou LS, Song SM, and Draganich LF: Predicting the Kinematics and Kinetics of Gait Based on the Optimum Trajectory of the Swing Limb. *Journal of Biomechanics*, 28:377-386, 1995.
17. Draganich LF, Hsieh YF, and Reider B: Iliotibial Band Tenodesis: A New Strategy for Attachment. *American Journal of Sports Medicine*, 23:186-195, 1995.
18. Burns WC, Draganich LF, Pyevich M, and Reider B: The Effect of Femoral Tunnel Position and Graft Tensioning Technique on Laxity of the Posterior Cruciate Ligament Reconstructed Knee. *American Journal of Sports Medicine*, 23:424-430, 1995.
19. Draganich LF, Hsieh Y-F, and Reider B: Strategies for attachment site location and twist of the intraarticular anterior cruciate ligament graft. *Journal of Sports Medicine*, 24:342-349, 1996.

20. Pearsall AW, Pyevich M, Draganich LF, and Reider B: An in vitro study of knee stability after reconstruction of the posterior cruciate ligament. *Clinical Orthopaedics And Related Research*, 327:264-271, 1996.
21. Samuelson M, Draganich LF, Zhou XZ, Krummins P, and Reider B: The effects of reconstructing the knee on combined ACL and anterolateral capsular deficiencies. *American Journal of Sports Medicine*, 24:492-497, 1996.
22. Chou LS, Draganich LF, and Song SM: Minimum energy trajectories of the swing ankle when stepping over obstacles of different heights. *Journal of Biomechanics*, 30:115-120, 1997.
23. Chou L-S and Draganich LF: Stepping over an obstacle increases the motions and moments of the trailing limb in young adults. *Journal of Biomech*, 30:331-337, 1997.
24. Hsieh Y-F, Draganich LF, Ho SH, and Reider B: The effects of removal and reconstruction of the anterior cruciate ligament on patellofemoral kinematics. *American Journal of Sports Medicine*, 26:201-209, 1998.
25. Chou L-S and Draganich LF: Placing the trailing foot closer to an obstacle reduces flexion of the hip, knee, and ankle to increase the risk of tripping. *Journal of Biomech*, 31:685-691, 1998.
26. Hsieh Y-F and Draganich LF: Increasing quadriceps loads affect the lengths of the ligaments and kinematics of the knee. *Journal of Biomechanical Engineering*, 120:750-756, 1998.
27. Chou L-S and Draganich LF: Increasing obstacle height and decreasing toe-obstacle affect the joint moments of the stance limb differently when stepping over an obstacle. *Gait and Posture*, 8:186-204, 1998.
28. Draganich LF, Hsieh, Ho S, and Reider: Placing the intraarticular ACL graft on the average most isometric line does not return reproducible kinematics from knee to knee. *American Journal of Sports Medicine*, 27:329-334, 1999.
29. Draganich LF, Whitehurst JB, Chou LS, Piotrowski G, Pottenger LA, and Finn HA: Effects of the Rotating-Hinge Total Knee Replacement on gait and stair stepping. *Journal of Arthroplasty*, 14:743-755, 1999.
30. Draganich LF and Pottenger LA: The TRAC PS mobile bearing prosthesis design rationale and in vivo three-dimensional laxity. *Journal of Arthroplasty*, 15:102-112, 2000.
31. Hsieh YF, Draganich LF, and Mass DA: Biomechanical analysis of reconstructed metacarpalphalangeal joint of the thumb. *Journal of Hand Surgery*, 25:313-321, 2000.
32. Hsieh Y-F, Draganich LF, Piotrowski GA, and Mass DP: The effects of transection and reconstruction of the radial capsuloligamentous structures on kinematics of the metacarpophalangeal joint of the index finger. *Clinical Orthopedics and Related Research*, 379:270-282, 2000.
33. Draganich LF, Zacny J, Klafta J, Karrison T: The effects of antidepressants on obstructed and unobstructed gait in the healthy elderly. *J Gerontology: Medical Sciences*, 56A:M36-M41, 2001.
34. Friedman MA, Draganich LF, Toolan B, and Brage ME: The Effects of Adult Acquired Flatfoot Deformity on Tibiotalar Joint Contact Characteristics. The effects of adult acquired flatfoot deformity on tibiotalar joint contact characteristics. *Foot and Ankle International*, 22:3, 241-246, 2001.

35. Chou LS, Kaufman KR, Brey RH, and Draganich LF: Motion of the whole body's center of mass when stepping over obstacles of different heights. *Gait & Posture*. 13(1):17-26, 2001.
36. Hsieh Y-F, Draganich LF, Ho SH, and Reider B: The effects of removal and reconstruction of the anterior cruciate ligament on patellofemoral contact characteristics. *American Journal of Sports Medicine*, 30:121-127, 2002.
37. Zhou X, Draganich LF and Amarouche F: A dynamic model for simulating a trip and fall during gait. *Medical Engineering & Physics*, 24:121-127, 2002.
38. Draganich LF, Piotrowski GA, Pottenger GA, and Martell J: The effects of early rollback in total knee replacement on stair stepping. *Journal of Arthroplasty*, 17:723-730, 2002.
39. Pottenger LA and Draganich L: Prosthetic Design and Early Clinical Results of the TRAC (Two Radii Area Contact) Knee Prosthesis. *Surg Technol Int*, 10:201-204, 2002.
40. Shrader MW, Draganich LF, Pottenger LA and Piotrowski GA: The Effects of Pain-relieving Knee Injections on the Gait of Patients with Osteoarthritis. *Clinical Orthopaedics and Related Research*, 421:188-193, 2004.
41. Draganich LF and Kuo C: The effects of walking speed on obstacle crossing in healthy young and healthy older adults. *Journal of Biomechanics*, 37:889-896, 2004.
42. Draganich LF, Greenspahn S, Mass D: Effects of intrinsic muscles on the kinematics of the metacarpalphalangeal joint of the thumb. *Journal of Hand Surgery*, 29:481-488, 2004.
43. Pandya N, Draganich L, Mauer A, Piotrowski GA, Pottenger, LA: Knee osteoarthritis increases the propensity to trip on an obstacle. *Clinical Orthopaedics and Related Research*, 431:450-456, 2005.
44. Mauer A, Draganich L, Pandya N, Piotrowski GA, Pottenger L: Mauer A, Draganich L, Pandya N, Piotrowski GA, Pottenger L: The effects of total knee replacement on obstacle avoidance. *Clinical Orthopaedics and Related Research*, 433:160-165, 2005.
45. Havenhill T, Toolan B, Draganich LF: Effects of medial calcaneal osteotomy and corrective foot orthoses on the contact characteristics of the tibiotalar joint in the flatfoot. *Foot & ankle International*, 26:607-613, 2005.
46. Matzon J, Widmer B, Draganich L, Mass D, Phillips C: Anatomy of the Coronoid Process. In Press, *J Hand Surgery (AM)*, 31(8):1272-1280, 2006.
47. Draganich L, Reider B, Rimington B, Piotrowski G, Mallik K, Nasson S: The Effectiveness of Self-Adjustable Custom and Self-Adjustable Off-The-Shelf Bracing in the Treatment of Varus Gonarthrosis *Journal of Bone and Joint Surgery (AM)*, 88:2645-2652, 2006.
48. Pandya N, Draganich L, Pottenger, L: Pain relief in knee osteoarthritis reduces the propensity to trip on an obstacle. *Gait & Posture*, 25(1):106-111, 2007.
49. Colman M, Hanna J, Mass DP, Draganich LF: Effects of the Deep Anterior Oblique and Dorsoradial Ligaments on Trapeziometacarpal Joint Stability. *J Hand Surgery [Am]*, 32(3): 310-7, 2007.

#### **MINIMAL-PEER REVIEW JOURNAL ARTICLES**

1. Hsieh Y-F and Draganich LF: Knee kinematics and ligament lengths during physiologic levels of isometric quadriceps loads. *The Knee*, 4:145-154, 1997

### COMMENT TO EDITOR

1. Draganich LF and Simon MA: Comment on: Comparative assessment of gait after limb-salvage procedures. *Journal of Bone and Joint Surgery (AM)*, 1990 Oct;72(9):1430.

### ABSTRACTS (PEER REVIEW)

1. Draganich LF, Andriacchi TP, Strongwater AM, and Galante JO: Measurement of Instantaneous Foot-Floor Contact Patterns. *Proceedings of the 32nd Annual Conference on Engineering in Medicine and Biology*, October, 1979.
2. Draganich LF, Andriacchi TP and Galante JO: Measurement of Instantaneous Foot-Floor Contact Patterns. *Transactions of the 26th Annual Orthopaedic Research Society Meeting*, February, 1980.
3. Hampton SJ, Andriacchi TP, Draganich LF, and Galante JO: Stresses Following Stem Cement Bond Failure in Femoral Total Hip Implants. *Transactions of the 27th Annual Orthopaedic Research Society Meeting*, Las Vegas, Nevada, February, 1981.
4. Draganich LF, Andriacchi TP, Hampton SJ, and Galante JO: The Relationship of Normal and Shear Stresses Producing Cement-Metal Bone Failure. *Transactions of the Orthopaedic Research Society*, New Orleans, Louisiana, January 18-21, 1982.
5. Weinstein JN, Andriacchi TP, Draganich LF, and Galante JO: A Relationship of Total Knee Design and Kinematics to Patient Function. *Trans. 29th Annual Meeting, Ortho Research Society*, p. 39, 1983.
6. Draganich LF, Andriacchi TP, Weinstein JN, and Galante JO: Effects of Abnormal Functional Loading and Cement/Bone Interdigitation on Total Knee Replacement Stresses. *Trans. 29th Annual Meeting, Orthopaedic Research Society*, p. 351, 1983.
7. Draganich LF, Andersson GBJ, Andriacchi TP, and Galante JO: The Effect of the Cruciate Ligaments on Femoral-Tibial Contact Movement During Knee Flexion. *Trans. 30th Annual Meeting, Orthopaedic Research Society*, p. 29, 1984.
8. Draganich LF, Andriacchi TP: Three Dimensional Moments Produced by the Knee Joint Musculature. *Trans. 31st Annual Meeting, Orthopaedic Research Society*, p. 137, 1985.
9. Draganich LF, Andriacchi TP: The Influence of Knee Muscle Antagonists on Knee Joint Loading. *Trans. 31st Annual Meeting, Orthopaedic Research Society*, p. 138, 1985.
10. Jaeger RO, Kralj A, and Draganich LF: Execution of Simple Monoarticular Movements in the Presence of Anatomical Constraints. *Abstracts of the Society for Neuroscience*, 12:971, 1986.
11. Draganich LF, Reider B and Miller P: The Biomechanical Efficacy of the Mueller ACL Reconstruction Procedure. *Trans. 33rd Annual Meeting, Orthopaedic Research Society*, p. 158, 1987.
12. Draganich LF, Jaeger R and Kralj A: EMG Activity of the Quadriceps and Hamstrings During Monoarticular Knee Extension and Flexion. *Trans. 33rd Annual Meeting, Orthopaedic Research Society*, p. 283, 1987.
13. Reider B and Draganich LF: An In Vitro Study of the Mueller ALFTL Tenodesis in the Anterior Cruciate Ligament Deficient Knee. *Proceedings of the International Society of the Knee Meeting*, Sydney, Australia, April 6-10, 1987, *American Journal of Sports Medicine*, 15:395, 1987.
14. Draganich LF and Vahey JW: An In Vitro Study of Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstring Forces. *Trans. 34th Annual Meeting, Orthopaedic Research Society*, p. 203, 1988.

15. Draganich LF, Jaeger RJ, and Kralj A: Synergism of the Hamstrings with the Anterior Cruciate Ligament. Proc. 6th Annual Meeting, Euro Soc. Bio., p. 24, 1988.
16. Draganich LF and Vahey JW: Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstrings Forces. Proc. 6th Annual Meeting, Euro Soc. Bio., p. C2, 1988.
17. Draganich LF and Vahey JW: An In Vitro Study of Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstrings Forces. Proc. 13th Annual Meeting, American Society of Biomechanics, p. 44, 1989.
18. Draganich LF, Jaeger, RJ, and Kralj A: Coactivation of the Hamstrings and Quadriceps During Extension of the Knee. Proc. 13th Annual Meeting, American Society of Biomechanics, p. 138, 1989.
19. Ling M and Draganich LF: Knee Motion and Ligament Length Changes During Quadriceps Generated Extension. Trans. 36th Annual Meeting, Orthopaedic Research Society, p. 516, 1990.
20. Pottenger L, Phillips FM, and Draganich LF: Effect of Marginal Osteophytes in Reducing Varus/Valgus Instability in Osteoarthritic Knees. Trans 36th Annual Meeting, Orthopaedic Research Society, p. 503, 1990.
21. Vahey JW and Draganich LF: Tensions in the Anterior and Posterior Cruciate Ligaments of the Knee During Passive Loading. Abstracts of the First World Congress of Biomechanics, 1:152, 1990.
22. Raasch W, Larkin J, Draganich LF: Assessment of the Posterior Malleolus as a Restraint to Posterior Ankle Subluxation. Trans. 37th Annual Meeting, Orthopaedic Research Society, 1991.
23. Dean LP, Draganich LF, Mass DP: The Effect of the Radial Collateral Ligament on the Kinematics of the Metacarpophalangeal Joint During Flexor Tendon Loading. Trans. 37th Annual Meeting, Orthopaedic Research Society, 1991.
24. Brage M, Draganich LF, Chang A, Pottenger L, and Curran JJ: The Effect of Osteoarthritis on Knee Joint Stability and Gait. Trans. 37th Annual Meeting, Orthopaedic Research Society, 1991.
25. Draganich LF, Nicholas RW, Shuster JK, Sathy MR, and Simon MA: The Effect of Resection of the Proximal Fibula on Stability of the Knee and on Gait. Ortho Trans., Spring 1991.
26. Chou LS, Song SM, and Draganich, LF: Predicting the Kinematics of Gait Based Optimum Trajectory of the Swing Leg. Proceedings of the North American Congress on Biomechanics II: 375-376, 1992.
27. Chou LS, Draganich LF, and Song SM: Predicting the Kinematics and Kinetics of Gait Using Dynamic Programming. ASME Advances in Bioengineering 523-526, 1993.
28. Draganich LF, Hsieh Y-F, and Reider B: A 180 degree twist in the iliotibial band tenodesis improves isometry. Trans Orthop Res Soc 19:614, 1994.
29. Draganich LF, Hsieh Y-F, and Reider B; Strategies for attachment of the intraarticular anterior cruciate ligament graft. Trans Orthop Res Soc 19:613, 1994.
30. Burns, WC, Draganich, LF, Pyevich M, and Reider B: The effect of femoral tunnel position and graft tensioning and technique on laxity of the posterior cruciate ligament reconstructed knee. Trans Orthop Res Soc 19:628, 1994.
31. Burns, WC, Draganich, LF, Pyevich M, and Reider B: The effect of femoral tunnel position and graft tensioning and technique on laxity of the posterior cruciate ligament reconstructed knee. Abstracts of the Am Soc Sports Med 20:43-44, 1994.

32. Hsieh Y-F and Draganich LF: The effect of quadriceps load on ligament lengths in the knee. Conference Proceedings of the American Society of Biomechanics, October 13-15, 1994.
33. Chou LS, Draganich LF, and Song SM: Minimum energy trajectory of the swing ankle when stepping over an obstacle. ASME Advances in Bioengineering 28:189-190, 1994.
34. Draganich LF, Whitehurst JB, Chou LS, Piotrowski G, Pottenger LA, and Finn HA: Gait in Ascending and Descending Steps in Patients with the Rotating-Hinge Total Knee Replacement. Final Program for American Academy of Orthopaedic Surgeons 62:201, 1995
35. Hsieh Y-F and Draganich LF: The effect of quadriceps load on ligament lengths in the knee. Conference Proceedings of the American Society Of Biomechanics 18:41-42, 1994.
36. Chou L-S and Draganich LF: Kinetics of the stance limb when stepping over obstacles of different heights. Proceedings Of The 1995 Bioengineering Conference 29:285-286, 1995.
37. Hsieh Y-F and Draganich LF: The effects of anterior cruciate ligament deficiency and reconstruction on the three-dimensional tracking of the patella. Proceedings Of The 1995 Bioengineering Conference 29:381-382, 1995.
38. Chou LS, Draganich LF, and Song SM: Minimum energy trajectories of the swing ankle when stepping over obstacles of different heights. Conference Proceedings of the American Society of Biomechanics 19:11-12, 1995.
39. Chou L-S and Draganich LF: Kinematics of the lower limbs when stepping over obstacles of different heights. Conference Proceedings of the American Society of Biomechanics 19:217-218, 1995.
40. Chou L-S and Draganich LF: Kinetics of the trailing limb when stepping over obstacles of different heights. Conference Proceedings of the American Society of Biomechanics 19:219-220, 1995.
41. Hsieh Y-F and Draganich LF: The effects of anterior cruciate ligament deficiency and reconstruction on the contact characteristics of the patellofemoral joint. Conference Proceedings of the American Society of Biomechanics 19:3-4, 1995.
42. Hsieh Y-F and Draganich LF: The effects of anterior cruciate ligament deficiency and reconstruction on patellofemoral kinematics. Conference Proceedings of the American Society of Biomechanics 19:251-252, 1995.
43. Chou L-S and Draganich LF: The effects of obstacle height on joint kinematics of the trailing limb. Proceedings of the 12th International Conference on Advanced Science and Technology 12:153-160, 1996
44. Chou L-S and Draganich LF: Effects of limb-obstacle proximity on the joint moments of the trailing limb. Conference Proceedings of the American Society of Biomechanics 20:33-34, 1996.
45. Hsieh Y-F, Draganich LF, Ho S, and Reider B: Patellofemoral center of pressure and centroid of contact area: Effects of removal and reconstruction of the anterior cruciate ligament. Conference Proceedings of the American Society of Biomechanics 20:71-73, 1996.
46. Chou L-S and Draganich LF: Effects of obstacle height and proximity on temporal-distance measurements and on kinematics of the trailing limb. Conference Proceedings of the American Society of Biomechanics 20:137-138, 1996.

47. Hsieh Y-F and Draganich LF: Mathematical model for the determination of zero strain reference. Conference Proceedings of the American Society of Biomechanics 20:201-202, 1996.
48. Hsieh Y-F, Draganich LF, Mass DP, and Piotrowski GA: The effects of transection of the radial capsuloligamentous structures on kinematics of the metacarpophalangeal joint. Trans Orthop Res Soc 22:279, 1997.
49. Draganich LF and Chou L-S: Model for producing tripping of the trailing foot when stepping over an obstacle. ASME Proceedings of the 1997 Bioengineering Conference 35:555-556, 1997.
50. Chou L-S and Draganich LF: Reducing the distance between an obstacle and the trailing foot during stance reduces the toe-obstacle distance. ASME Proceedings of the 1997 Bioengineering Conference 35:557-558, 1997.
51. Hsieh Y-F, Draganich LF, Mass DP, and Piotrowski GA: Metacarpophalangeal joint kinematics of the index finger during physiologic levels of muscle loading: Stabilizing roles of the radial capsuloligamentous structures. Conference Proceedings for the 21st Annual Meeting of the American Soc of Biomech 21:218, 1997.
52. Draganich LF and Chou L-S: Model for producing tripping of the trailing foot when stepping over an obstacle. Conference Proceedings for the 21st Annual Meeting of the American Soc of Biomech 21:212, 1997.
53. Chou L-S and Draganich LF: The effect of toe-obstacle distance on toe-obstacle clearance of the trailing limb. Conference Proceedings for the 21st Annual Meeting of the American Soc of Biomech 21:67, 1997.
54. Hsieh Y-F, Draganich LF, Mass DP, and Piotrowski GA: The effects of reconstruction of the radial collateral ligament on the kinematics of the metacarpalphalangeal joint of the index finger. Trans Orthop Res Soc 23:753, 1998.
55. Chou L-S and Draganich LF: Joint motion patterns of the leading and trailing limb when stepping over an obstacle. Conference Proceedings of the Third World Congress of Biomechanics 3:377, 1998.
56. Draganich LF and Pottenger LA: TRAC PS knee design and clinical outcome. 11th Annual Symposium of the International Symposium for Technology in Arthroplasty 11:96-97, 1998.
57. Draganich LF, Pottenger LA, Piotrowski GA: Three-dimensional knee laxity of TRAC PS. Trans Orthop Res Soc 24:975, 1999.
58. Kuo C and Draganich LF: Effect of gait speed on obstacle crossing of the trailing limb. Conference Proceedings for the 23rd Annual Meeting of the American Society of Biomechanics 23:42-43, 1999.
59. Friedman MA, Draganich LF, Toolan B, Brage, ME: The effects of adult acquired flatfoot deformity on tibiotalar joint contact. Conference Proceedings for the 23rd Annual Meeting of the American Society of Biomechanics 23:168-179, 1999.
60. Coan B and Draganich LF: A study of isometric regions in anterior cruciate ligament intact and deficient knees under clinically significant loading conditions. Conference Proceedings for the 23rd Annual Meeting of the American Society of Biomechanics 23:192-193, 1999.

61. Draganich LF, Pottenger LA, Piotrowski GA: Three-dimensional laxities of conforming and nonconforming total knee replacements. Abstracts for the 12th Annual International Symposium for Technology in Arthroplasty 1999.
63. Draganich LF, Pottenger LA, Piotrowski GA: The effects of conforming and nonconforming total knee replacements on three-dimensional knee laxity. *Trans Orthop Res Soc* 25:442, 2000.
64. Shrader WM, Draganich LF, Pottenger LA, Piotrowski GA: The effects of pain relieving knee injections on the gait of patients with osteoarthritis. *Trans Orthop Res Soc* 25:258, 2000.
65. Friedman MA, Draganich LF, Toolan B, Brage, ME: The effects of adult acquired flatfoot deformity on tibiotalar joint contact. 67th Annual Meeting Proceedings of AAOS 67:403-404, 2000.
66. Brage ME, Friedman MA, Draganich LF, Toolan B: The effects of Adult Acquired Flatfoot Deformity on Tibiotalar Joint Contact Characteristics. Proceedings for the American Orthopaedic Foot and Ankle Society 16th Annual Meeting, 16:38, 2000.
67. Draganich LF, Zacny J, Klawns J, Karrison T: The effects of antidepressants on obstructed and unobstructed gait in the healthy elderly. Conference Proceedings for the 24th Annual Meeting of the American Society of Biomechanics 24:1-2, 2000.
68. Draganich LF, Piotrowski GA, Pottenger LA, Martell J: Effects of posterior stabilizer engagement angle in total knee replacement on stair stepping. *Trans Orthop Res Soc* 26:212, 2001.
69. MacDougall J and Draganich LF: Effects of prefabricated foot orthoses on adduction-abduction knee and ankle moments during gait. *Trans Orthop Res Soc* 27: 2002.
70. Draganich LF, Piotrowski GA, Pottenger LA, Martell J: The effects of early rollback on quadriceps efficiency during stair stepping” at the Fourth World Congress of Biomechanics in Calgary, Canada, August 4-9, 2002.
71. Draganich LF, Pottenger LA, Shrader WM, Piotrowski GA: The effects of pain relieving knee injections on the gait of patients with osteoarthritis. Pain-relieving knee injections in osteoarthritis increase knee loading during gait but not during stair stepping. *Trans Orthop Res Soc* 28:1264, 2003.
72. Greenspahn S, Draganich LF, Mass D: The effects of reconstruction of the metacarpalphalangeal joint of the thumb during tip pinch for intrinsic muscle loading. *Trans Orthop Res Soc* 28:1204, 2003.
73. Pandya N, Draganich L, Mauer A, Piotrowski GA, Pottenger, LA: The effects of painful knee osteoarthritis on obstacle avoidance. *Trans Orthop Res Soc* 29:920, 2004.
74. Mauer A, Draganich L, Pandya N, Piotrowski GA, Pottenger L: The effects of total knee replacement on obstacle avoidance. *Trans Orthop Res Soc* 29:1032, 2004.
75. Hampole CV, Draganich LF, Mass DP, Piotrowski GA, The Effects of Isolated and Complex Type-II Coronoid Fractures on Three-Dimensional Elbow Laxity. *Trans Orthop Res Soc* 30:642, 2005.
76. Pandya N, Draganich L, Piotrowski GA, Pottenger, LA: The effects of pain relief on obstacle avoidance in knee osteoarthritis. *Trans Orthop Res Soc* 30:1411, 2005.

## **BOOK CHAPTERS**

1. Andriacchi TP, Galante JO, Draganich LF: Relationship Between Knee Extensor Mechanics and Function Following Total Knee Replacement. *The Knee: Papers of the First Scientific Meeting of the Knee Society*. Edited by Lawrence D. Dorr. University Park Press, pp. 83-94, 1985.

## **PRESENTATIONS AT MEETINGS**

1. "Measurement of Instantaneous Foot-Floor Contact Patterns" at the 32nd Annual Conference of Engineering in Medicine and Biology, October 6-10, 1979, Denver, Colorado.
2. "Measurement of Instantaneous Foot-Floor Contact Patterns" at the 26th Annual Meeting of the Orthopedic Research Society, February 5-8, 1980, Atlanta, Georgia.
3. "The Effect of the Cruciate Ligaments on Femoral-Tibial Contact Movement During Knee Flexion" at the 30th Annual Orthopaedic Research Society Meeting, February 6-9, 1984, Atlanta, Georgia.
4. "Three Dimensional Moments Produced by the Knee Joint Musculature" at the 31st Annual Orthopaedic Research Society Meeting, Las Vegas, Nevada, January 21-24, 1985.
5. "The Influence of Knee Muscle Antagonists on Knee Joint Loading" at the 31st Annual Orthopaedic Research Society Meeting, Las Vegas, Nevada, January 21-24, 1985.
6. "The Biomechanical Efficacy of the Mueller ACL Reconstruction Procedure" at the 33rd Annual Orthopaedic Research Society Meeting, San Francisco, California, January 19-22, 1987.
7. "EMG Activity of the Quadriceps and Hamstrings During Monarticular Knee Extension and Flexion" at the 33rd Annual Orthopaedic Research Society Meeting, San Francisco, California, January 19-22, 1987.
8. "An In Vitro Study of the Mueller ALFTL Tenodesis in the Anterior Cruciate Ligament Deficient Knee" to the Chicago Orthopaedic Society, Chicago, Illinois, January 8, 1988.
9. "An In Vitro Study of Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstrings Forces" at the 34th Annual Orthopaedic Research Society Meeting, Atlanta, Georgia, February 1, 1988.
10. "An In Vitro Study of the Mueller ALFTL Tenodesis in the Anterior Cruciate Ligament Deficient Knee" at the American Orthopaedic Society for Sports Medicine, Atlanta, Georgia, February 7, 1988.
11. "Synergism of the Hamstrings with the Anterior Cruciate Ligament" at the European Society of Biomechanics, Bristol, England, September 11-14, 1988.
12. "Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstrings Forces" at the European Society of Biomechanics, Bristol, England, September 11-14, 1988.
13. "An In Vitro Study of Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstrings Forces" at the 13th Annual Meeting of the American Society of Biomechanics, August 23-25, 1989, Burlington, Vermont.
14. "Coactivation of the Hamstrings and Quadriceps During Extension of the Knee" at the 13th Annual Meeting of the American Society of Biomechanics, Burlington, Vermont, August 23-25, 1989.

15. "Knee Motion and Ligament Length Changes During Quadriceps Generated Extension" at the 36th Annual Orthopaedic Research Society Meeting, New Orleans, Louisiana, February 5-8, 1990.
16. "Tensions in the Anterior and Posterior Cruciate Ligaments of the Knee During Passive Loading" at the First World Congress of Biomechanics, University of California, San Diego, August 30-September 4, 1990.
17. "A 180 degree twist in the iliotibial band tenodesis improves isometry" at the 40th Annual Orthopaedic Research Society Meeting, New Orleans, Louisiana, February 21-24, 1994.
18. "Strategies for attachment of the intraarticular anterior cruciate ligament graft" at the 36th Annual Orthopaedic Research Society Meeting, New Orleans, Louisiana, February 21-24, 1994.
19. "Gait in ascending and descending steps in patients with the rotating-hinge total knee replacement" at the 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, Florida, February 16-21, 1995.
20. "Model for producing tripping of the trailing foot when stepping over an obstacle" Summer Bioengineering Conference of the American Society of Mechanical Engineers, Sun River, Oregon on June 15, 1997
21. "Reducing the distance between an obstacle and the trailing foot during stance reduces the toe-obstacle distance" Summer Bioengineering Conference of the American Society of Mechanical Engineers, Sun River, Oregon on June 15, 1997
22. "Metacarpophalangeal joint kinematics of the index finger during physiologic levels of muscle loading: Stabilizing roles of the radial capsuloligamentous structures" 21st Annual Meeting of the American Society of Biomechanics, Clemson, N.C., on September 26, 1997.
23. "Model for producing tripping of the trailing foot when stepping over an obstacle" Conference Proceedings for the 21st Annual Meeting of the American Society of Biomechanics, Clemson, N.C., on September 26, 1997.
24. "TRAC PS knee design and clinical outcome" 11th Annual Symposium of the International Society for Technology in Arthroplasty, Marseille, France, October 1-3, 1998.
25. "Three-dimensional knee laxity of TRAC PS and clinical outcome" 11th Annual Symposium of the International Society for Technology in Arthroplasty Marseille, France, October 1-3, 1998.
26. "Three-dimensional laxity of conforming and nonconforming total knee replacements. 12th Annual Symposium of the International Society for Technology in Arthroplasty, Chicago, IL, September 23-25, 1999.
27. TRAC design rationale" French Orthopaedic Meeting entitled "Journées D'orthopedie De Fort De France", February 8, 2000.
28. "The effects of conforming and nonconforming total knee replacements on three-dimensional knee laxity. 46th Annual Meeting of the Orthopaedic Research Society, March 12-15, 2000.
28. The effects of adult acquired flatfoot deformity on tibiotalar joint contact. 67th Annual Meeting Proceedings of AAOS March 15-19, 2000.

29. Draganich LF, Zacny J, Klawns J, Karrison T: The effects of antidepressants on obstructed and unobstructed gait in the healthy elderly. 24th Annual Meeting of the American Society of Biomechanics July 20-22, 2000.
30. Effects of the Finn Rotating Hinge Total Knee Replacement on gait and stair stepping” French Orthopaedic Meeting entitled “Journées D’orthopedie De Fort De France”, March 20, 2001.
31. Draganich LF, Piotrowski GA, Pottenger LA, Martell J: Effects of posterior stabilizer engagement angle in total knee replacement on stair stepping. *Trans Orthop Res Soc* 26:212, 2001.
28. Draganich LF, Piotrowski GA, Pottenger LA, Martell J: The effects of early rollback on quadriceps efficiency during stair stepping” at the Fourth World Congress of Biomechanics in Calgary, Canada, August 4-9, 2002.
29. Draganich LF, Pottenger LA, Shrader WM, Piotrowski GA: The effects of pain relieving knee injections on the gait of patients with osteoarthritis. Pain-relieving knee injections in osteoarthritis increase knee loading during gait but not during stair stepping. *Trans Orthop Res Soc* 25:1264, 2003.
30. Draganich LF, Mass D, Greenspahn S: The effects of reconstruction of the metacarpalphalangeal joint of the thumb during tip pinch for intrinsic muscle loading. *Trans Orthop Res Soc* 25:1204, 2003.
31. Hampole CV, Draganich LF, Mass DP, Piotrowski GA, The Effects of Isolated and Complex Type-II Coronoid Fractures on Three-Dimensional Elbow Laxity. *Trans Orthop Res Soc* 30:642, 2005.
32. Pandya N, Draganich L, Piotrowski GA, Pottenger, LA: The effects of pain relief on obstacle avoidance in knee osteoarthritis. *Trans Orthop Res Soc* 30:1411, 2005.

#### **INVITED LECTURESHIPS**

1. "The Effect of the Cruciate Ligaments on Femoral-Tibial Contact Movement and Knee Joint Mechanics" at Stony Brook University, Department of Orthopaedics, June 1, 1984.
2. "The Effect of the Cruciate Ligaments on Femoral-Tibial Contact Movement and Knee Joint Mechanics" at the University of South Florida, Department of Orthopaedics, August 10, 1984.
3. "Experimental Knee Joint Biomechanics" at the University of Chicago, Department of Anatomy, February 7, 1985.
4. "The Biomechanics of the Mueller and Andrews Reconstructions for the Anterior Cruciate Ligament Deficient Knee" at the Kantonsspital Bruderholz, Department of Orthopedics in Basel, Switzerland, November 1-8, 1987.
5. "Patellofemoral Pain: New Approaches to Understanding and Treating an Old Clinical Problem". Sponsored by the American College of Sports Medicine, Dallas, Texas, May 29, 1992.
6. "Gait in ascending and descending steps in patients with the rotating-hinge total knee replacement” at Department of Orthopedics at Rush-Presbyterian-St. Lukes Medical Center, Chicago, Il., May 1, 1995.
7. "Gait in ascending and descending steps in patients with the rotating-hinge total knee replacement” at Department of Mechanical Engineering, University of Illinois at Chicago, Chicago, Il., September 14, 1995.

8. "TRAC design rationale" at French Orthopaedic Meeting entitled "Dix-humtiemes Journees D'orthopedie De Fort De France", February 10, 1998.
9. "Computerized measurements of knee laxity in TRAC PS patients" at French Orthopaedic Meeting entitled "Dix-humtiemes Journees D'orthopedie De Fort De France", February 10, 1998.
10. "TRAC design rationale" French Orthopaedic Meeting entitled "Journees D'orthopedie De Fort De France", February 8, 2000
11. "The effects of posterior stabilizer design in total knee replacement on stair stepping" at Department of Orthopedics at Rush-Presbyterian-St. Lukes Medical Center, Chicago, Il., September 27, 2000.
12. "Biomechanics, research and design of a total knee replacement" in the Biomedical Engineering Seminar series (University of Chicago, Argonne National Institute, Illinois Institute of Technology) at the Illinois Institute of Technology, Chicago, Il., January 16, 2001.
13. "Biomechanics, research and design of a total knee replacement" in the Department of Exercise Science & Physical Education at Arizona State University, Tempe, AZ., November 20, 2001.
14. Keynote address: "Biomechanics, research and design of a total knee replacement" in "Tribology Issues in Biology and Medicine" workshop at Argonne National Laboratories,  
Sponsored by National Science Foundation, Dec 10-12, 2001.
15. "Biomechanics, research and design of a total knee replacement" at the University of Illinois at Chicago, Department of Mechanical Engineering, Chicago, Il., Oct 9, 2001.
16. "The effects of early rollback on quadriceps efficiency during stair stepping" at the Fourth World Congress of Biomechanics in Calgary, Canada, August 4-9, 2002.
17. "Mobility issues in knee osteoarthritis and total knee replacement" at Northwestern University, Feinberg School of Medicine, Department of Physical Therapy and Human Movement Sciences, July 10, 2003.

#### **PAST RESEARCH SUPPORT**

- Whitaker Foundation, "The Biomechanical Efficacy of Anterior Cruciate Ligament Reconstruction Procedures on Knee Joint Instability and Extension", \$138,619, 11/1/85 - 10/31/88, Grant Number: 635432
- National Institutes of Health, "Effect of Exercise on Growth and Aging of Bone" Co-Principal Investigator with Andrew Biewener, PhD, \$519,831, 9/20/91 - 9/19/94, 1R01AR39828
- National Institutes of Health, "Knee Joint Kinematics in the Normal and Reconstructed Knee", \$347,103, 1/1/92 - 12/31/96, 1R01AR40605
- Biomet Manufacturing, Inc., "Evaluating Gait and Stair-Climbing of Patients with the Finn and AGC Knee", \$47,063, 07/01/93 - 06/30/94
- Biomet Manufacturing, Inc., Total Knee Replacement Research, Amount: \$50,000, 05/01/95 - 04/30/96,
- Biomet Manufacturing, Inc., Total Knee Replacement Research, Amount: \$16,000, 12/17/97 - 8/2002
- American Orthopaedic Foot and Ankle Society, "The effects of adult acquired flatfoot deformity on the tibiotalar joint contact characteristics", \$7,250.00, 7/15/97 - 7/14/98

Home Health Care (University of Chicago), "Effects of antidepressants on gait and tripping and other behavioral variables", \$21,000, 7/1/96 - 6/30/98  
University of Chicago Clinical Research Center (NIH sponsored grant), "Effects of antidepressants on gait, tripping and other behavioral variables", \$39,000, 7/1/96 - 6/30/98  
DonJoy Orthopedics, "Valgus Knee Bracing in Osteoarthritis", \$21,600, 10/01/02 – 9/30/04

## **ADVISORSHIPS**

### **Dissertation Advisor for Graduate Students**

#### **Master Of Science**

1. Ling M: "An In Vitro and Computer-Aided Design Study of Knee Joint Kinematics", Dept of Mechanical Engineering, University of Illinois at Chicago, defended July 6, 1989.

#### **Doctor Of Philosophy**

1. Hsieh, Y-F: "Tibiofemoral and patellofemoral mechanics in the anterior cruciate ligament reconstructed knee" in the Department of Mechanical Engineering at the University of Illinois at Chicago, defended March 8, 1995, degree conferred 6/95
2. Chou, L-S: "Measurements and predictions of obstructed and unobstructed gait" in the Department of Mechanical Engineering at the University of Illinois at Chicago, defended May 1, 1995, degree conferred 8/95.
3. Zhou, Xiadong: "Dynamic simulation of human gait and falling", in the Department of Mechanical Engineering at the University of Illinois at Chicago, defended March 9, 1999, degree conferred 6/99.

### **Medical Students** (Biomechanics Readings Course: 342-01 and/or Biomechanics Research Course 343-01; \* indicates coauthor of abstract and/or journal publication)

1. \*Paul R. Miller, B.S., 1985 - 1986: "An In Vitro Study of the Mueller ALFTL Reconstruction in the Anterior Cruciate Ligament Deficient Knee".
2. \*James W. Vahey, B.S., 1986 - 1989: A) "An In Vitro Study of Anterior Cruciate Ligament Strain Induced by Quadriceps and Hamstrings Forces". B) "Tensions in the Anterior Cruciate Ligaments of the Knee During Passive Loading".
3. \*Matthew Samuelson, B.S., 1987 - 1988: "An In Vitro Study of a Combined Intra and Extraarticular Reconstruction in the Anterior Cruciate Deficient Knee".
4. \*John Shuster, B.S., 1988 - 1990: "The Effects of Resection of the Proximal Fibula on Knee Stability and Gait".
5. \*Michael R. Sathy, B.S., 1988 - 1991: A) "The Effects of Resection of the Proximal Fibula on Knee Stability and Gait". B) "The Effects of Thigh and Goniometer Restraints on the Reproducibility of the Genucom Knee Analysis System".
6. \*Michael T. Pyevich, B.S., 1990 – 1993: "An In Vitro Analysis of Knee Stability after Reconstruction of the Posterior Cruciate Ligament".
7. \*Jon Whitehurst, 1993 – 1994: "Gait and Stair-Stepping of Patients with a Rotating-Hinge Total Knee Replacement".
8. James Seeds, 1994 – 1997: "The effects of early rollback in total knee replacement on stair stepping."

9. \*Wade Shrader, 1996 – 1999: A) “Gait and Stair-Stepping of Patients with Two Different Patellar Tendon Reconstructions”. B) “The effect of Osteoarthritis on Gait and Stair-Stepping”.
10. Brian Coan, 1997 – 1999: “Isometry of the anterior cruciate ligament intact and excised knee”
11. James McDougall, 1998 – 2002: “The effects of arch-supporting foot orthoses on gait and stair-stepping”
12. Kirk Doerger, 1998
13. Steve Copeland, 1998
14. \*Mark A. Friedman, 1998 – 2000: “The effects of acquired flatfoot deformity on tibiotalar joint contact pressures”
15. \*Scott V. Greenspahn, 1998 – 2002: “The effects of reconstruction of the metacarpalphalangeal joint of the thumb during tip pinch for intrinsic muscle loading”
16. \*Christina E. Kuo, 1998 – 2002: “The effects of walking speed on obstacle crossing in young and elderly adults”
17. Andrew Swanson, 1998
18. Raffi Avedian, 1999
19. Amy Williams, 1999
20. Gregory Munson, 2000
29. Neil Clark, 2000
30. Andrew Pennock, 2000
31. Sharon Moran, 2001
32. Arif Ali, 2001
33. Auveek Pat Basu, 2001: “The effects of a valgus knee brace on gait and stair stepping”
34. Benjamin Widmer, 2001
35. Nicholas Seibert, 2001
36. Jonas Matzen, 2001
37. Vicki Anderson, 2001
38. \*Nirav Pandya, 2002: “Effects of painful knee osteoarthritis on obstacle avoidance”
39. \*Andreas Mauer, 2002 – present: “Effects of total knee replacement on obstacle avoidance”
40. Steven Tohurst: 2002 – present: “Effects of tendon transfers on thumb opposition”
41. Kellee Gooden, 2002 – present: “Effects of tendon transfers on thumb opposition”
42. Justin Orr, 2002
43. Jennifer Hofer, 2003 – present: “The relationship between total knee replacement Knee Society Score and obstacle avoidance success rate”
44. Mike Madsen, 2003 – present: “Factors Influencing Stair Stepping in Knee Osteoarthritis”
45. Joseph Hanna, 2003 – present: “Effects of the dorsal and volar ligaments on laxity of the basilar joint of the thumb”
46. \*Chetan Hampole, 2003 – present: “Effects of isolated and complex coronoid fractures on laxity of the elbow”
47. Lukas Zebala, 2003
48. Mara Schenker, 2004 “Finger Kinematics after Tendon Transfer for Intrinsic Muscle Paralysis: A Cadaveric Study”

49. Mathew Coleman, 2004 “Effects of the dorsal and volar ligaments on laxity of the basilar joint of the thumb during opposition”
50. Katie Sharff, 2004 “Effects of knee strength, varus angulation and laxity on stepping over an obstacle in persons with knee osteoarthritis”
51. William Ennon, 2004 “Effects of hip osteoarthritis on stepping over an obstacle”
52. William Symons, 2004 “Effects of total hip replacement on stepping over an obstacle”

**Orthopaedic Surgery Residents** (\* indicates coauthor of abstract and/or journal publication)

1. \*Leslie P. Dean, M.D., 1988 - 1989: "The Effect of the Radial Collateral Ligament on the Kinematics of the metacarpophalangeal Joint During Flexor Tendon Loading".
2. \*William G. Raasch, M.D., 1989 - 1990: "Assessment of the Posterior Malleolus as a Restraint to Posterior Ankle Subluxation". Awarded Zimmer-AOA Resident Award for 1991.
3. \*Michael Brage, M.D., 1990 - 1991: "The Effect of Osteoarthritis on Knee Joint Stability and Gait".
4. \*Albert W. Pearsall, MD., 1990 - 1991: a) "An In Vitro Analysis of Knee Stability After Reconstruction of the Posterior Cruciate Ligament". B) "An In Vitro Analysis of Patellofemoral Contact Pressures Following Procurement of the Central One-Third of the Patellar Tendon".
5. \*Matthew Samuelson, M.D., 1994: "The Effects of Reconstructing the Knee on Combined ACL and Anterolateral Capsular Deficiencies".
6. James McDougall, 1998 – 2003: “The effects of arch-supporting foot orthoses on gait and stair-stepping”.
7. Timothy Havenhill, 2001 – 2005: A) “The effects of arch-supporting foot orthoses on gait and stair-stepping in people with flatfoot”, B) “Effects of calcaneal osteotomy on tibiotalar contact pressures”, C) “Gait of patients with neurogenic claudication in lumbar spinal stenosis”

**Orthopaedic Surgery Fellows** (\* indicates coauthor of abstract and/or journal publication)

1. \*Samuel D'Agata, M.D. (Sports Medicine) 1988 – 1989: "An In Vitro Analysis of Patellofemoral Contact Pressures Following Procurement of the Central One-Third of the Patellar Tendon".
2. \*Richard W. Nicholas, M.D. (Orthopaedic Oncology) 1989 - 1990: "The Effect of Resection of the Proximal Fibula on Stability of the Knee and on Gait".
3. \*William Burns, M.D. (Sports Medicine) 1992-1993: “The Effect of Femoral Tunnel Position and Graft Tensioning Technique on Laxity of the Posterior Cruciate Ligament Reconstructed Knee”.
4. Peter Krumins, M.D. (Sports Medicine) 1993 - 1994: "The Effects of Reconstructing the Knee on Combined ACL and Anterolateral Capsular Deficiencies".
5. \*Scott Nassan, M.D. (Sports Medicine) 2003-2004: Effects of Custom and Off-The-Shelf Bracing on Pain, Stiffness, Function and Loading in Medial Compartment Knee Osteoarthritis

**Undergraduate Students**

Nicole Lively 6/1999 – 11/1999 (Biomechanics readings in Biology 100)