

**CURRICULUM VITAE**  
**University of Pittsburgh**  
**School of Medicine**

**BIOGRAPHICAL**

<b>Name</b>	<b>JAMES J. IRRGANG, PHD, PT, ATC,F APTA</b>	<b>Birth Date:</b>	February 8, 1955
<b>Home Address</b>	3656 Forbes Trail Road Murrysville, PA 15668	<b>Birth Place:</b>	Ridley Park, PA
<b>Home Phone:</b>	412-780-6718	<b>Citizenship:</b>	USA
<b>Business Address:</b>	Department of Physical Therapy Bridgeside Point 1 100 Technology Drive, Suite 210 Pittsburgh, Pa 15219	<b>Email Address:</b>	jirrgang@pitt.edu
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**EDUCATION AND TRAINING**

<b>Undergraduate:</b>	1977	University of Pittsburgh Pittsburgh, Pennsylvania	B.S. Physical Therapy
<b>Graduate:</b>	1990	University of Pittsburgh Pittsburgh, Pennsylvania	M.S. Health Related Professions
<b>Graduate</b>	1999	University of Pittsburgh Pittsburgh, Pennsylvania	Ph.D. Research Methodology
<b>Dissertation Title</b>		Development of a health related quality of life instrument to assess physical function related to pathology and impairment of the knee.	

**APPOINTMENTS AND POSITIONS**

**ACADEMIC**

1986 -1989	University of Pittsburgh Pittsburgh, Pennsylvania	Instructor, Athletic Training Education Program School of Education
1986-1990	University of Pittsburgh	Field Instructor

## APPOINTMENTS AND POSITIONS

### ACADEMIC

	Pittsburgh, Pennsylvania	Department of Physical Therapy School of Health Related Professions
1990- 1995	University of Pittsburgh Pittsburgh, Pennsylvania	Clinical Assistant Professor Department of Physical Therapy School of Health and Rehabilitation Sciences
1990-2005	University of Pittsburgh Pittsburgh, Pennsylvania	Clinical Instructor Department of Orthopaedic Surgery School of Medicine
1995 – 2003	University of Pittsburgh Pittsburgh, Pennsylvania	Assistant Professor and Vice Chairman of Clinical Services Department of Physical Therapy School of Health and Rehabilitation Sciences
2003 - 2005	University of Pittsburgh Pittsburgh, Pennsylvania	Associate Professor and Vice Chairman of Clinical Services Department of Physical Therapy School of Health and Rehabilitation Sciences
2005 – 2013	University of Pittsburgh Pittsburgh, Pennsylvania	Visiting Associate Professor Department of Orthopaedic Surgery School of Medicine
2012 – Present	University of Pittsburgh Pittsburgh, Pennsylvania	Visiting Associate Professor Clinical and Translational Science Institute (CTSI)
2013 - Present	University of Pittsburgh Pittsburgh, Pennsylvania	Professor Clinical and Translational Science Institute
2013-Present	University of Pittsburgh Pittsburgh, Pennsylvania	Professor, Department of Orthopaedic Surgery University of Pittsburgh
2014 - Present	University of Pittsburgh Pittsburgh, Pennsylvania	Assistant Dean for Medical Student Research, School of

## APPOINTMENTS AND POSITIONS

### ACADEMIC

		Medicine, University of Pittsburgh
2015 – Present	University of Pittsburgh Pittsburgh, Pennsylvania	Vice Chair for Clinical Outcomes Research, Department of Orthopedic Surgery, University of Pittsburgh
2016 – Present	University of Pittsburgh Pittsburgh, Pennsylvania	Professor and Chair, Department of Physical Therapy, School of Health & Rehabilitation Sciences, University of Pittsburgh

### Non-Academic

1977-1978	University of Pittsburgh Pittsburgh, Pennsylvania	Assistant Head Athletic Trainer Athletic Department
1978-1979	St. Margaret's Hospital Pittsburgh, Pennsylvania	Staff Physical Therapist Physical Therapy Department
1979-1982	University of Pittsburgh Pittsburgh, Pennsylvania	Physical Therapy Consultant Athletic Department
1979-1983	Allegheny General Hospital Pittsburgh, Pennsylvania	Director of Sports Medicine
1983-1985	National Hospital for Orthopaedics and Rehabilitation Arlington, Virginia	Director, Center for Sports Medicine
1985 – 1986	Keystone Rehabilitation System Pittsburgh, Pennsylvania	Coordinator of Sports Medicine
1986 – 1995	University of Pittsburgh Medical Center	Director, Outpatient Physical Therapy and Sports Medicine
1996-2005	Centers for Rehab Services / University of Pittsburgh Medical Center Pittsburgh, Pennsylvania	Vice President of Quality Improvement and Outcomes and Director of Outpatient Sports and Orthopaedic Physical Therapy

## CERTIFICATION AND LICENSURE

## CERTIFICATION AND LICENSURE

### Professional Licensure

Licensed Physical Therapist	Pennsylvania Board of Physical Therapy	PT003270-L	1977
Certified Athletic Trainer	Pennsylvania Board of Professional and Occupational Affairs	RT000149-A	1987

### Specialty Certification

Certified Athletic Trainer	National Athletic Trainers Association Board of Certification	No. 0000200418	1977
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## MEMBERSHIPS IN PROFESSIONAL SOCIETIES

1974 - present	National Athletic Trainers' Association
1975 - present	American Physical Therapy Association
1978 - present	Sports Physical Therapy Section of APTA
1987 - present	Pennsylvania Athletic Trainers Association
1992 - 2003	American Society of Shoulder & Elbow Therapists
1995 - present	Section on Research of APTA
1996 - 1994	Federation of State Boards of Physical Therapy
1998 - 2000	Section on Education of APTA
1998 – Present	American College of Rheumatology
1998 - present	International Society of Arthroscopy and Knee Orthopaedic Surgery
1999 - present	Orthopaedic Physical Therapy Section of APTA
2007 – 2011	International Cartilage Research Society
2015 – Present	Affiliate Member American Orthopaedic Society for Sports Medicine

## HONORS

1974	Phi Eta Sigma – National Freshman Honor Society
1990	3 <sup>rd</sup> Place Poster Presentation at the Annual Meeting of the European Society of Knee Surgery & Arthroscopy for paper entitled “Loss of motion following arthroscopic anterior cruciate ligament reconstruction” authored by Harner CD, Paul J, <b>Irrgang JJ</b> , Sawhney R.

## HONORS

Stockholm Sweden.

- 1996 Distinguished Alumni Award presented by the University of Pittsburgh School of Health and Rehabilitation Sciences
- 1996 Outstanding Clinical Manuscript Award presented by Journal of Athletic Training for manuscript entitled "Functional plyometric exercises for the throwing athlete" authored by Pezullo DJ, Karas S, **Irrgang JJ**,
- 1998 Bregg Award for Excellence presented by the Sports Physical Therapy Section, APTA for paper entitled "A pilot study of the relationship between physical impairments and disability in the anterior cruciate ligament reconstructed knee at long-term follow-up" authored by Pantano K, **Irrgang JJ**, Delitto A, Burdette R, Fu FH, Harner CD.
- 2000 Distinguished Teaching Award presented by the University of Pittsburgh School of Health and Rehabilitation Sciences, Pittsburgh, PA
- 2002 Clinical Educator Award presented by the Sports Physical Therapy Section, APTA
- 2003 2003 AAOMPT Excellence in Research Award, American Academy of Orthopaedic Manual Physical Therapists. Validation of a Clinical Prediction Rule to Identify Patients with Low Back Pain Likely to Benefit from Spinal Manipulation: A Randomized Clinical Trial.
- 2006 Rose Excellent in Research Award presented by the Orthopaedic Section of the American Physical Therapy Association. A Clinical Prediction Rule to Identify Patients with Low Back Pain Most Likely to Benefit from Spinal Manipulation: A Validation Study.
- 2009 Catherine Worthingham Fellow of the American Physical Therapy Association
- 2013 Prof Orlando Pinto de Souza Award presented for the best research presentation at the Brazilian Congress of Orthopaedics and Traumatology (CBOT 2013). Development of an application to quantify a Standardized Pivot Shift Test. Curitiba, PR, Brazil November 14-16, 2013
- 2015 Paris Distinguished Service Award presented by the Orthopaedic Section of the American Physical Therapy Association at the Combined Sections Meeting. February 6, 2015, Indianapolis
- 2015 Keynote Speaker. Understanding Drivers and Obstacles for Using Process of Care and Clinical Outcomes Data to Provide Value-Based Care – Lessons from Implementation Science. 2015 Annual Orthopaedic Section Meeting, Phoenix, Arizona. May 14, 2015

## PUBLICATIONS

### Peer Reviewed

- 1 Weiss JR, **Irrgang JJ**, Sawhney R, Dearwater, S, and Fu, FH.: A functional assessment of anterior cruciate ligament deficiency in an acute and clinical setting. J Orthop Sports Phys Ther 11:372-373, 1990
- 2 Fu FH, Woo S, **Irrgang JJ**. Current concepts for rehabilitation following anterior cruciate

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- ligament reconstruction. J Orthop Sports Phys Ther 15: 270-278, 1992
3. Lephart SM, Perrin DH; Fu FH, **Irrgang JJ**; Gieck, JH, M<sup>c</sup>Cue FC. Relationship between selected physical characteristics and functional capacity in the anterior cruciate ligament-insufficient athlete. J Orthop Sports Phys Ther 16: 174-181, 1992.
  4. Harner CD; **Irrgang JJ**; Paul J; Dearwater S; Fu FH. Loss of motion following anterior cruciate ligament reconstruction. Am J Sports Med, 20: 499-506, 1992.
  5. Pezzullo D; **Irrgang JJ**; Whitney S. Patellar Tendonitis: Jumper's knee. J Sport Rehabil 1: 56-68, 1992.
  6. **Irrgang JJ**; Whitney SL.; and Harner CD. Nonoperative treatment of rotator cuff injuries in throwing athletes. J Sport Rehabil 1: 197-222, 1992.
  7. Kamkar A. **Irrgang JJ**, Whitney SL. Nonoperative management of secondary shoulder impingement syndrome. J Orthop Sports Phys Ther. 17(5):212-24, 1993.
  8. Harner CD, **Irrgang JJ**, Fu FH. Prevention and Management of Loss of Motion After Arthroscopic Anterior Cruciate Ligament Reconstruction. Complications in Orthopedics, 8:5-8, 1993.
  9. **Irrgang JJ**, Modern trends in anterior cruciate ligament rehabilitation: nonoperative and postoperative management. Clin Sport Med. 12(4):797-813, 1993
  10. Cox ED, Lephart SM, **Irrgang JJ**. Unilateral balance training on normal individuals and the effects on postural sway. J Sport Rehabil. 2: 87-96, 1993
  11. Marks PH, Warner JJ, **Irrgang JJ**. Rotator cuff disorders of the shoulder. J Hand Ther 7(2):90-8, 1994
  12. Harner CD, Marks PH, Fu FH, **Irrgang JJ**, Silby MB, Mengato R. Anterior cruciate ligament reconstruction: endoscopic versus two-incision technique. Arthroscopy. 10:502-12, 1994
  13. Whitney SL, Matoeski L, **Irrgang JJ**; Gentile PA, Pezzullo D, Kamkar A. Reliability of lower extremity girth measurements and right- and left-side differences. J Sport Rehabil, 4: 108-115, 1995
  14. Pezzullo DJ, Karas S, **Irrgang JJ**, Functional plyometric exercises for the throwing athlete. J Athl Train 30:220-6, 1995
  15. Allegrucci M, Whitney SL, **Irrgang JJ**. Clinical implications of secondary impingement of the shoulder in freestyle swimmers. J Orthop Sports Phys Ther. 20:307-18, 1994
  16. **Irrgang JJ**, Whitney SL, Cos ED. Balance and proprioceptive training for rehabilitation of the lower extremity. J Sport Rehabil. 3:68-83, 1994
  17. Warner JJP, Marks P, **Irrgang JJ**. Rotator cuff injuries. J Hand Ther 7:90-98, 1994

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### Peer Reviewed

18. **Irrgang JJ**, Harner CD. Loss of motion following knee ligament reconstruction. *Sports Med.* 19:150-9, 1995
19. Allegrucci M. Whitney SL. Lephart SM. **Irrgang JJ**, Fu FH. Shoulder kinesthesia in healthy unilateral athletes participating in upper extremity sports. *J Orthop Sports Phys Ther.* 21:220-6, 1995.
20. **Irrgang JJ**, Delitto A. Hagen B. Huber F. Pezzullo D. Rehabilitation of the injured athlete. *Orthop Clin North Am.* 26:561-77, 995
21. Lin J-J, **Irrgang JJ**, Burdett RG, Stone DA.: An analysis of the lower trapezius electromyographic activity. *Biomed Eng-App Bas C*, 7: 43-51, 1995.
22. Lin J-J, Whitney SL, **Irrgang JJ**: An analysis of secondary impingement syndrome related to rotator cuff tendinitis in overhead throwing sports. *Biomed Eng-App Bas C* , 7: 416-428, 1995.
23. Johnson DL,. Swenson TM, **Irrgang JJ**, Fu FH,. Harner CD. Revision anterior cruciate ligament surgery: experience from Pittsburgh. *Clin Orthop Relat Res* 325:100-9, 1996
24. Fritz JM, **Irrgang JJ**, Harner CD. Rehabilitation following allograft meniscal transplantation: a review of the literature and case study. *J Orthop Sports Phys Ther.* 24:98-106, 1996
25. Harner CD, Olson E, **Irrgang JJ**, Silverstein S,. Fu FH,. Silbey M. Allograft versus autograft anterior cruciate ligament reconstruction: 3- to 5-year outcome. *Clin Orthop Rel Res.* 324:134-44, 1996
26. Gulling LK, Lephart SM, Stone DA, **Irrgang JJ**, Pincivero DM. The effects of patellar bracing on quadriceps EMG activity during isokinetic exercise. *Isokinet Exerc Sci* , 6: 133-138, 1996
27. Huber FE, **Irrgang JJ**, Harner CD, Lephart S. Intratester and intertester reliability of the KT-1000 arthrometer in the assessment of posterior laxity of the knee. *Am J Sports Med*, 25: 479-485, 1997
28. Borsa PA, Lephart SM, **Irrgang JJ**, Safran MR, Fu FH.: The effects of joint position and direction of joint motion on proprioceptive sensibility in anterior cruciate ligament deficient athletes. *Am J Sports Med* 25: 336-340, 1997
29. Warner JJP, Goitz RJ, **Irrgang JJ**, Groff YJ.: Arthroscopic-assisted rotator cuff repair: Patient selection and treatment outcome. *J Shoulder Elbow Surg*, 6: 463-472, 1997
30. **Irrgang JJ**, Harner CD, Fu FH, Silbey MB, Digiacomio R. Loss of motion following ACL reconstruction: A second look. *J Sport Rehabil*, 6: 213-225, 1997
31. Ninos JC, **Irrgang JJ**, Burdett R., Weiss JR.. Electromyographic analysis of the squat performed in self-selected lower extremity neutral rotation and 30° of lower extremity turn-out from the self-selected neutral position. *J Orthop Sports Phys Ther* 25, 307-315. 1997

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32. **Irrgang JJ**, Harner, CD. Recent advances in ACL rehabilitation: Clinical factors that influence the program. *J Sport Rehabil* 6:111-124, 1997
33. **Irrgang JJ**, Follow-up to the clinical and cost-effectiveness of two different programs for rehabilitation following ACL reconstruction. *J Orthop Sports Phys Ther.* 26:39-40, 1997
34. Borsa PA, Lephart SM, **Irrgang JJ**, **Safran M**, **Fu F**. The effects of joint position and direction of joint motion on proprioceptive sensibility in anterior cruciate ligament deficient athletes. *Am J Sports Medicine* 25(3):336-340, 1997
35. Borsa PA, Lephart SM, **Irrgang JJ**: Sport-specificity of knee scoring systems to assess disability in anterior cruciate ligament deficient athletes. *J Sport Rehabil* 7:44-60, 1998
36. **Irrgang JJ**, Pezzullo D. Rehabilitation following surgical procedures to address articular cartilage lesions in the knee. *J Orthop Sports Phys Ther.* 28(4):232-40, 1998
37. **Irrgang JJ**, Snyder-Mackler L., Wainner RS, Fu FH, Harner CD. Development of a patient-reported measure of function of the knee. *J Bone Joint Surg Am.* 80(8):1132-45, 1998
38. Sheehy P, Burdett RG. **Irrgang JJ**, VanSwearingen J. An electromyographic study of vastus medialis oblique and vastus lateralis activity while ascending and descending steps. *J Orthop Sports Phys Ther.* 27:423-9, 1998
39. **Irrgang JJ**, Ho H, Harner CD, Fu FH. Use of the International Knee Documentation Committee guidelines to assess outcome following anterior cruciate ligament reconstruction. *Knee Surg Sports Traumatol Arthrosc* 6:107-14, 1998
40. Borsa PA, Lephart SM, **Irrgang JJ**. Comparison of performance-based and patient-reported measures of function in anterior-cruciate-ligament-deficient individuals. *J Orthop Sports Phys Ther* 28:392-9, 1998
41. Martin RL. **Irrgang JJ**, Conti SF. Outcome study of subjects with insertional plantar fasciitis. *Foot Ankle Int.* 19:803-11, 1998
42. Cole B.J., L'Insalata J., **Irrgang JJ**, Warner JP. Comparison of arthroscopic and open anterior shoulder stabilization: A two to six-year follow-up study. *J Bone Joint Surg Am* 82-A:1108-1114, 2000.
43. **Irrgang JJ**, Fitzgerald GK. Rehabilitation of the multiple-ligament-injured knee. *Clin Sports Med* 19:545-71, 2000
44. McGinty G. **Irrgang JJ**, Pezzullo D. Biomechanical considerations for rehabilitation of the knee. *Clin Biomech.* 15:160-6, 2000
45. O'Connor DP, Jackson AS, **Irrgang JJ**. Predicting physical therapy visits needed to achieve minimal functional goals after arthroscopic knee injury. *J Orthop Sports Phys Ther* 31:240-258, 2001.



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46. **Irrgang JJ**, Anderson AF, Boland AL, Harner CD, Kurosaka M, Neyret P, Richmond JC, Shelborne KD. Development and validation of the international knee documentation committee subjective knee form. *Am J Sports Med.* 29:600-13, 2001
47. Fritz JM, **Irrgang JJ**, A comparison of a modified Oswestry Low Back Pain Disability Questionnaire and the Quebec Back Pain Disability Scale. *Phys Ther.* 81:776-88, 2001
48. Harner CD, Fu FH, **Irrgang JJ**, Vogrin TM. Anterior and posterior cruciate ligament reconstruction in the new millennium: a global perspective. *Knee Surgery, Sports Traumatol, Arthrosc.* 9:330-336, 2001
49. Pantano KJ, **Irrgang JJ**, Burdett R, Delitto A, Harner C, Fu FH. A pilot study on the relationship between physical impairment and activity restriction in persons with anterior cruciate ligament reconstruction at long-term follow-up. *Knee Surgery, Sports Traumatol, Arthrosc.* 9:369-78, 2001
50. Ross MD, **Irrgang JJ**, Denegar CR, McCloy CM, Unangst ET. The relationship between participation restrictions and selected clinical measures following anterior cruciate ligament reconstruction. *Knee Surg Sports Traumatol Arthrosc* 10:10-9, 2001
51. Fitzgerald GK, Childs JD, Ridge TM, **Irrgang JJ**. Agility and perturbation training for a physically active individual with knee osteoarthritis. *Phys Ther* 82:372-82, 2002
52. Ross MD, **Irrgang JJ**, Denegar CR, McCloy CM, Unangst ET. The relationship between participation restrictions and selected clinical measures following anterior cruciate ligament reconstruction. *Knee Surgery, Sports Traumatology, Arthroscopy.* 10:10-9, 2002
53. **Irrgang JJ**, Anderson AF. Development and validation of health-related quality of life measures for the knee. *Clin Orthop Relat Res*40:95-109, 2002
54. Wainner RS, Fritz JM, **Irrgang JJ**, Boninger ML, Delitto A, Allison S. Reliability and diagnostic accuracy of the clinical examination and patient self-report measures for cervical radiculopathy. *Spine.* 28:52-62, 2003
55. Sekiya JK, Giffin JR, **Irrgang JJ**, Fu FH, Harner CD. Clinical outcomes after combined meniscal allograft transplantation and anterior cruciate ligament reconstruction. *Am J Sports Med.* 31:896-906, 2003
56. Fitzgerald GK, Piva SR, **Irrgang JJ**, A modified neuromuscular electrical stimulation protocol for quadriceps strength training following anterior cruciate ligament reconstruction. *J Orthop Sports Phys Ther.* 33:492-501, 2003
57. Yoldas EA, Sekiya JK, **Irrgang JJ**, Fu FH, Harner CD. Arthroscopically assisted meniscal allograft transplantation with and without combined anterior cruciate ligament reconstruction. *Knee Surg, Sports Traumatol, Arthrosc* 11:173-82, 2003
58. Wainner RS, Fritz JM, **Irrgang JJ**, Boninger ML, Delitto A, Allison S. Reliability and diagnostic accuracy of the clinical examination and patient self-report measures for cervical radiculopathy.

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Spine 28:52-62, 2003

59. Rogers JC, **Irrgang JJ**. Measures of adult lower extremity function: The American Academy of Orthopedic Surgeons Lower Limb Questionnaire, The Activities of Daily Living Scale of the Knee Outcome Survey (ADLS), Foot Function Index (FFI), Functional Assessment System (FAS), Harris Hip Score (HHS), Index of Severity for Hip Osteoarthritis (ISH), Index of Severity for Knee Osteoarthritis (ISK), Knee Injury and Osteoarthritis Outcome Score (KOOS), and Western Ontario and McMaster Universities Osteoarthritis Index (WOMACTM) Arthritis Care Res 49: S67-S84, 2003.
60. Ma CB, Francis K, Towers J., **Irrgang JJ**, Fu FH., Harner CH. Hamstring ACL Reconstruction: An early comparison of bioabsorbable interference screw and endobutton/post fixation. Arthroscopy 20:1222-128, 2004.
61. Fitzgerald GK, Piva SR, **Irrgang JJ**, Reports of joint instability in knee osteoarthritis: its prevalence and relationship to physical function. Arthritis Rheum 51:941-6, 2004.
62. Childs JD, Fritz JM, Flynn TW, **Irrgang JJ**, Johnson KK, Majkowski GR, Delitto A. A clinical prediction rule to identify patients with low back pain most likely to benefit from spinal manipulation: a validation study.[see comment][summary for patients in Ann Intern Med 141:920-8, 2004.
63. Kaplan LD, McMahon PJ, Towers J, **Irrgang JJ**, Rodosky MW. Internal impingement: findings on magnetic resonance imaging and arthroscopic evaluation. Arthroscopy. 20:701-4, 2004
64. Jones DL, Cauley JA, Kriska AM, Wisniewski SR. **Irrgang JJ**, Heck DA, Kwoh CK, Crossett LS. Physical activity and risk of revision total knee arthroplasty in individuals with knee osteoarthritis: a matched case-control study. J Rheumatology. 31:1384-90, 2004
65. Piva SR, Fitzgerald GK, **Irrgang JJ**, Bouzubar F, Starz TW. Get up and go test in patients with knee osteoarthritis. Arch Phys Med Rehabil 85:284-9, 2004
66. Fitzgerald GK, Piva SR, **Irrgang JJ**, Bouzubar F, Starz TW. Quadriceps activation failure as a moderator of the relationship between quadriceps strength and physical function in individuals with knee osteoarthritis. Arthritis Rheum 51:40-8, 2004
67. Childs JD, Sparto PJ, Fitzgerald GK, Bizzini M. **Irrgang JJ**, Alterations in lower extremity movement and muscle activation patterns in individuals with knee osteoarthritis. Clin Biomech. 19:44-9, 2004
68. Harner CD, Waltrip RL, Bennett CH, Francis KA, Cole B, **Irrgang JJ**, Surgical management of knee dislocations. J Bone Joint Surg Am 86:262-73, 2004
69. Martin RL, **Irrgang JJ**, Burdett RG, Conti SF, Van Swearingen JM. Evidence of validity for the Foot and Ankle Ability Measure (FAAM). Foot Ankle Int. 26:968-83, 2005
70. Sekiya JK, West RV, Ong BC, **Irrgang JJ**, Fu FH, Harner CD. Clinical outcomes after isolated arthroscopic single-bundle posterior cruciate ligament reconstruction. Arthroscopy. 21:1042-50,

## PUBLICATIONS

### Peer Reviewed

2005 .

71. Lephart SM, Abt JP, Ferris CM, Sell TC, Nagai T, Myers JB, **Irrgang JJ**, Neuromuscular and biomechanical characteristic changes in high school athletes: a plyometric versus basic resistance program. *Br J Sports Med.* 39:932-8, 2005 .
72. Wainner RS, Fritz JM, **Irrgang JJ**, Delitto A, Allison S, Boninger ML. Development of a clinical prediction rule for the diagnosis of carpal tunnel syndrome. *Arch Phys Med Rehab.* 86:609-18, 2005.
73. Lyons CL, Robb JB, **Irrgang JJ**, Fitzgerald GK. Differences in quadriceps femoris muscle torque when using a clinical electrical stimulator versus a portable electrical stimulator. *Phys Ther.* 85:44-51, 2005
74. Anderson AF, **Irrgang JJ**. Are validated questionnaires valid? *J Bone Joint Surg Am* 88:446-7, 2006
75. Rihn JA, **Irrgang JJ**, Chhabra A, Fu FH, Harner CD. Does irradiation affect the clinical outcome of patellar tendon allograft ACL reconstruction?. *Knee Surg Sports Traumatol Arthrosc* 14:885-96, 2006.
76. **Irrgang JJ**, Harner CD. Initially asymptomatic meniscal lesions of the knee were later associated with complaints of pain, stiffness, and impaired function but severity was low. *J Bone Joint Surg Am* 10:2312, 2006
77. Rabin A, **Irrgang JJ**, Fitzgerald GK, Eubanks A. The intertester reliability of the Scapular Assistance Test. *J Orthop Sports Phys Ther.* 36:653-60, 2006.
78. Piva SR, Fitzgerald K, **Irrgang JJ**, Jones S, Hando BR, Browder DA, Childs JD. Reliability of measures of impairments associated with patellofemoral pain syndrome. *BMC Musculoskeletal Disorders* 7:33, 2006.
79. **Irrgang JJ**, Anderson AF, Boland AL, Harner CD, Neyret P, Richmond JC, Shelbourne KD and the International Knee Documentation Committee. Responsiveness of the International Knee Documentation Committee Subjective Knee Form. *Am J Sports Med* 34 1567-1573, 2006
80. Sekiya JK, West RV, Groff YJ, **Irrgang JJ**, Fu FH, Harner CD. Clinical outcomes following isolated lateral meniscal allograft transplantation. *Arthroscopy* 22:771-80, 2006
81. Martin RL, **Irrgang JJ**, Lalonde KA, Conti S. Current concepts review: foot and ankle outcome instruments. *Foot Ankle Int* 27:383-90, 2006
82. Anderson AF, **Irrgang JJ**, Kocher MS, Mann BJ, Harrast JJ. International Knee Documentation Committee. The International Knee Documentation Committee Subjective Knee Evaluation Form: normative data. *Am J Sports Med.* 34:128-35, 2006
83. Williams BA, Kentor ML, Vogt MT, **Irrgang JJ**, Bottegal MT, West RV, Harner CD, Fu FH, Williams JP. Reduction of verbal pain scores after anterior cruciate ligament reconstruction

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with 2-day continuous femoral nerve block: a randomized clinical trial. *Anesthesiology*. 104:315-27, 2006 .

84. Starman JS, Vanbeek C, Armfield DR, Sahasrabudhe A, Baker CL 3<sup>rd</sup>. **Irrgang JJ**, Fu FH. Assessment of normal ACL double bundle anatomy in standard viewing planes by magnetic resonance imaging. *Knee Surg Sports Traumatol Arthrosc*. 15:493-9, 2007.
85. Williams BA, Kentor ML, **Irrgang JJ**, Bottegal MT, Williams JP. Nausea, vomiting, sleep and restfulness after discharge home following outpatient anterior cruciate ligament reconstruction with regional anesthesia and multimodal analgesia-antiemesis. *Reg Anesth Pain Med*. 32:193-202, 2007.
86. Williams BA, Bottegal MT, Francis KA, **Irrgang JJ**, Vogt MT. A post-hoc analysis of research study staffing: The effects of the health insurance portability and accountability act on research staff work hours during a prospective, randomized clinical trial. *Anesthesiology* 107:860-1, 2007
87. Williams BA, Bottegal MT, Kentor ML, **Irrgang JJ**, Williams JP. Rebound pain scores as a function of femoral nerve block duration after anterior cruciate ligament reconstruction: Retrospective analysis of a prospective, randomized clinical trial. *Reg Anesth Pain Med*. 32:186-92, 2007
88. Musahl V, Bell SM, Tsai AG, Costic RS, Allaire R, Zantop T, **Irrgang JJ**, Fu FH. Development of a simple device for measurement of rotational knee laxity. *Knee Surg Sports Traumatol Arthrosc*. 15:1009-12, 2007
89. Martin RL, **Irrgang JJ**. A survey of self-reported outcome instruments for the foot and ankle. *J Orthop Sports Phys Ther*. 37:72-84, 2007.
90. Fitzgerald L, Delitto A, **Irrgang JJ**. Validation of a clinical internship tool. *PhysTher* 87:844-60, 2007.
91. Chu CR, Izzo NJ, **Irrgang JJ**, Ferretti M, Studer RK. Clinical diagnosis of potentially treatable early articular cartilage degeneration using topical coherence tomography. *J Biomed Opt* 12, 051703, 2007
92. Fu FH, Shen W, Starman JS, Okeke N, and **Irrgang JJ**. Primary anatomic double bundle ACL reconstruction: A preliminary 2 year prospective cohort study of the first 100 consecutive patients. *Am J Sports Med* . 36, 1263-1274, 2008
93. Tsai AG, Musahl V., Steckel H. , Bell KM, Zantop T., **Irrgang JJ**, Fu FH. Rotational Knee Laxity: Reliability of a Simple Measurement Device In Vivo. : *BMC Musculoskelet Disord* 9:35, 2008
94. Gause PR, Siska PA, Westrick ER, Zavatsky J, **Irrgang JJ**, Kang, JD. Efficacy of intraoperative cell saver in decreasing postoperative blood transfusions in instrumented posterior lumbar fusion patients. *Spine* 33: 571-575, 2008

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95. Mauro CS, **Irrgang JJ**, Williams BA, Harner CD. Loss of extension following anterior cruciate ligament reconstruction: analysis of incidence and etiology using IKDC criteria. *Arthroscopy* 24:146-53, 2008
96. Godges JJ, **Irrgang JJ**. ICF-based practice guidelines for common musculoskeletal conditions. *J Orthop Sports Phys Ther* 38:167-8, 2008
97. McPoil TG, Martin RL, Cornwall MW, Wukich DK, **Irrgang JJ**, Godges JJ. Heel pain—plantar fasciitis: clinical practice guidelines linked to the international classification of function, disability, and health from the Orthopaedic Section of the American Physical Therapy Association. *J Orthop Sports Phys Ther* 38:A1-A18 2008.
98. **Irrgang JJ**, Lubowitz JH. Measuring arthroscopic outcome. *Arthroscopy* 24:718-22, 2008.
99. Martin RR, **Irrgang JJ**, Sekiya JK.. The Diagnostic Accuracy of a Clinical Examination in Determining Intraarticular Hip Pain for Potential Hip Arthroscopy Candidates. *Arthroscopy* 24:1013-1018, 2008
100. **Irrgang JJ**, Bost JE, Fu FH. Outcome of single-bundle versus double-bundle reconstruction of the anterior cruciate ligament: a meta analysis. Author reply. *Am J Sports Med* 37:421-422, 2009
101. Piva SR, Fitzgerald GK, **Irrgang JJ**, Fritz JM, Wisniewski S, McGinty GT, Childs JD, Domenech MA, Jones S, Delitto A. Associates of physical function and pain in patients with patellofemoral pain syndrome. *Arch Phys Med Rehabil* 90:285-295, 2009
102. Williams BA, Bost BE, **Irrgang JJ**, Kentor M, Orebaugh S, Bottegal M. General Health And Knee Function Outcomes From Seven Days To Twelve Weeks After Spinal Anesthesia And Multimodal Analgesia For Anterior Cruciate Ligament Reconstruction. *Anesth Analg*. 108:1296-302, 2009 . PMID: PMC2861496
103. Piva SR, Childs JD, Klucenic B, **Irrgang JJ**, Almeida GJM, Fitzgerald GK. Patella fracture during rehabilitation after bone-patellar-tendon bone anterior cruciate ligament reconstruction: 2 case reports. *J Orthop Sports Phys Ther* 39:278-86, 2009.
104. Kowalchuk DA, Harner CD, Fu FH, **Irrgang JJ**. Prediction of Patient-Reported Outcome After Single-Bundle ACL Reconstruction. *Arthroscopy* 25, 457-463. 2009 PMID: PMC2855045
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Ross M.D., Denegar C.R., **Irrgang JJ**, McCloy C.: Estimating disability following anterior cruciate ligament reconstruction. Combined Sections Meeting of the American Physical Therapy Association, San Antonio, TX. February 17, 2001.

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proximal/distal realignment for patellofemoral instability in athletes. American Orthopaedic Society for Sports Medicine Specialty Day Meeting, San Francisco, CA.. March 3, 2001.

Anderson A.F., Boland A.L. **Irrgang JJ**, Harner CD, Kurosaka M, Neyret P., Richmond J.C., Shelbourne K.D.: Development and validation of the International Knee Documentation Committee Subjective Knee Form. International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine, Montreux, Switzerland. May 17, 2001.

Ma CB, Francis K, Towers J, **Irrgang JJ**, Fu FH, Harner CD: Hamstring ACL Reconstruction: A Comparison of Bioabsorbable Interference Screw and Endobutton/post Fixation. Arthroscopy Association of North America 2002, Washington D.C

Ma CB, Francis K, Towers J, **Irrgang JJ**, Fu FH, Harner CD: Hamstring ACL Reconstruction: A study on Bioabsorbable Interference Screw Fixation. 9th Annual Residents & Fellows Arthroscopy Conference 2002, Useppa Island, Florida

Giffin R, Francis K, **Irrgang JJ**, Fu FH, Harner CD. Clinical outcome of combined meniscal and ACL reconstruction. AAOS Specialty Day Meeting, Dallas, TX. February 16, 2002.

Westerheide K, Fluhme D, Francis K, **Irrgang JJ**, Harner CD, Fu FH. Long-term follow up of allograft versus autograft bone patellar tendon bone ACL reconstruction. Annual AOSSM Meeting, Orlando, Florida. June 30 – July 3, 2002.

Lephart SM, Ferris CM, Abt JP, **Irrgang JJ**, Laudner KG, Habu A, Harner CD. Adaptations in loading patterns of the knee, hip, and ankle in ACL deficient subjects. 2003 Orthopaedic Research Society. New Orleans, LA. Feb 1-5, 2003.

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Sekiya, JK., Ong BC, **Irrgang, JJ.**, Fu FH, Harner, CD.. Clinical outcomes following arthroscopic single bundle posterior cruciate ligament reconstruction. Annual Meeting of the Virginia Orthopaedic Society, Williamsburg, VA, May 2003.

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Sekiya JK, West RV, Ong BC, **Irrgang JJ**, Fu FH, Harner CD. Clinical outcomes after isolated arthroscopic single-bundle posterior cruciate ligament reconstruction. 5<sup>TH</sup> Biennial ISAKOS Congress, Hollywood, Florida, April 5, 2005.

Rihn JA, Chhabra A, Fu FH, **Irrgang JJ**, Harner CD. Does irradiation affect the clinical outcome of patellar tendon allograft Acl reconstruction. Presented at the AOSSM 2005 meeting Keystone Resort in Keystone, Colorado July 14-17,2005

Jones DL, **Irrgang JJ**, Kriska AM, Wearden S, Crossett LS, Kwoh CK. Predictors of physical activity in two cohorts with knee osteoarthritis. Physical Therapy Annual Conference Abstracts June 2005.

Rihn JA, Koenig MD, **Irrgang JJ**, Fu FH, Harner CD. Septic arthritis following ACL reconstruction: 13 year experience. American Orthopaedic Society for Sports Medicine (Poster presentation Hershey Lodge & Convention Center, Hershey, Pennsylvania June 29 to July 2, 2006)

Martin, RL, **Irrgang JJ**: Evidence of validity for the Hip Outcome Score (HOS) based on differential item functioning. 2006 APTA Combined Sections meeting, San Diego, CA. February 1-5, 2006

Jones D, **Irrgang JJ** et al. Physical activity expectations within two cohorts with knee osteoarthritis. 54<sup>th</sup> Annual Meeting of the American College of Sports Medicine. Ernest N. Morial Convention Center, New Orleans, Louisiana. May 30<sup>th</sup>, 2007

Radkowski CA, **Irrgang JJ**, Kline AJ, Williams BA, Fu FH, Harner CD. Effects of femoral nerve blocks on postoperative range of motion and quadriceps function after ACL reconstruction. 17<sup>th</sup> Annual Meeting of the American Orthopaedic Society for Sports Medicine, Calgary, Alberta, Canada, July 12, 2007

Harner CD, **Irrgang JJ**, Williams B, Jordan S, Tranovich M. Side effects of continuous femoral perineural analgesia after anterior cruciate ligament reconstruction: A prospective, randomized clinical trial. Presented at the American Society for Sports Medicine Annual Meeting . Orlando, Florida. July 13, 2008

Fu FH, Pombo M, **Irrgang JJ**, Bonci, G. Tanovich M, Shen W. Single-bundle versus double-bundle anterior cruciate reconstruction: A matched pairs case control study. Thursday, July 10, 2008. AOSSM Annual Meeting, JW Marriott Orlando Grande lakes, Orlando, Florida, July 10-13, 2008.

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Fu FH, Jordan S, **Irrgang JJ**, Shen W. The evolution of double-bundle ACL reconstruction and recovery of early postoperative range of motion. Presentation at the 13<sup>TH</sup> ESSKA 2008 Congress, Porto 2008, Portugal

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Jordan S, Pombo M, **Irrgang JJ**, Williams BA, Tranovich M, Bottegal M, Harner CD. Complications after ACL reconstruction with continuous femoral perineural analgesia: A prospective randomized clinical trial. 7<sup>TH</sup> Biennial ISAKOS Congress. Osaka, Japan April 5-9, 2009

Szczodry M, Kasten P, **Irrgang JJ**, Costello J, Fu FH. Intra-operative fluoroscopic measurements to determine tibial tunnel placement in anatomical double bundle ACL reconstruction . 2009 Annual Meeting of the American Orthopaedic Society for Sports Medicine, Keystone, CO July 9-12, 2009

Goitz RJ, Razfar A, Duffy JM, Kaufmann RA, Kowalchuk D, **Irrgang J**, Borrero CD and Towers JD. Outcome of Nonoperative Treatment of Ulnar-Sided Wrist Pain. 64<sup>th</sup> Annual Meeting of the American Association for Hand Surgery, January 7-10, 2009 Maui, Hawaii

Musahl V; Jordan SS, Colvin A, Tranovich MJ , **Irrgang JJ**, Practice patterns for combined anterior cruciate ligament and meniscal surgery in the US. American Orthopaedic Society for Sports Medicine Specialty Day, Las Vegas, Nevada, February 28, 2009

Yan Xu. Tranovich MJ, Shen W, **Irrgang JJ**, Fu FH, Relationship of Tunnel Placement and Clinical Outcome Following Double-Bundle ACL Reconstruction. American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, Nevada, February 25th, 2009

Kropf EJ, Forsythe B, Tranovich M, Baker III CL, **Irrgang JJ**. Allograft revision vs. primary single bundle anterior cruciate ligament reconstruction: A case-control study. . Specialty Day of the American Orthopaedic Society for Sports Medicine, Las Vegas, February 28th, 2009

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Chun Y; Huard J; **Irrgang JJ**; Hagen T; Wright V; Burhan; Fu FH. Improving Recovery Following Recurrent Hamstring Injury Using an Angiotensin II Receptor Blocker: Two Case Studies" Presented at the ORS 56th Annual Meeting, in New Orleans, Louisiana, March 6-9, 2010

Hasper C, Kopf S, Lorenz S, **Irrgang JJ**, Tashman S, Fu FH. The influence of tibial rotation on tunnel position measurement using fluoroscopy in ACL reconstruction. Presented at the 14th ESSKA Congress, Oslo, Norway, June 9, 2010

Li R, Lorenz S, Harner CD, Fu FH, **Irrgang JJ**. Predictors of radiographic knee osteoarthritis after

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anterior cruciate ligament reconstruction. Presented at the 2010 Annual Meeting of the American Orthopaedic Society for Sports Medicine. Providence, RI. July 14, 2010.

Popchak A, Hagen BF, Rosentsteel C, Harner CD, **Irrgang JJ**. Evaluation of a strength and conditioning program on performance variables in youth baseball. Presented at the 2010 Annual Meeting of the American Orthopaedic Society for Sports Medicine, Providence, RI, July 17, 2010.

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Li R, Lorenz S, Harner CD, Fu FH, **Irrgang JJ**. Predictors of radiographic osteoarthritis after ACL reconstruction. Presented at the 8<sup>TH</sup> Biennial Meeting of the International Society of Arthroscopic Sports Medicine and Knee and Orthopaedic Surgery (ISAKOS), Rio de Janeiro, Brazil, May 16, 2011.

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Wasserman BR, Jordan SS, Working ZM, Williams B, Fu FH, **Irrgang JJ**, Harner CD. Adverse Effects of Femoral Nerve Block Analgesia after Anterior Cruciate Ligament Reconstruction. 2011 Annual Meeting of the American Orthopaedic Society for Sports Medicine. San Diego, California. July 9, 2011).

Middleton KK, Muller B; Araujo P Rabuck SJ; **Irrgang JJ**; Fu FH. Can individualized anterior cruciate ligament reconstruction restore the native insertion site size? American Orthopaedic Society of Sports Medicine 2012 Meeting. Baltimore, MD July 13, 2012.

Li RT, Borrero CG, Casagrande BU, Harner CD, **Irrgang JJ**. Obesity and root degeneration exhibit a non-linear interaction Effect with meniscectomy to increase the risk of cartilage loss: Data from the Osteoarthritis Initiative. 9th Biennial Congress 2013 ISAKOS Congress. Toronto, Ontario, Canada on May 12-16, 2013

Araujo PH, Asai S, Pinto MP, Protta T, Middleton K, Linde-Rosen, M, **Irrgang J**, Smolinski P, Fu F. The ACL Graft Inclination Angle Effects in In Situ Force. 9th Biennial Congress 2013 ISAKOS Congress. Toronto, Ontario, Canada on May 12-16, 2013

Hoshino Y, Araujo P, Ahldén M, Samuelsson K, Muller B, Hofbauer M, Wolf MR, **Irrgang JJ**, Fu FH, Musahl V. Image Analysis for Quantification of the Pivot Shift Test and Development of an iPad Application. Presented at the 9th Biennial Congress 2013 ISAKOS Congress. Toronto, Ontario, Canada on May 16th, 2013.

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Lopomo N, Hoshino Y, Volker M, **Irrgang JJ**, Zaffagnini S, Karlsson J, Samuelsson K, Kuroda R. Quantification of the pivot shift test before and after ACL reconstruction: A multicenter international study. 16<sup>TH</sup> ESSKA May 15<sup>th</sup>, 2014 Amsterdam

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Ferrer G, Miller M, Murawski C, Tashman S, **Irrgang JJ**, Musahl V, Fu F, Debski R. Quantitative analysis of patella harvest site after harvest of quadriceps tendon graft with bone plug. 16<sup>TH</sup> ESSKA May 16<sup>th</sup>, 2014 Amsterdam

Smolinski P, Araujo P, Middleton K, **Irrgang JJ**, Linde-Rosen M, Fu FH. In situ graft force with clination angle in single bundle anterior cruciate ligament reconstruction. 16<sup>TH</sup> ESSKA May 15<sup>th</sup>, 2014 Amsterdam.

Ohashi B, Lopomo N, Samuelsson K, Hoshino Y, **Irrgang JJ**, Musahl V, Pivot Study Group T. The use of different technologies to quantify the pivot shift test: A multicenter study comparing the examination while awake and under anesthesia. 16<sup>TH</sup> ESSKA May 15<sup>th</sup>, 2014 Amsterdam

Muller B, Lynch A, Yabroudi M, Tarabachi M, Harner C, van Dijk C, Fu FH, **Irrgang JJ**. Prediction of return to preinjury sports following ACL reconstruction. 16<sup>TH</sup> ESSKA May 15<sup>th</sup>, 2014 Amsterdam

Duerr E, Rahnemai-azar AA, Fu FH, Irrgang JJ. ACL Degeneration As An Early Marker Of Future Osteoarthritic Changes In The Knee. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31

Thorhauer ED, Sass K, Sivaprakasam A, Irrgang JJ, Fu FH, Tashman S. Changes in Tibiofemoral gait kinematics are associated with regional cartilage morphological changes. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31

Thorhauer ED, Sass K, Sivaprakasam A, Irrgang JJ, Fu FH, Tashman S. Alterations in in vivo knee cartilage contact after anterior cruciate ligament reconstruction and correlations to clinical outcomes. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

Duerr E, Azar AAR. Fu FH, Irrgang JJ. ACL degeneration as an early marker of future osteoarthritic changes in the knee. 10<sup>th</sup> Biennial ISAKOS Congress, Lyon, France. June 10<sup>th</sup>, 2015

Nishizawa Y, Thorhauer E, Irrgang JJ, Fu FH, Tashman S. Relationships between femoral tunnel position and dynamic knee function after ACL reconstruction. 10<sup>th</sup> Biennial ISAKOS Congress, Lyon, France. June 10<sup>th</sup>, 2015

Kalawadia J, Thorhauer E, Arilla FV, Azar AAR, Zhang C, Fu FH, Tashman S, Irrgang JJ. Knee kinematics are related to patient-reported outcomes 6 months after anatomic ACL reconstruction. AOSSM 2015 Annual Meeting, Orlando, FL July 9, 2015

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Popchak A, Boninger M, Irrgang JJ. Acute changes in the infraspinatus and long head of the biceps tendons in adolescent baseball players in response to a pitching performance. APTA Combined Sections Meeting 2016, Anaheim, CA, February 17-20, 2016.

Azar AAR, Irrgang JJJ. Passive anterior tibial subluxation in ACL injured knees restores after reconstruction surgery. 2016 American Academy of Orthopedic Surgeons Annual Meeting, March 1-5, 2016, Orlando, FL

Kalawadia J , Irrgang JJ. Isolated Lateral Meniscectomy Versus Repair - Is There a Difference? 2016 American Academy of Orthopedic Surgeons Annual Meeting, March 2<sup>nd</sup>, 2016, Orlando, FL

Nishizawa Y, Irrgang JJ, Fu FH, Tashman S. Anterior cruciate ligament elongation during gait and running is influenced by force more than knee flexion angle. ORS 2016 Annual Meeting. March 5, 2016, Orlando, FL

Nishizawa Y, Irrgang JJ, Fu FH, Tashman S. Does early anterior cruciate ligament reconstruction restore dynamic knee function and improve clinical outcomes. ORS 2016 Annual Meeting. March 7, 2016, Orlando, FL

Azar A, Yaseen Z, van Eck CF, Irrgang J, Fu F, Musahl V. Increased Lateral Tibial Plateau Slope Predisposes Male College Football Players to ACL Injury. AANA Annual Meeting, April 14-16, 2016 in Boston, MA

Surer L, Yapici C, Guglielmino C, van Eck C, Irrgang J, Fu F. Fibrin Clot Prevents Bone Tunnel Widening after ACL Reconstruction with Allograft" has been accepted for Podium Presentation at the AANA Annual Meeting, April 14-16, 2016 in Boston, MA

Nishizawa Y, Tashman S, Irrgang JJ, Fu FH. Does early anterior cruciate ligament reconstruction restore dynamic knee function and improve clinical outcomes? 17th ESSKA Congress, Barcelona 2016:

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Fu FH, Paul JJ, **Irrgang JJ**, Sawhney R., Harner CD.: Loss of knee motion following arthroscopic anterior cruciate ligament reconstruction. Fourth Congress of the European Society of Knee Surgery and Arthroscopy, Stockholm, Sweden, June 25-30, 1990.

**Irrgang JJ**. Comparison of CPM to physical therapy in the rehabilitation of patients undergoing ACL reconstruction. International Society of the Knee Annual Meeting, Toronto, Canada, May 14-17, 1991.

**Irrgang JJ**, Dearwater S, Fu FH, Sawhney R.: Effects of using a continuous CPM machine in rehabilitation following anterior cruciate ligament reconstruction. 1st Congress of Orthopaedic Association of English-Speaking World, Toronto, Ontario, Canada, June 21-25, 1991.

Harner C., Fu FH., **Irrgang JJ**, Paul JJ., Sawhney R.: Recognition, management and prevention of the

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stiff knee following arthroscopic anterior cruciate ligament reconstruction (Scientific Exhibit). 58<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Anaheim, California, March 7-12, 1991.

**Irrgang JJ**, Harner CD, Fu FH., Paul J., Silbey MB.: Recognition, management and prevention of the stiff knee following arthroscopic anterior cruciate ligament reconstruction (Scientific Exhibit). 59<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Washington, DC, February 20-25, 1992.

**Irrgang JJ**, Dearwater S, Fu FH, Sawhney R.: Effects of using a continuous passive motion machine in rehabilitation following anterior cruciate ligament reconstruction. 59<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Washington, DC, February 20-25, 1992.

**Irrgang JJ**: Reliability of measuring postural sway during unilateral stance in normal individuals using the Chattecx Dynamic Balance System. American Physical Therapy Association Annual Conference, Denver, Colorado, June 16, 1992.

Maday M, **Irrgang JJ**, Fu FH, Harner CD: Posterior cruciate ligament reconstruction using fresh frozen allograft tissue: Indications, techniques, results and controversies (Scientific Exhibit). 60<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, California, February 18-22, 1993.

**Irrgang JJ**, Harner CD, Silbey M., DiGiacomo R, Fu FH.: Loss of motion following ACL reconstruction: A second look. Arthroscopy Association of North America Specialty Day, New Orleans, Louisiana, February 1994.

Allen A., **Irrgang JJ**, Maday M., Ticker J., Fu FH, Harner CD. Arthroscopically assisted multiple ligament reconstructions using fresh frozen allograft tissue. Annual Meeting of the American Academy of Orthopaedic Surgeons Meeting, Orlando, Florida, February, 1995.

Waltrip RL., Bennett CH., **Irrgang JJ**, Harner CD.: Surgical management of traumatic knee dislocation: Results of a standard surgical approach. 68<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, CA. February 28, 2001.

Sell TC, Lephart SM, Ferris CM, Abt JP, **Irrgang JJ**, Fu FH. Neuromuscular and biomechanical adaptations to two different intervention programs for the prevention of female ACL injuries. 2003 APTA Combined Sections Meeting. Tampa, FL. Feb 12-16.

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Miller SL, Francis KA, Fluhme DJ, **Irrgang JJ**, Fu FH., Harner CD: High school and college femal atheletes: Intermediate term comparison of bone- patellar tendon-bone versus hamstring ACL reconstruction. American Orthopaedic Society of Sports Medicine 2004 Annual Meeting, June 24-27, 2004, Quebec City, Canada.

Rihn JA, Koenig MD, **Irrgang JJ**, Fu FH, Harner CD. Septic arthritis following ACL reconstruction. 13-



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year experience. American Orthopaedic Society of Sports Medicine 2006 Annual Meeting, June 29 – July 2, 2006, Hershey, PA.

Williams BA, Bottegal MT, Francis KA, **Irrgang JJ**, Vogt MT. A post-hoc analysis of research study staffing: The effects of the health insurance portability and accountability act on research staff work hours during a prospective, randomized clinical trial. Presented at the International Anesthesia Research Society Annual Meeting. March 25, 2007, Orlando, Florida.

**Irrgang JJ**: Effect of femoral nerve blocks on early motion after ACL reconstruction: A randomized clinical trial. 6<sup>TH</sup> Biennial ISAKOS Congress, Florence, Italy, May 29-31, 2007

Kowalchuk DA, **Irrgang JJ**, Sekiya JK, Fu FH, Harner CD. A model to predict patient-reported outcome after ACL reconstruction. 6<sup>th</sup> Biennial ISAKOS Congress, Florence, Italy, May 29-31, 2007

Jones D, **Irrgang JJ**. A comparison of physical activity expectations between two cohorts with knee osteoarthritis. Annual European Congress of Rheumatology EULAR 2007. Barcelona, Spain, June 14, 2007

Henry S, Mascarenhas R, Forsythe B, **Irrgang JJ**, Harner CD. Relationship between medial meniscus tear morphology and chondral changes within medial and lateral compartments of the knee. American Society of Sports Medicine 2008, Orlando, Florida. July 10-13, 2008

Tischer T, Ronga M, Tsai A, Ekdahl M, Ingham S, **Irrgang J**, Smolinski P, Fu F. The role of the anteromedial, intermediate and posterolateral bundles of the anterior cruciate ligament in goats. Poster presentation 54<sup>th</sup> Annual Meeting of the Orthopaedic Research Society, San Francisco, CA, March 2-5, 2008.

Siebold R, Axes J, **Irrgang J**, Tashman S, Shen W, Robinson S, Li K, Fu F. A computerized analysis of femoral condyle radii in 37 ACL reconstructed and 37 contralateral intact knees using 3D CT reconstructions. 13<sup>th</sup> ESSKA 2000 Congress, Porto Portugal, May 21-25, 2008.

Kopf S, Pombo MW, Szczodry M, **Irrgang JJ**, Fu FH. Variability of the human anterior cruciate ligament insertion sites: A prospective study, Annual Meeting of the American Academy of Orthopaedic Surgeons, Las Vegas, NV February 25-27, 2009

Mascarenhas R, Karpie J, **Irrgang JJ** Harner CD, Irrgang JJ. Patellar tendon anterior cruciate ligament reconstruction in the high-demand patient: A retrospective matched analysis of autograft versus allograft reconstruction with 3 to 14 year Follow-up. Arthroscopy Association of North America Annual Meeting in Hollywood, Florida, May 20<sup>th</sup> to 23<sup>rd</sup>, 2010.

Hasper C, Kopf S, Lorenz S, **Irrgang J**, Tashman S, Fu FH. The influence of tibial rotation on tunnel position measurement using fluoroscopy in ACL reconstruction. Presented at the 14<sup>th</sup> ESSKA Congress, Oslo, Norway. June 9, 2010

Kopf S., Bignozzi, **Irrgang JJ**, Zaffagnini S, Musahl V, Fu FH. In vivo kinematic evaluation of anatomic double bundle ACL reconstruction. Presented at the 14<sup>th</sup> ESSKA Congress, Oslo, Norway. June 9-12, 2010

Kopf S, Pombo M, Wong A, Shen W, **Irrgang JJ**, Fu FH. The ability of three different approaches to

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restore the anatomical AM bundle femoral insertion site during anatomic ACL reconstruction. Presented at the 14<sup>th</sup> ESSKA Congress. Oslo, Norway. June 9-12, 2010

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Greco N, Anderson A, Mann B, Cole BJ, Farr J, Nissen CW, **Irrgang JJ**. Responsiveness of the IKDC Subjective Knee Form in comparison to the WOMAC Osteoarthritis Index, Modified Cincinnati Knee Rating System and SF36 in patients with focal articular cartilage defects. Presented at the 2010 Annual meeting of the American Orthopaedic Society for Sports Medicine, Providence, RI, July 14-17, 2010.

Greco N, Anderson A, Mann B, Cole BJ, Farr J, Nissen CW, **Irrgang JJ**. Responsiveness of the IKDC Subjective Knee Form in comparison to the WOMAC Osteoarthritis Index, Modified Cincinnati Knee Rating System and SF36 in patients with focal articular cartilage defects. Presented at the 8<sup>th</sup> Biennial meeting of the International Society of Arthroscopic Sports Medicine and Knee and Orthopaedic Surgery (ISAKOS), Rio de Janeiro, Brazil, May 15-17, 2011

Mascarenhas R, Kropf, E, Jeong, KH, Moore C, Costello J, Jordan SS, Chu CR, Macdonald PB, Harner CD, Harner, CD, **Irrgang JJ**. Arthroscopic and magnetic resonance imaging (MRI) grading of articular cartilage lesions of the knee: Inter-rater reliability and reliability between modalities Canadian Orthopaedic Association, Ottawa, ON, Canada, June 7-10, 2012.

Kosempa D, Lin A, **Irrgang JJ**, Harner CD. A systematic review of complications reporting in clinical trials in sports medicine. Presented at the Annual Meeting of the American Academy of Orthopaedic Surgery, San Francisco, CA Feb 7-11, 2012.

Maeda S, Miyawaki M, Araujo P, **Irrgang JJ**, Tashman S, Fu FH. Tibial insertion morphology and area of anterior cruciate ligament. ESSKA, May 2-5, 2012 Meeting, Zurich, Switzerland.

Gande A, **Irrgang JJ**. Baseline knee flexion pain, age and joint line tenderness predict the progression of asymptomatic, radiographic knee osteoarthritis to symptomatic knee osteoarthritis over 5 years. Presentation at the 2012 ACR/ARHP Annual Meeting, Washington, D.C., November 12, 2012.

McClincy M; \*Farrell D, Siska P; Gruen GS; **Irrgang JJ**, Tarkin IS. Prospective Randomized Evaluation of Outcomes with Different Tibial Nail Entry Portals 28th Orthopaedic Trauma Association Annual Meeting, Minneapolis, Minnesota October 3-6, 2012.

Miller C, Lin A, Harold S, **Irrgang JJ**, Harner CD. Complications Following Arthroscopic Knee Surgery: A Review Of The ABOS Part II Database. AAOS Annual Meeting in Chicago, IL, March 19-23, 2013

Miyawaki M, Maeda S, Araujo P, Fujimaki Y, Thorhauer E, Middleton K, **Irrgang J**, Tashman S, Fu F. Measurement of native ACL tibial insertion site morphology: A cadaveric study. ORS 2013 Annual Meeting, San Antonio, January 26-29, 2013.

McClincy M; Farrell DJ, Siska PA, Gruen GS, **Irrgang JJ**, Tarkin IS. Prospective randomized evaluation of outcomes with different tibial nail entry portals. AAOS 2013 Annual Meeting, March 2013.

## PEER REVIEWED POSTER PRESENTATIONS

Fujimaki Y, Maeda S, Middleton K, Thorhauer E, Miyawaki M, Araujo P, **Irrgang J**, Tashman S, Fu FH. Size prediction of quadriceps tendon autograft for ACL reconstruction. ORS 2013 Annual Meeting, San Antonio, January 26-29, 2013.

Muller B, Hofbauer M, Hoshino Y, Araujo P, Ahldén M, **Irrgang J**, Fu F, Musahl V. Image Analysis For Quantification Of The Pivot Shift Test And Development Of An Ipad Application. AOSSM 2013 Chicago IL, July 11-14, 2013

Muller B, Hofbauer M, Atte A, **Irrgang J**, Fu F. The Effect Of Flexible Tunnel Drilling On The Femoral Tunnel Angle. 9th Biennial Congress ISAKOS 2013 Congress, May 12-16, 2013 Toronto, CA.

Muller B, Duerr E, Tranovich M, **Irrgang J**, van Dijk CN, Fu F. Does Anatomic Anterior Cruciate Ligament Reconstruction Reduce Anterior Tibial Subluxation. 9th Biennial Congress ISAKOS 2013 Congress, May 12-16, 2013 Toronto, CA.

Araujo PA, Ahldén M, Hoshino Y, Hofbauer M, Muller B, **Irrgang J**, Fu F, Musahl V. Quantitative Parameters Of The Pivot Shift - Correlation And Clinical Use. 9th Biennial Congress ISAKOS 2013 Congress, May 12-16, 2013 Toronto, CA.

Muller B, Yabroudi MA, Chung-Liang L, Lynch A, Harner CD, Dijk CNV, Fu FH, **Irrgang JJ**. Defining patient acceptable symptom state thresholds for the IKDC Subjective Knee Form and KOOS for patients undergoing ACL reconstruction. AOSSM 2013 Chicago IL, July 11-14, 2013.

Yabroudi MA, Muller B, Lai C-L, Lynch A, Oostdyk A, Fu FH, Harner CD, **Irrgang JJ**. Comparison of Two Methods to Measure Return to Sports After Anterior Cruciate Ligament (ACL) Reconstruction. . AOSSM 2013 Chicago IL, July 11-14, 2013

Ferrer GA, Miller RM; Murawski CD<sup>2</sup>; Tashman S; **Irrgang JJ**; Musahl V; Fu FH; Debski, RE. Quantitative Analysis of Patella Following Harvest of a Quadriceps Tendon Graft with Bone Plug. 60<sup>th</sup> Annual Meeting of the ORS, March 15-18, 2014 at the Hyatt Regency New Orleans.

Ohashi B, Lopomo N, Zaffagnini S, i Hoshino Y, Kurod R, Samuelsso K, **Irrgang JJ**, Musahl V, The PIVOT Study Group. Quantitative Measurement Of A Standardized Pivot-shift: Comparison Between The Awake And The Examination Under Anesthesia In Patients With Acute ACL Injury. Poster #: 1671. 60<sup>th</sup> Annual Meeting of the ORS, March 15-18, 2014 at the Hyatt Regency New Orleans

**Irrgang JJ**, Yabroudi M, Lynch A, Fu FH, Muller B, Lai C, Oostdyk AM, Fu FH, Harner CD,. Return to pre-injury level of competitive sports after anterior cruciate ligament (ACL) reconstruction. 16<sup>th</sup> ESSKA Congress, May 14-17, 2014 Amsterdam.

Muller B, Yabroudi M, Lai P, Lynch A, Harner CD, van Dijk CN, Fu FH, **Irrgang JJ**. Defining thresholds for the patient acceptable symptom state for the IKDC subjective knee form and KOOS for patients undergoing ACL reconstruction. 16<sup>th</sup> ESSKA Congress, May 14-17, 2014 Amsterdam.

**Nishizawa Y**, Thorhauer E, **Irrgang JJ**, Fu FH, Tashman S. Relationships Between Clinical Laxity Measurement and Dynamic Knee Kinematics After ACL Reconstruction. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

**Nishizawa Y**, Thorhauer E, **Irrgang JJ**, Fu FH, Tashman S. Relationships Between Femoral Tunnel

## PEER REVIEWED POSTER PRESENTATIONS

position and Dynamic Knee Function After ACL Reconstruction. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

Araujo PH, Asai S, Pinto M, Protta T, Middleton KK, **Irrgang JJ**, Linde-Rosen M, Smolinski P, Fu FH. Effect Of Graft Inclination Angle In Single Bundle Anterior Cruciate Ligament Reconstruction On Knee Kinematics. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

OHara-Plotnik R, Thorhauer E, Sivaprakasam A, **Irrgang JJ**, Fu FH., Tashman S . Gait Is a Poor Task Choice for Identifying Kinematic Deficits After ACL Reconstruction. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

Miller RM, Popchak A, Vyas D, Tashman S, **Irrgang JJ**, Volker Musahl V, Debsk RE. Effects Of Exercise Therapy For Treatment Of Symptomatic Full-thickness Tears Of The Supraspinatus Tendon On In Vivo Glenohumeral Kinematics. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

Manmohan R, Kurapati N, Eric Thorhauer E, Fu FH, Tashman S, **Irrgang JJ**. Quantitative MRI-T2 Mapping of Articular Cartilage following Anatomic Anterior Cruciate Ligament Reconstruction: Relationship to Patient Reported Measures of Symptoms, Activity, and Participation. Poster#: 1198 ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

Thorhauer ED, **Irrgang JJ**, Tashman S, Fu FH. In situ analysis of anterior cruciate ligament shape and morphology. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

Thorhauer ED, Nishizawa Y, **Irrgang JJ**, Fu FH, Tashman S. Factors affecting femoral tunnel morphology and graft bone block healing after anterior cruciate li gament reconstruction. ORS 2015 Annual Meeting at the MGM Grand Hotel in Las Vegas, Nevada, March 28-31, 2015

Hoshino Y, Kuroda R, Musahl V, **Irrgang J**, Lopomo N, Zaffagnini S, Karlsson J, Fu FH. Quantitative evaluation of the pivot shift – relationship to clinical pivot shift grade a prospective international multicenter study. 10<sup>th</sup> Biennial ISAKOS Congress, Lyon, France, June 7-11, 2015

Zakko P, Eck CV, **Irrgang J**, Fu F. How can we predict the size of frequently used autografts in ACL reconstruction. 10<sup>th</sup> Biennial ISAKOS Congress, Lyon, France, June 7-11, 2015

Kurapati N, Thorhauer E, Fu F, Tashman S, **Irrgang J**. Quantitative MRI-T2 mapping of articular cartilage following anatomic anterior cruciate ligament reconstruction: Relationship to patient reported measures of symptoms, activity, and participation. Abstract No 11112. E-poster. 10<sup>th</sup> Biennial ISAKOS Congress, Lyon, France, June 7-11, 2015

Hoshino Y, Musahl V, Irrgang JJ, Lopomo N, Zaffagnini S, Karlsson J, Kuroda R, Fu FH. Quantitative Evaluation of the Pivot Shift - Relationship to Clinical Pivot Shift Grade: A Prospective International Multicenter Study. AOSSM Annual Meeting 2015, Orlando, FL.

Guenther D, Irrgang JJ, Musahl Volker, Fu FH. Klassifikation der tibialen insertion des vorderen Kreuzbandes. 32<sup>nd</sup> AGA Congress 2015, September 17, 2015 Dresden, Germany

## PEER REVIEWED POSTER PRESENTATIONS

Guenther D, Irrgang JJ, Fu FH. Klassifikation der tibialen Insertion des vorderen Kreuzbandes. (Variation in the shape of the tibial insertion site of the anterior cruciate ligament: A classification system) has been accepted for poster presentation during the German congress of orthopaedic and trauma surgery (DKOU) 2015.

Popchak A, Boninger M, Irrgang JJ. Physical characteristics of a youth and adolescent baseball population and the relation to upper extremity complaints.. Combined Sections Meeting 2016, Anaheim, CA, February 17-20, 2016

Lynch AL, Popchak A, Irrgang JJ. Activities important to athletes are not represented in the Activity Measure for Post-Acute Care Basic Mobility Item Bank. Combined Sections Meeting 2016, Anaheim, CA, February 17-20, 2016

Fourman MS, Giugale J, Gasbarro GV, Zlotnicki J, Beck A, Boakye LA, Kalawadia J, Rodosky M, Irrgang J, Lin A. Comparing long term clinical outcomes of humeral head resurfacing with stemmed hemiarthroplasty: A study of 368 patients. ORS 2016 Annual Meeting, Orlando, FL March 5-8

Van Eck C, Rahnama-Azar AA, Ma Y, Musahl V, Irrgang JJ, FuFH. Passive anterior tibial subluxation in ACL-injured knees is restored after ACL reconstruction. ORS 2016 Annual Meeting, Orlando, FL March 5-8

Thorhauer E, Fu FH, Irrgang J, Tashman S. Hypertrophy and structural alterations in tibiofemoral articular cartilage following anterior cruciate ligament reconstruction assessed with MRI. ORS 2016 Annual Meeting, Orlando, FL March 5-8

Surer L, Yapici C, Guglielmino C, van Eck CF, Irrgang JJ, Fu FH. Fibrin clot prevents bone tunnel enlargement after ACL reconstruction with allograft. ORS 2016 Annual Meeting, Orlando, FL March 7 (Poster Teaser Presentation)

Rahnama-Azar AA, Yaseen Z, van Eck C, Fu FH, Irrgang JJ, Musahl V. Increased lateral tibial plateau slope predisposes male college football players to ACL injury. ORS 2016 Annual Meeting, Orlando, FL March 5-8

Tashiro Y, Sundaram V, Thorhauer E, Irrgang JJ, Fu FH, Tashman S. In vivo analysis of dynamic graft bending angle in anterior cruciate ligament reconstructed knees during downhill running and level walking. ORS 2016 Annual Meeting, Orlando, FL March 5-8

Abebe E, Rahnama-Azar AA, Johnson P, Labrum JO, Fu FH, Irrgang JJ, Musahl V. Increased lateral tibial slope predicts high-grade rotatory knee laxity pre-operatively in ACL injured patients. ORS 2016 Annual Meeting, Orlando, FL March 5-8

Musahl V, Rahnama-Azar AA, Costello J, Arner JW, Fu FH, Hoshino Y, Lopomo N, Samuelsson K, Irrgang JJ. The influence of anterolateral capsular injury on knee laxity of anterior cruciate ligament injured patients. ORS 2016 Annual Meeting, Orlando, FL March 5-8

Van Eck C, Azar A, Musahl V, Irrgang JJ, Fu FH. "Passive Anterior Tibial Subluxation in Anterior Cruciate Ligament Injured Knees Is Restored after Reconstruction Surgery" AANA Annual Meeting, April 14-16, 2016 in Boston, MA

## **PEER REVIEWED POSTER PRESENTATIONS**

Nishizawa Y, Tashman S, Irrgang JJ, Fu FH. Anterior Cruciate Ligament Elongation During Gait and Running is Influenced by Force More Than Knee Flexion Angle. 17th ESSKA Congress, Barcelona 2016

Lynch AD, Zhang C, Irrgang JJ. Reliability and Responsiveness of the Single Assessment Numeric Evaluation in individuals after Anterior Cruciate Ligament Reconstruction. 17th ESSKA Congress, Barcelona 2016

## **TEACHING**

### **MEETINGS AND SYMPOSIA ORGANIZED**

Cervical Spine Seminar sponsored by the Institute for Sports Medicine of Greater Pittsburgh, (Program Director). Pittsburgh, PA. June 1980.

Sports Medicine Symposium sponsored by the Institute for Sports Medicine of Greater Pittsburgh and the Department of Orthopaedic Surgery of Allegheny General Hospital (Program Director). Pittsburgh, PA. May 1981.

Panther Sports Medicine Symposium sponsored by the Sports and Preventive Medicine Institute of Presbyterian-University Hospital and the University of Pittsburgh (Co-Director). Pittsburgh, PA. December 1987.

Second Annual Panther Sports Medicine Symposium sponsored by the Sports Medicine Institute of Presbyterian-University Hospital, the Department of Orthopaedic Surgery and the Center for Continuing Education for the Health Sciences of the University of Pittsburgh (Co-Director). Pittsburgh, PA. December 1988.

Third Annual Panther Sports Medicine Symposium sponsored by the Sports Medicine Institute of Presbyterian-University Hospital, the Department of Orthopaedic Surgery and the Center for Continuing Education for the Health Sciences of the University of Pittsburgh (Co-Director). Pittsburgh, PA. December 1989.

Fourth Annual Panther Sports Medicine Symposium sponsored by the Sports Medicine Institute of Presbyterian-University Hospital, the Department of Orthopaedic Surgery and the Center for Continuing Education for the University of Pittsburgh Medical Center (Co-Director). Pittsburgh, PA. November 1990.

The Fifth Annual Panther Sports Medicine Symposium Current Concepts of Knee Ligament Injuries sponsored by the Sports Medicine Institute of Presbyterian-University Hospital, the Department of Orthopaedic Surgery and the Center for Continuing Education for the University of Pittsburgh Medical Center (Co-Director). Pittsburgh, PA. April 2-4, 1992.

Sports Rehabilitation Update 1993 sponsored by the Sports Medicine Institute of Presbyterian University Hospital, the Department of Orthopaedic Surgery and the Center for Continuing Education for the University of Pittsburgh Medical Center (Co-Director). Pittsburgh, PA. March 20-21, 1993.

The Seventh Annual Panther Sports Medicine Symposium. Sponsored by the Center for Sports Medicine of the University of Pittsburgh Medical Center, the Department of Orthopaedic Surgery and the Center for Continuing Education for the University of Pittsburgh Medical Center. David L.

## TEACHING

### MEETINGS AND SYMPOSIA ORGANIZED

Lawrence Convention Center/DoubleTree Hotel, Pittsburgh, Pennsylvania. (Co-Course Chairmen) April 14-16, 1994.

The Eighth Panther Sports Medicine Symposium. Current Concepts in Knee Surgery: A Sports Medicine Perspective. Sponsored by the Center for Sports Medicine of the University of Pittsburgh Medical Center, the Department of Orthopaedic Surgery and the Center for Continuing Education for the University of Pittsburgh Medical Center. David L. Lawrence Convention Center/DoubleTree Hotel, Pittsburgh, Pennsylvania. (Co-Course Chairmen) May 17-19, 1997.

The Ninth Panther Sports Medicine Symposium. The Knee: A New Millennium from Robotics to Gene Therapy. Sponsored by the Center for Sports Medicine of the University of Pittsburgh Medical Center, the Department of Orthopaedic Surgery and the Center for Continuing Education for the University of Pittsburgh Medical Center. David L. Lawrence Convention Center/DoubleTree Hotel, Pittsburgh, Pennsylvania. (Co-Course Chairmen) May 4-6, 2000.

Panther Global Summit 2008: Anatomic Double Bundle ACL Reconstruction. Herberman Conference Center, Pittsburgh, Pennsylvania. February 28<sup>th</sup> –March 1<sup>st</sup>, 2008

Panther Global Summit 2011: Anatomic ACL Reconstruction. Herberman Conference Center, Pittsburgh, Pennsylvania. August 25-27, 2011

### INVITED PRESENTATIONS

**Irrgang JJ.** Ankle injuries and shoulder injuries. Southwestern District of the Pennsylvania Physical Therapy Association, Pittsburgh, Pennsylvania, May 1979

**Irrgang JJ.** Rehabilitation of athletic knee injuries. Sports Medicine Seminar, Pittsburgh, Pennsylvania, June 1979

**Irrgang JJ.** Rehabilitation of athletic knee injuries. Southwestern District of the Pennsylvania Physical Therapy Association, Pittsburgh, Pennsylvania, September, 1979

**Irrgang JJ.** Scientific basis of flexibility and endurance conditioning of athletes. Southwestern District of the Pennsylvania Physical Therapy Association, Pittsburgh, PA. April 1981

**Irrgang JJ.** General concepts of sports medicine and rehabilitation. Allegheny General Hospital Sports Medicine Seminar, Pittsburgh, PA. May, 1981

**Irrgang JJ.** Treatment of lower extremity injuries to runners. Allegheny General Hospital Sports Medicine Seminar, Pittsburgh, PA. March 1982

**Irrgang JJ.** Update of physical therapy modalities in the treatment of back pain. Allegheny General Hospital Symposium for Industrial Back Ache, Pittsburgh, PA, April 1982

**Irrgang JJ.** Pathomechanics in long distance runners: Use of orthotics. Allegheny General Hospital Sports Medicine Symposium, Pittsburgh PA. April 1983.

**Irrgang JJ.** Biomechanics of the foot and ankle: Indications for use of orthotics. Northern Virginia

## **INVITED PRESENTATIONS**

Sports Medicine Association Meeting, Arlington, Virginia, 1984.

**Irrgang JJ.** Basic Extremity Mobilization. Northern Virginia Sports Medicine Association Meeting, Arlington, Virginia, 1985.

**Irrgang JJ.** Special sports medicine problems in dancers and gymnasts. 1989 Sports Medicine Conference - New Horizons in Sports Medicine and Sports Science, Hong Kong, March 27, 1989.

**Irrgang JJ.** A practical appraisal of the rehabilitation of patellofemoral problems. 1989 Sports Medicine Conference - New Horizons in Sports Medicine and Sports Science, Hong Kong, March 25, 1989.

**Irrgang JJ.** Symposium on overuse injuries in running. American College of Sports Medicine Annual Meeting, Baltimore, Maryland, June 1, 1989.

**Irrgang JJ.** Instrumented testing of the knee. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, December 3, 1989.

**Irrgang JJ.** Biomechanical approach to conservative treatment of patellofemoral pain. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, December 5, 1989.

**Irrgang JJ.** Sports-specific preseason musculoskeletal screening. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, December 7, 1989.

**Irrgang JJ.** Nonsurgical treatment of rotator cuff injuries in throwing athletes. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, December 9, 1989.

**Irrgang JJ.** Treatment and prevention of stress fractures in athletes. D. Patte Commemorative Conference, Brest, France, September 6, 1990.

**Irrgang JJ.** Rehabilitation of rotator cuff injuries in throwing athletes. D. Patte Commemorative Conference, Brest, France, September 8, 1990.

**Irrgang JJ.** Stiff shoulder syndrome. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, November 30, 1990.

**Irrgang JJ.** Eccentric overload of rotator cuff. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, November 30, 1990.

**Irrgang JJ.** Rehabilitation for the non-operative and post-operative shoulder instability. American Society of Hand Therapists Annual Meeting, Park City, Utah, February 1, 1991.

**Irrgang JJ.** Instability of glenohumeral joint. Pennsylvania Athletic Trainers Society Meeting, Hershey, Pennsylvania, May 17, 1991.

**Irrgang JJ.** Eccentric overload of the rotator cuff. Pennsylvania Athletic Trainers Society Meeting, Hershey, Pennsylvania, May 17, 1991.

**Irrgang JJ.** Eccentric overload of the rotator cuff in throwing athletes: Implications for diagnosis and treatment. American Physical Therapy Association Annual Meeting, Boston, Massachusetts, June 26, 1991



## **INVITED PRESENTATIONS**

**Irrgang JJ.** Current advances in the prevention of lower quadrant injuries in athletes. Naval Academy Rehab Conference on Lower Extremity Prevention of Injuries, Annapolis, Maryland, September 19, 1991

**Irrgang JJ.** Rotator cuff injuries in throwing athletes. Human Kinetics Conference Journal of Sports Rehabilitation, Orlando, Florida, March 6, 1992

**Irrgang JJ.** ACL controversies in rehabilitation. National Kin-Com Users Meeting, Orlando, Florida, October 9, 1992

**Irrgang JJ.** Impingement syndromes and rotator cuff tears - The acute treatment phase. East Coast Continuing Education, Atlantic City, New Jersey, November 7, 1992

**Irrgang JJ.** Acute postoperative management following acromioplasty and/or rotator cuff repair - Acute Treatment Protocols. East Coast Continuing Education, Atlantic City, New Jersey, November 7, 1992

**Irrgang JJ.** Designing a post-surgical patellofemoral protocol. East Coast Continuing Education, Atlantic City, New Jersey, November 7, 1992

**Irrgang JJ.** Rehabilitation after ACL reconstruction. East Coast Continuing Education, Atlantic City, New Jersey, November 7, 1992

**Irrgang JJ.** Knee anatomy. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, March 20, 1993

**Irrgang JJ.** Plyometrics and functional rehabilitation of the lower extremity. Second Annual Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, April 1993

**Irrgang JJ.** Rehabilitation after ACL reconstruction surgery. 6th International Knee Surgery Course, Bormio, Italy, May 13, 1993

**Irrgang JJ.** Treatment of severe ankle sprains and return to activity. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 4, 1993

**Irrgang JJ.** Closed chain strengthening for the upper extremity. Sports Physical Therapy Section 14th Annual Physician-Therapist Team Concept Conference, Williamsburg, Virginia, October 15-17, 1993

**Irrgang JJ.** Rehabilitation following shoulder instability surgery. Sports Physical Therapy Section 14th Annual Physician-Therapist Team Concept Conference, Williamsburg, Virginia, October 15-17, 1993

**Irrgang JJ.** Treatment techniques for acute tendonitis. Sports Physical Therapy Section 14th Annual Physician-Therapist Team Concept Conference, Williamsburg, Virginia, October 15-17, 1993

**Irrgang JJ.** Rehabilitation following patellofemoral surgery. Sports Physical Therapy Section 14th Annual Physician-Therapist Team Concept Conference, Williamsburg, Virginia, October 15-17, 1993

**Irrgang JJ.** Integrating research into clinical practice: Design, control and methodology considerations. American Society of Shoulder and Elbow Therapists Annual Meeting, Williamsburg, Virginia, October 28-31, 1993

## **INVITED PRESENTATIONS**

**Irrgang JJ.** Management of the stiff shoulder. Panther Sports Medicine Symposium, Pittsburgh, Pennsylvania, April 14-16, 1994

**Irrgang JJ.** Proprioceptive & functional training for the upper extremity. 45<sup>th</sup> Annual Meeting and Clinical Symposium of the National Athletic Trainers Association. Dallas, Texas, June 10-14, 1994

**Irrgang JJ.** Update on proprioceptive testing of the shoulder joint. American Sports Medicine Institute 1995 Injuries in Baseball Course, Birmingham, Alabama, January, 1995

**Irrgang JJ.** Muscle function at the shoulder joint - Recent advances. American Sports Medicine Institute 1995 Injuries in Baseball Course, Birmingham, Alabama, January, 1995

**Irrgang JJ.** Conservative treatment of shoulder impingement in the thrower. American Sports Medicine Institute 1995 Injuries in Baseball Course, Birmingham, Alabama, January 1995

**Irrgang JJ.** Closed chain rehabilitation of the shoulder. 46<sup>th</sup> Annual Meeting and Clinical Symposium of the National Athletic Trainers' Association 46<sup>th</sup>, Indianapolis, Indiana, June 1995

**Irrgang JJ.** Scapular strengthening techniques. Sports Physical Therapy Section Shoulder Special Interest Group Meeting at the 12th International Congress of the World Confederation for Physical Therapy, Washington, D.C., June 28, 1995

**Irrgang JJ.** Current concepts: Unstable shoulder - Scientific and clinical rationale for the rehabilitation of the unstable shoulder. Joint Sports Physical Therapy Section of the American Physical Therapy Association and the American Orthopaedic Society for Sports Medicine Team Concept Meeting in Toronto, Canada, July 15, 1995

**Irrgang JJ.** Outcomes in sports medicine: Classification schemes for physical impairments, functional limitations and disability. Project Focus '96 - The Conference on Sports Related Injury, Foundation for Physical Therapy, Atlanta, GA, February 3, 1996

**Irrgang JJ.** How many visits are enough? Project Focus '96 - The Conference on Sports Related Injury, Foundation for Physical Therapy, Atlanta, GA, February 3, 1996

**Irrgang JJ.** Scapular strengthening techniques. Combined Sections Meeting of the American Physical Therapy Association, Atlanta, GA, February 17, 1996

**Irrgang JJ.** Socratic debate: Capitulated ACL rehabilitation - What's absolutely necessary for optimal results: The physical therapists' perspective. American Orthopaedic Society for Sports Medicine Specialty Day Meeting, Atlanta, Georgia, February 25, 1996

**Irrgang JJ.** Introduction to concepts of joint mobilization. 47<sup>th</sup> Annual Meeting and Clinical Symposium of the National Athletic Trainers' Association, Orlando, FL. June 11-15, 1996

**Irrgang JJ.** Overview of outcomes following knee ligament injury/surgery. Partners in Performance Conference, Wellington, New Zealand. October 11-13, 1996

**Irrgang JJ.** Mobilization of the shoulder. Partners in Performance Conference, Wellington, New Zealand. October 11-13, 1996

## **INVITED PRESENTATIONS**

**Irrgang JJ.** Region specific outcomes scales for the knee. Combined Sections Meeting of the American Physical Therapy Association, Dallas, Texas. February 14, 1997

**Irrgang JJ.** Closed kinetic chain exercises for the lower extremity - Lecture and workshop. 5<sup>TH</sup> Annual Mid-American Sports Medicine Symposium, Dearborn, Michigan. March 22, 1997

**Irrgang JJ.** Open and closed kinetic chain exercises. 18th Annual Sports Medicine Physician-Therapist Team Concept Conference, Sports Physical Therapy Section of the American Physical Therapy Association, Williamsburg, VA, October 17, 1997

**Irrgang JJ.** Rehabilitation following meniscal allograft surgery. 18th Annual Sports Medicine Physician-Therapist Team Concept Conference, Sports Physical Therapy Section of the American Physical Therapy Association, Williamsburg, VA, October 17, 1997

**Irrgang JJ.** ACL rehabilitation: The conventional approach. 18th Annual Sports Medicine Physician-Therapist Team Concept Conference, Sports Physical Therapy Section of the American Physical Therapy Association, Williamsburg, VA, October 17, 1997

**Irrgang JJ.** Overview of rehabilitation of the knee. 8<sup>th</sup> Panther Sports Medicine Symposium: Current Concepts in Knee Surgery: A Sports Medicine Perspective, Pittsburgh, Pennsylvania. April 17-19, 1997

**Irrgang JJ.** Patient reported measures of outcome of the knee. 8<sup>th</sup> Panther Sports Medicine Symposium: Current Concepts in Knee Surgery: A Sports Medicine Perspective, Pittsburgh, Pennsylvania. April 17-19, 1997.

**Irrgang JJ.** Rationale for open and closed kinetic chain activities for restoration of proprioception and neuromuscular control following injury. American Orthopaedic Society for Sports Medicine Foundation for Sports Medicine Education and Research Workshop, Pittsburgh, Pennsylvania. August 22-24, 1997.

**Irrgang JJ.** Controversies in the management and treatment of chondral injuries to the knee in athletes. 49<sup>th</sup> Annual Meeting and Clinical Symposia of the National Athletic Trainers' Association, Baltimore, Maryland, June 17-20, 1998.

**Irrgang JJ.** Conservative management of patellofemoral pain. Joyner Sports Medicine Institute National Conference "World Class Care in Orthopedic Rehabilitation and Sports Medicine", Hilton Head, South Carolina, October 15-18, 1998.

**Irrgang JJ.** Continuing competence update. Fall Educational Meeting of the Federation of State Boards of Physical Therapy, Charleston, South Carolina. October 18, 1998.

**Irrgang JJ.** Outcomes management for the shoulder. Annual Meeting of the American Society of Shoulder & Elbow Therapists, New York, New York. November 6, 1998.

**Irrgang JJ.** Outcome measures for the knee. Combined Sections Meeting of the American Physical Therapy Association, Seattle, Washington. February 5, 1999.

**Irrgang JJ.** We were best friends in PT school but would I let you treat me today: The case for continuing competence. Combined Sections Meeting of the American Physical Therapy Association, Seattle, Washington. February 7, 1999.

## **INVITED PRESENTATIONS**

**Irrgang JJ.** Standards of competence for physical therapists. Annual Meeting of the Federation of State Boards of Physical Therapy, San Antonio, Texas. March 7, 1999

**Irrgang JJ.** The structure and function of the rotator cuff. Physical Therapy '99: Meeting & Exposition of the American Physical Therapy Association, Washington, DC. June 5, 1999

**Irrgang JJ.** Impingement syndromes: Functional causes & treatment. Physical Therapy '99: Scientific Meeting & Exposition of the American Physical Therapy Association, Washington, DC. June 5, 1999

**Irrgang JJ.** Update on clinical residencies. Physical Therapy '99: Scientific Meeting & Exhibition of the American Physical Therapy Association, Washington, DC. June 6, 1999

**Irrgang JJ.** Outcomes Management. Switzerland Physiotherapy Association, Zurich, Switzerland. June 25, 1999

**Irrgang JJ.** Overview of orthopaedic physical therapy. Switzerland Physiotherapy Association, Zurich, Switzerland. June 25, 1999

**Irrgang JJ.** Rehabilitation of the shoulder following rotator cuff repair. Switzerland Physiotherapy Association, Zurich, Switzerland. June 26, 1999

**Irrgang JJ.** Outcomes studies. American Medical Society for Sports Medicine – Research Workshop for Primary Care Sports Medicine Fellows, Pittsburgh, Pennsylvania. July 16-18, 1999

**Irrgang JJ.** Pennsylvania State Board of Physical Therapy: Overview and Issues – presented to the Physical Therapy Program at Slipper Rock University. October 1, 1999

**Irrgang JJ.** Rehabilitation following ACL reconstruction. VIII Brazilian Congress of Knee Surgery, IX Brazilian Congress of Arthroscopy, and I Latin American Congress of Knee Surgery, Arthroscopy and Sport Traumatology. São Paulo, Brasil, October 21, 1999

**Irrgang JJ.** Methods to assess outcomes for injuries of the knee. VIII Brazilian Congress of Knee Surgery, IX Brazilian Congress of Arthroscopy, and I Latin American Congress of Knee Surgery, Arthroscopy and Sport Traumatology. São Paulo, Brasil, October 21, 1999

**Irrgang JJ.** Non-operative management and rehabilitation for impingement syndrome. VIII Brazilian Congress of Knee Surgery, IX Brazilian Congress of Arthroscopy, and I Latin American Congress of Knee Surgery, Arthroscopy and Sport Traumatology. São Paulo, Brasil, October 22, 1999

**Irrgang JJ.** Rehabilitation for stiff shoulder. VIII Brazilian Congress of Knee Surgery, IX Brazilian Congress of Arthroscopy, and I Latin American Congress of Knee Surgery, Arthroscopy and Sport Traumatology. São Paulo, Brasil, October 22, 1999

**Irrgang JJ.** Treatment of patellofemoral pain. VIII Brazilian Congress of Knee Surgery, IX Brazilian Congress of Arthroscopy, and I Latin American Congress of Knee Surgery, Arthroscopy and Sport Traumatology. São Paulo, Brasil, October 23, 1999

**Irrgang JJ.** Quadriceps function in patients with knee osteoarthritis –presented to Arthritis Instittuets Research Conference, University of Pittsburgh, Pittsburgh, PA. November 19, 1999

## **INVITED PRESENTATIONS**

**Irrgang JJ.** Evaluation and treatment of shoulder impingement syndrome – presented at the millennium Conference Series sponsored by the Physical Therapy Class of 2000, University of Pittsburgh, Pittsburgh, PA January 22, 2000

**Irrgang JJ.** Clinical residencies. Combined Sections Meeting of the American Physical Therapy Association. New Orleans, Louisiana. February 5, 2000.

**Irrgang JJ.** Rehabilitation following meniscal repair and transplantation. 9<sup>th</sup> Panther Sports Medicine Symposium “The Knee: The New Millennium from Robotics to Gene Therapy”. Pittsburgh, Pennsylvania. May 4, 2000.

**Irrgang JJ.** Framework for assessing patient oriented outcomes in orthopaedic sports medicine. 9<sup>th</sup> Panther Sports Medicine Symposium “The Knee: The New Millennium from Robotics to Gene Therapy” Pittsburgh, Pennsylvania. May 4, 2000.

**Irrgang JJ.** Role of exercise in the management of the degenerative knee. 9<sup>th</sup> Panther Sports Medicine Symposium “The Knee: The New Millennium from Robotics to Gene Therapy”. Pittsburgh, Pennsylvania. May 6, 2000.

**Irrgang JJ.** Rehabilitation following ACL reconstruction. III Millennium International Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress. Buenos Aires, Argentina. May 22, 2000

**Irrgang JJ.** Rotator cuff and scapular muscle biomechanics and strengthening. III Millennium International Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress. Buenos Aires, Argentina. May 22, 2000

**Irrgang JJ.** Non-operative treatment and rehabilitation of shoulder impingement syndrome. III Millennium International Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress, Buenos Aires, Argentina. May 22, 2000

**Irrgang JJ.** Biomechanical considerations for rehabilitation of the knee. III Millennium International Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress. Buenos Aires, Argentina. May 23, 2000

**Irrgang JJ.** Mobilization of the stiff shoulder. III Millennium International Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress. Buenos Aires, Argentina. May 23, 2000

**Irrgang JJ.** Non-operative management of patellofemoral pain. III Millennium International Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress. Buenos Aires, Argentina. May 24, 2000

**Irrgang JJ.** Clinical residencies. Annual Meeting of the American Physical Therapy Association. Indianapolis, Indiana. June 14, 2000

**Irrgang JJ.** The knee: Complicated case study – The knee extensor mechanism/patellofemoral conditions. Joint American Orthopaedic Society for Sports Medicine/Sports Physical Therapy Section of the American Physical Therapy Association Pre-conference. Sun Valley, Idaho. June 17, 2000

**Irrgang JJ.** Post-surgical pathway for the meniscus repair and allograft. College & High School Athlete

## **INVITED PRESENTATIONS**

Sports Medicine Conference. Covington, KY, August 3, 2000

**Irrgang JJ.** Examination and treatment of the shoulder. New England Chapters of the American Physical Therapy Association, Portland, Maine, October 12, 2000

**Irrgang JJ.** Evidence-based practice. Annual Meeting of the American Shoulder and Elbow Therapists, Austin, TX. October 21, 2000

**Irrgang JJ.** Robotics & gene therapy: What does this mean for physical therapy? Fourth International Conference in Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi, Italy, December 1-3, 2000

**Irrgang JJ.** Joint Mobilization Workshop. Fourth International Conference in Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi, Italy, December 1-3, 2000

**Irrgang JJ.** Rehabilitation protocol in Pittsburgh following patellofemoral surgery. Fourth International Conference in Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi, Italy, December 1-3, 2000

**Irrgang JJ.** Clinical residency forum and working roundtable. Combined Sections Meeting of the American Physical Therapy Association, San Antonio, TX. February 15, 2001

**Irrgang JJ.** What outcome measures should be measured? ACL Outcomes Symposium at the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress, Montreux, Switzerland, May 17, 2001

**Irrgang JJ.** Rehabilitation following ACL reconstruction in the 21<sup>st</sup> century: How far can it be pushed? International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress, Montreux, Switzerland, May 17, 2001

**Irrgang JJ.** Considerations for restoration of proprioception and neuromuscular control. 52<sup>nd</sup> Annual Meeting and Clinical Symposia of the National Athletic Trainers Association, Los Angeles, California. June 21, 2001

**Irrgang JJ.** Clinical residency and fellowship credentialing forum. Physical Therapy 2001: Annual Meeting and Scientific Exhibition of the American Physical Therapy Association, Anaheim, CA. June 22, 2001

**Irrgang JJ.** Proprioceptive training and its role in dynamic stabilization of the shoulder. College & High School Athlete Sports Medicine Conference, Cincinnati, OH. July 20, 2001

**Irrgang JJ.** Proprioceptive concepts: Where to start and how to progress. College & High School Athlete Sports Medicine Conference, Cincinnati, OH. July 20, 2001

**Irrgang JJ.** Treatment of tendonitis: A physical therapists perspective. 5<sup>th</sup> International Conference on Orthopaedics, Biomechanics and Sports Rehabilitation, Assisi, Italy, December 7, 2001

**Irrgang JJ.** Evaluation and treatment of the shoulder: A weekend workshop. Hong Kong Polytechnic University, Hong Kong, January 19-20, 2002

**Irrgang JJ.** Evaluation and management of non-surgical foot & ankle conditions. American College of Rheumatology State-of-the-Art Clinical Symposium, Chicago, IL, April 19-21, 2002

## **INVITED PRESENTATIONS**

**Irrgang JJ.** How and when articular cartilage heals. Annual Scientific Meeting and Exposition of the American Physical Therapy Association, Cincinnati, OH. June 5, 2002

**Irrgang JJ.** Non-operative treatment of osteoarthritis and articular cartilage defects. Annual Scientific Meeting and Exposition of the American Physical Therapy Association, Cincinnati, OH. June 5, 2002

**Irrgang JJ.** Combined instabilities of the knee – ACL/PCL/MCL/LCL: American Orthopaedic Society for Sports Medicine and Sports Physical Therapy Section of the American Physical Therapy Association Pre-Conference, Orlando, FL. June 29, 2002

**Irrgang JJ.** Prevention of ACL Injuries in Female Athletes. American Orthopaedic Society for Sports Medicine Non-Contact ACL Conference, Orlando, FL. June 30, 2002

**Irrgang JJ.** Non-operative and post-operative management for PCL injuries. College & High School Athlete Sports Medicine Conference, Columbus, OH. July 27, 2002

**Irrgang JJ.** Assessment for return to play. College & High School Athlete Sports Medicine Conference, Columbus, OH. July 27, 2002

**Irrgang JJ.** Robots and gene therapy: What does it mean for physical therapy? College & High School Athlete Sports Medicine Conference, Columbus, OH. July 28, 2002

**Irrgang JJ.** The Role of the State Board of Physical Therapy Practice Act: Rules and Regulations and Pennsylvania Licensure Exam. Arcadia University, Glenside, PA. September 9, 2002

**Irrgang JJ.** Outcomes management in orthopedics. Grand Rounds – Department of Orthopedics, University of Louisville, Louisville, KY, September 17, 2002

**Irrgang JJ.** Outcome Measurements in Sports Medicine and Rehabilitation. The University of Vermont Sports Medicine Conference, Burlington, VT. October 3-4, 2002

**Irrgang JJ.** The prevention of ACL injuries in the female athlete. The University of Vermont Sports Medicine Conference, Burlington, VT. October 3-4, 2002

**Irrgang JJ.** Non-operative management of patients with patellofemoral disorders. The University of Vermont Sports Medicine Conference, Burlington, VT. October 3-4, 2002

**Irrgang JJ.** Rehabilitation after meniscal transplant. The University of Vermont Sports Medicine Conference, Burlington, VT. October 3-4, 2002

**Irrgang JJ.** Current concepts in evaluation of treatment of shoulder impingement. The University of Vermont Sports Medicine Conference, Burlington, VT. October 3-4, 2002.

**Irrgang JJ.** Management of the stiff shoulder. The University of Vermont Sports Medicine Conference, Burlington, VT. October 3-4, 2002.

**Irrgang JJ.** Rehab for the multiple ligament injured knee. The University of Vermont Sports Medicine Conference, Burlington, VT. October 3-4, 2002.

## **INVITED PRESENTATIONS**

**Irrgang JJ.** Implementing an outcomes assessment program in clinical practice. . National Athletic Trainers' Association NATA Annual Meeting & Clinical Symposia. St. Louis, MO. June 25, 2003.

**Irrgang JJ.** Review and validation of clinical outcome instruments. AOSSM Research Workshop – Pre-Conference Program. San Diego Marriott Hotel & Marina, San Diego, CA. July 19, 2003.

**Irrgang JJ.** Basic concepts of isokinetic and functional evaluation of the knee. I Curso Internacional De Rehabilitacao Do Joelho De Campinas. October 5, 2003

**Irrgang JJ.** Preventing ACL injuries in female athletes. I Curso Internacional De Rehabilitacao Do Joelho De Campinas. October 5, 2003

**Irrgang JJ.** Rehabilitation after meniscal repair and meniscal transplate of the knee. I Curso Internacional De Rehabilitacao Do Joelho De Campinas. October 5, 2003

**Irrgang JJ.** The rationale for open and closed kinetic chain activities for restoration of proprioception and neuromuscular control following injury. I Curso Internacional De Rehabilitacao Do Joelho De Campinas. October 5, 2003

**Irrgang JJ.** Continuing Competency – What's Out There? Pennsylvania Physical Therapy Association 2003 Annual Conference. October 24<sup>th</sup>, 2003, Seven Springs Mountain Resort, Champion, Pennsylvania.

**Irrgang JJ.** Prevention of ACL injuries in female athletes. 19<sup>th</sup> Annual Hawkeye Sports Medicine Symposium, December 5<sup>th</sup>, 2003, The University of Iowa, Iowa City, Iowa.

**Irrgang JJ.** Management of the stiff shoulder. 19<sup>th</sup> Annual Hawkeye Sports Medicine Symposium, , The University of Iowa, Iowa City, Iowa, December 5<sup>th</sup>, 2003

**Irrgang JJ.** Outcomes management for sports medicine and rehabilitation. 19<sup>th</sup> Annual Hawkeye Sports Medicine Symposium, The University of Iowa, Iowa City, Iowa December 6<sup>th</sup>, 2003

**Irrgang JJ.** Use of clinical outcomes to develop a professional development plan. 2004 Combined Sections Meeting, Nashville, Tennessee, February 2004.

**Irrgang JJ.** Scientific basis for plyometric training. College & High School Sports Medicine Conference, Columbus, OH. June 5-, 2004.

**Irrgang JJ.** Rehabilitation of the multiple ligament injured knee. College & High School Sports Medicine Conference, Columbus, OH. June 6th, 2004.

**Irrgang JJ.** Rehabilitation pathway post meniscus repair. College & High School Sports Medicine Conference, Columbus, OH. June 6th, 2004.

**Irrgang JJ** How to find and evaluate evidence. 55<sup>TH</sup> Annual Meeting & Clinical Symposia National Athletic Trainer's Association. June, 16<sup>th</sup>, 2004. Baltimore, Maryland.

**Irrgang JJ.** Clinical outcomes research in orthopaedic sports medicine. 5<sup>th</sup> Biennial Congress of the international Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine. Hollywood, FL. April 5, 2005



## INVITED PRESENTATIONS

**Irrgang JJ.** Rehabilitation issues for individuals with degenerative knees. 5<sup>th</sup> Biennial Congress of the international Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine. Hollywood, FL. April 5, 2005

**Irrgang JJ.** Clinical outcomes research in orthopaedic sports medicine. 5<sup>TH</sup> Biennial Congress of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine. Hollywood, FL. April 4<sup>th</sup>, 2005

**Irrgang JJ.** Rehabilitation issues for individuals with degenerative knees. 5<sup>TH</sup> Biennial Congress of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine. Hollywood, FL. April 4<sup>th</sup>, 2005

**Irrgang JJ.** Current concepts of examination and treatment of the shoulder. Presented at the Spring Educational Meeting of the New York Physical Therapy Association. Albany NY, April 9, 2005

**Irrgang JJ.** Current concepts of examination and treatment of the knee. Presented to the physical therapy staff at Charles Coe Memorial Hospital. Coudersport, PA, May 6 – 7, 2005

**Irrgang JJ.** Outcomes research in orthopaedic physical therapy. Presented for the Doctor of Physical Therapy Degree Program, Krannert School of Physical Therapy, University of Indianapolis, Indianapolis, IN, May 20 – 22, 2005

**Irrgang JJ.** Current concepts of examination and treatment of the shoulder. Presented at Temple University for the Jules Rothstein Liver Transplantation Fund, Philadelphia, PA, June 19, 2005

**Irrgang JJ.** Examination and treatment of the foot and ankle. Presented to the clinical staff at the Steadman-Hawkins Clinic, Greenville, SC, August 13 – 14, 2005

**Irrgang JJ.** Examination and treatment of the foot and ankle. Presented to the clinical staff at the Steadman-Hawkins Clinic, Vail, CO, October 29-30, 2005

**Irrgang JJ.** An evidence-based approach to rehabilitation of the shoulder. Presented at the Joint Symposium of the American College of Rheumatology and Association of Rheumatology Health Professionals, San Diego, CA, November 14, 2005

**Irrgang JJ.** Clinical outcomes for articular cartilage repair procedures. Presented at the American Orthopaedic Society for Sports Medicine Articular Cartilage Research Planning Meeting, Torre Pines, CA, January 7, 2006

**Irrgang JJ.** What skills do you need to apply evidence-based practice? Presented at the Combined Sections Meeting of the American Physical Therapy Association, San Diego, CA, February 6, 2006

**Irrgang JJ.** Rehabilitation after anatomic ACL reconstruction: Is there a difference? Presented at the UPMC Athletic Training Seminar, Pittsburgh, PA, March 4, 2006

**Irrgang JJ.** Current Concepts in the Prevention of ACL Injuries. Presented at Lower Extremity Update University of Pennsylvania Health System – Penn Orthopaedics Penn Therapy and Fitness April 21-23, 2006, Philadelphia, PA

## **INVITED PRESENTATIONS**

**Irrgang JJ.** Conservative and Post-op Rehabilitation Considerations of the ACL. Presented at Lower Extremity Update University of Pennsylvania Health System – Penn Orthopaedics Penn Therapy and Fitness April 21-23, 2006, Philadelphia, PA

**Irrgang JJ.** Rehabilitation Following Articular Cartilage Procedures. Presented at Lower Extremity Update University of Pennsylvania Health System – Penn Orthopaedics Penn Therapy and Fitness April 21-23, 2006, Philadelphia, PA

**Irrgang JJ.** Rotator Cuff Injuries in Senior Athletes. 8<sup>TH</sup> national Congress of the Italian Shoulder and Elbow Society June 15<sup>th</sup>, 2006, Milan, Italy

**Irrgang JJ.** Prevention and Treatment of Epicondylitis of the Elbow. 8<sup>TH</sup> national Congress of the Italian Shoulder and Elbow Society , Milan, Italy, June 15<sup>th</sup>, 2006,

**Irrgang JJ.** Prevention of Shoulder Pain in Overhead Athletes. 8<sup>TH</sup> national Congress of the Italian Shoulder and Elbow Society , Milan, Italy, June 15<sup>th</sup>, 2006,

**Irrgang JJ.** Validation of Clinical Outcomes Instruments – Practical Information for the Clinician – Considerations for selection and Interpretation of Clinical Outcomes Measures. American Journal of Sports Medicine Reviewers Symposium at the Annual Meeting of the American Orthopaedic Society for Sports Medicine, Hershey, PA. June 30, 2006

**Irrgang JJ.** Use of the International Classification of Functioning and Disability to Develop Evidence Based Treatment Guidelines for Common Musculoskeletal Disorders – Overview of Project Methodology. Combined Sections Meeting of the American Physical Therapy Association, Boston, MA. February 15, 2007

**Irrgang JJ.** Evidence-Based Examination and Treatment of Shoulder Impingement Syndrome. Medical Congress of the XV PAN Americanos Games 2007. Rio de Janeiro, Brasil May 3<sup>rd</sup>, 2007

**Irrgang JJ.** Rehabilitation after ACL Reconstruction. International Experience. Medical Congress of the XV PAN Americanos Games 2007. Rio de Janeiro, Brasil. May 3<sup>rd</sup>, 2007

**Irrgang JJ.** Use of Eccentric Exercises for Treatment of Tendinosis. Medical Congress of the XV PAN Americanos Games 2007. Rio de Janeiro, Brasil. May 3<sup>rd</sup>, 2007

**Irrgang JJ.** Non-operative management of patients with patellofemoral disorders. Pam Am Games Pre-Congress in Sports Physiotherapy, Rio De Janeiro, May 3<sup>rd</sup>, 2007

**Irrgang JJ.** Tibiofemoral mechanics and rehabilitation. 1<sup>ST</sup> International Cartilage Repair Society. Schulthess Clinic Zurich, Switzerland. June 29<sup>th</sup> – 30<sup>th</sup>, 2007

**Irrgang JJ.** Rehabilitation after double-bundle ACL reconstruction. Sports Physical Therapy Section Pre-Conference of the Annual Meeting of the American Orthopaedic Society for Sports Medicine, Calgary, Alberta, Canada, July 11<sup>th</sup>, 2007

**Irrgang JJ.** Use of the International Classification of Functioning and Disability to Develop Evidence Based Treatment Guidelines for Common Musculoskeletal Disorders – Overview of project methodology. Combined Sections Meeting of the American Physical Therapy Association, Boston, MA,

## **INVITED PRESENTATIONS**

February 8<sup>th</sup>, 2008

**Irrgang JJ.** Current status of measuring clinical outcomes: Are we good enough? Panther Global Knee Summit: Anatomic Double Bundle ACL Reconstruction. Pittsburgh, PA February 28<sup>th</sup>, 2008

**Irrgang JJ.** Evidence based examination and treatment of the shoulder. Annual Meeting of the Physical Therapy Association of Republic of China (Taiwan), Taipei, Taiwan, March 28<sup>th</sup>, 2008

**Irrgang JJ.** Keynote Lecture: Evidence based practice and continuing competence. Annual Meeting of the Physical Therapy Association of Republic of China (Taiwan), Taipei, Taiwan, March 28<sup>th</sup>, 2008

**Irrgang JJ.** Rehabilitation of knee ligament injuries. Annual Meeting of the Physical Therapy Association of Republic of China (Taiwan), Taipei, Taiwan, March 28<sup>th</sup>, 2008

**Irrgang JJ.** Physical therapy management of patellofemoral pain. Annual Meeting of the Physical Therapy Association of Republic of China (Taiwan), Taipei, Taiwan, March 28<sup>th</sup>, 2008

**Irrgang JJ.** Reliability and valid clinical outcomes scores that you can use in your practice. Wednesday, July 9<sup>th</sup>, 2008. American Orthopaedic Society for Sports Medicine Annual Meeting, JW Marriott Orlando Grande lakes, Orlando, Florida, July 9, 2008.

**Irrgang JJ.** Clinical Outcomes. Ligament and tendon think tank. Sponsored by the American Orthopaedic Society for Sports Medicine, Miami, Florida. January 24<sup>th</sup>, 2009.

**Irrgang JJ.** Use of the International Classification of Functioning to Develop Evidence-Based Practice Guidelines for Common Musculoskeletal Conditions. Combined Sections Meeting of the American Physical Therapy Association, Las Vegas, Nevada. February 10<sup>th</sup>, 2009

**Irrgang JJ.** Research information exchange. Combined Sections Meeting of the American Physical Therapy Association, Las Vegas, NV, February 11<sup>th</sup>, 2009

**Irrgang JJ.** Evidence-based approach to treatment of the stiff shoulder. Annual Meeting of the American Academy of Orthopaedic Surgeons Nursing and Allied Health Programs. National Association of Orthopaedic Nursing. Las Vegas, NV February 26<sup>th</sup>, 2009

**Irrgang JJ.** Assessment of outcomes following ACL surgery. 10<sup>TH</sup> Anniversary Cohen Institute of Orthopedics, Sports Medicine and Rehabilitation. Sheraton WTC, São Paulo, Brazil. August 14-15,2009

**Irrgang JJ.** Rehabilitation following ACL reconstruction. 10<sup>TH</sup> Anniversary Cohen Institute of Orthopedics, Sports Medicine and Rehabilitation. Sheraton WTC, São Paulo, Brazil. August 14-15,2009

**Irrgang JJ.** Rehabilitation following ACL reconstruction. 10<sup>TH</sup> Anniversary Cohen Institute of Orthopedics, Sports Medicine and Rehabilitation. (Surgeons Meeting) Sheraton WTC, São Paulo, Brazil. August 14-15, 2009

**Irrgang JJ.** Examination and non-operative treatment of patellofemoral pain. 10<sup>TH</sup> Anniversary Cohen Institute of Orthopedics, Sports Medicine and Rehabilitation. Sheraton WTC, São Paulo, Brazil. August 14-15,2009

## INVITED PRESENTATIONS

**Irrgang JJ.** Examination and non-operative treatment of patellofemoral pain. 10<sup>TH</sup> Anniversary Cohen Institute of Orthopedics, Sports Medicine and Rehabilitation. (Surgeons Meeting) Sheraton WTC, São Paulo, Brazil. August 14-15, 2009

**Irrgang JJ.** Non-operative treatment of shoulder impingement syndrome. Boston Shoulder and Sports Symposium 2009. Waltham Woods Conference Center, Waltham, MA October 30, 2009

**Irrgang JJ.** Rehabilitation after ACL Reconstruction. Boston Shoulder and Sports Symposium 2009. Waltham Woods Conference Center, Waltham, MA October 31, 2009

**Irrgang JJ.** Non-operative treatment of patellofemoral pain. Boston Shoulder and Sports Symposium 2009. Waltham Woods Conference Center, Waltham, MA October 31, 2009

**Irrgang JJ.** Patient reported outcomes: Symptoms, activity and participation. AOSSM/NIH U-13 Post-Joint Injury Osteoarthritis Conference II. New Orleans, Louisiana. December 2-5, 2010

**Irrgang JJ.** Keynote Lecture; When is the post-surgical patient return to return to sports? Sports Injuries: The Team Approach Course. Mount Sinai School of Medicine. New York, New York. May 7, 2011

**Irrgang JJ.** Immediate post-operative rehabilitation after ACL reconstruction. ISAKOS 2011 Congress Sports Rehabilitation Concurrent Course: Global Perspectives for the Physical Therapist and Athletic Trainer. Rio de Janeiro, Brazil May 15. 2011.

**Irrgang JJ.** Rehabilitation for meniscus injuries. ISAKOS 2011 Congress Sports Rehabilitation Course. Rio de Janeiro, Brazil May 15. 2011.

**Irrgang JJ.** Anatomy and biomechanics of shoulder complex. ISAKOS 2011 Congress Sports Rehabilitation Course. Rio de Janeiro, Brazil May 17. 2011.

**Irrgang JJ.** Treatment of stiff shoulder. ISAKOS 2011 Congress Sports Rehabilitation Course. Rio de Janeiro, Brazil May 17. 2011.

**Irrgang JJ.** Evidence Based ACL Rehabilitation. Presented at the Orthopaedic & Sports Medicine Conference, TRIA Orthopaedic Center Sports Medicine Surgical Techniques Conference. Bloomington, MN. June 4, 2011

**Irrgang JJ.** Office of the future. Outcome measures. Presented at the 2011 Annual Meeting of the American Society of Sports Medicine, July 7-10, 2011

**Irrgang JJ.** American Orthopaedic Society for Sports Medicine Outcome Measures Consensus Task Force: Recommendations for use of knee outcome instruments in reporting sports medicine research. Presented at the American Journal of Sports Medicine Reviewers Workshop, San Diego, CA. July 7, 2011

**Irrgang JJ** Patient-reported outcomes: Symptoms, activity & participation. Presented at the 2011 Panther Global Summit: Anatomic ACL Reconstruction, Pittsburgh, PA August 26, 2011

**Irrgang JJ** Rehabilitation after anatomic ACL reconstruction: Is there a difference. Presented at the

## INVITED PRESENTATIONS

2011 Panther Global Summit: Anatomic ACL Reconstruction, Pittsburgh, PA August 26, 2011

**Irrgang JJ** . Anatomic single-vs. double-bundle ACL reconstruction: A prospective randomized clinical trial. Presented at the 2011 Panther Global Summit: Anatomic ACL Reconstruction, Pittsburgh, PA August 26, 2011

**Irrgang JJ** Principles of rehabilitation. Presented to Primary Care Sports Medicine Fellows, University of Pittsburgh Medical Center, Pittsburgh, PA. January 18<sup>th</sup>, 2012

**Irrgang JJ**. Update on ACL research: Implications for rehabilitation. Swiss Sports PT Association Symposium 2012. Zurich, Switzerland. November 13<sup>th</sup> – November 17<sup>th</sup>, 2012

**Irrgang JJ**. Immediate post-operative rehabilitation ater ACL reconstruction. ISAKOS Congress 2013. Sports Rehabilitation: Global Perspective for the Physical Therapist & Athletic Trainer. Toronto, Canada May 12<sup>th</sup>, 2013

**Irrgang JJ**. 1<sup>ST</sup> L.C.A. Meeting Brazil – Pittsburgh. Module 6: ACL combined injury, meniscal or chondral injury – assessing clinical outcome following anatomic ACL reconstruction. Sao Paulo, Brazil October 3, 2015.

**Irrgang JJ**. 1<sup>ST</sup> L.C.A. Meeting Brazil – Pittsburgh. Module 6: ACL combined injury, meniscal or chondral injury – Modification of ACL rehabilitation for concomitant meniscus and cartilage lesions and surgery. Sao Paulo, Brazil October 3, 2015.

**Irrgang JJ**. 1<sup>ST</sup> L.C.A. Meeting Brazil – Pittsburgh. ACL Miscellaneous - Rehabilitation after anatomic ACL reconstruction. Sao Paulo, Brazil October 3, 2015.

**Irrgang JJ**. 1<sup>ST</sup> L.C.A. Meeting Brazil – Pittsburgh. Module 5: Anteriolateral Ligament (ALL) and ACL failure – Functional Testing and Training Following Anatomic ACL Reconstruction. Sao Paulo, Brazil October 2<sup>nd</sup> & 3<sup>rd</sup>, 2015.

**Irrgang JJ**. 1<sup>ST</sup> L.C.A. Meeting Brazil – Pittsburgh. Ligament Cruciate Anterior 12 hour course. Sao Paulo, Brazil October 3, 2015.

**Irrgang JJ**. Evaluating the clinical outcomes of biologic treatments: What is the next step? How do we determine objective versus subjective outcomes and short versus long term outcomes? AAOS/ORS Biologic Treatments for Orthopaedic Injuries (BTOI) Research Symposium. Hyatt Rosemont,, Rosemont, ILL. November 6<sup>th</sup>, 2015

**Irrgang JJ**. Value and meaning of patient outcomes. AOSSM Annual Meeting. Colorado Springs, CO. July 10, 2016

## Teaching – Courses Taught

### PT 2029 – Kinesiology

Taught Summer Terms of 1999-2000 to 2004-2005 academic years

### Co-Instructor

This course is an introduction to the foundations of therapeutic exercise and biomechanics that provides the basic principles underlying the analysis of normal and abnormal human movement with applications to the musculoskeletal system.

### Masters of Physical Therapy Degree Program

## Teaching – Courses Taught

### **PT 2032 – Musculoskeletal Causes, Analysis and Interventions in Movement Dysfunction II**

**Course  
Coordinator &  
Instructor**

**Masters of Physical Therapy Degree Program**

Taught Spring Terms of  
1999-2001 to 2002  
academic years.

This course is an overview of the musculoskeletal causes of and interventions for movement dysfunction related to the upper extremity. Lecture and laboratory sessions will be used to develop competency in the pathomechanics, examination, evaluation, diagnosis, prognosis, intervention and assessment of outcomes for patients with upper extremity musculoskeletal dysfunction.

### **PT 2032 – Musculoskeletal Causes, Analysis and Interventions in Movement Dysfunction III**

**Course  
Coordinator &  
Instructor**

**Doctor of Physical Therapy Degree Program**

Taught Summer Terms of  
2002-2003 to 2004-2005  
academic years.

This course is an overview of the musculoskeletal causes of and interventions for movement dysfunction related to the upper extremity. Lecture and laboratory sessions will be used to develop competency in the pathomechanics, examination, evaluation, diagnosis, prognosis, intervention and assessment of outcomes for patients with upper extremity musculoskeletal dysfunction.

### **PT 2034 – Manual Therapy**

**Course  
Coordinator &  
Instructor**

**Masters of Physical Therapy Degree Program**

Taught Fall Terms of 1994  
0-1995 to 2000-2001  
academic years.

This course includes evaluation and treatment of musculoskeletal conditions using advanced orthopaedic and sports physical therapy skills. The course will cover evaluation and treatment of the foot and ankle, knee, lumbar spine, shoulder and cervical spine. Emphasis will be placed on enhancing the students' clinical decision making skills and integrating manual therapy skills within the overall plan of care for the patient.

### **PT 2072 – Evidence Based Practice 1**

**Course  
Instructor**

**Doctor of Physical Therapy Degree Program**

Taught Spring Terms of  
2004 – 2005 to current  
academic year.

This course is an introduction to the concepts of evidence-based practice as it relates to physical therapy. The course integrates classroom lecture and discussion to help students learn how research evidence impacts physical therapy practice. Additionally students will be provided with hands-on opportunities to develop and refine strategies to locate and critically appraise evidence to answer important clinical questions.

### **PT 2072 – Evidence**

**Course**

**Doctor of Physical Therapy Degree Program**

## Teaching – Courses Taught

### Based Practice 2

### Instructor

Taught Summer Term of 2003-2004 academic year

This course introduces the student to the concept of clinical outcomes data collection and to provide students with skills for locating literature to answer clinical questions. To accomplish this, each student will identify a clinically relevant question of interest and will systematically search the literature to identify evidence to answer the question. Additionally students will design a clinical outcomes database that could be used to provide evidence of performance in managing the condition of interest in the clinically relevant question.

### PT 2075 – Evidence Based Practice 4

### Course Instructor Doctor of Physical Therapy Degree Program

Taught Spring Terms of 2003 – 2004 to current academic year.

This course provides students with the knowledge and skills that required to collect and analyze clinical outcomes data during the year-long clinical internship for the purposes of assessing clinical performance and developing a personal performance improvement plan.

### PT 2076 – Evidence Based Practice 5

### Course Coordinator Doctor of Physical Therapy Degree Program

Taught Summer Terms of 2005 – 2006 to current academic year.

This course is a continuation of the evidence-based practice series that runs concurrently with the student's full-time year-long clinical internship. In this course students will utilize the databases developed in PT 2075 to collect clinical outcomes data from patients managed by the student during the clinical internship.

### PT 2077 – Evidence Based Practice 6

### Course Coordinator Doctor of Physical Therapy Degree Program

Taught Fall Terms of 2005-2006 to current academic year.

This course is a continuation of the evidence-based practice series that runs concurrently with the student's full-time year-long clinical internship. In this course the student will analyze, summarize and interpret the clinical outcomes data that were collected in PT 2076. Students will utilize this information to critically evaluate their performance in comparison to their peers and to develop an individualized performance improvement plan.

### PT 2078 – Evidence Based Practice 7

### Course Coordinator Doctor of Physical Therapy Degree Program

Taught Spring Terms of 2005-2006 to current academic year.

This course is a continuation of the evidence-based practice series that runs concurrently with the student's full-time year-long clinical internship. In this course the student will analyze, summarize and interpret clinical outcomes data that were collected in during the 2<sup>nd</sup> half of his/her year-long clinical internship. Students will utilize this information to critically evaluate their performance in comparison to their prior performance and their peers' performance to evaluate the effects of the individualized performance improvement plan that was developed in PT 2077.

## Teaching – Courses Taught

### **SHRS 2362 – Musculoskeletal Physical Therapy II**

Taught Spring Terms of  
1996-1997 to 2002-2003  
academic years.

### **Course Coordinator & Instructor**

### **Masters of Science Degree in Advanced Orthopaedic Physical Therapy**

The course includes evaluation and treatment of musculoskeletal conditions involving the hip, knee, ankle and foot. Emphasis is placed on enhancing clinical decision making skills and integrating manual therapy skills within the overall plan of care for the patient. Class includes lecture and laboratory sessions.

### **SHRS 2381 – Musculoskeletal Physical Therapy Iv**

Taught Summer Terms of  
1996-1997 to 2003-2004  
and Fall Terms of 2004-  
2005 to 2005-2006  
academic years.

### **Course Coordinator & Instructor**

### **Masters of Science Degree in Advanced Orthopaedic Physical Therapy**

The course includes evaluation and treatment of musculoskeletal conditions involving the shoulder, elbow, wrist and hand. Emphasis is placed on enhancing clinical decision making skills and integrating manual therapy skills within the overall plan of care for the patient. Class will include lecture and laboratory sessions.

## DISERTATION THESES SUPERVISED

2000	Robert S. Wainner	Committee Member	Cervical radiculopathy and carpal tunnel syndrome: A prospective determination of the reliability, diagnostic accuracy, and predictive validity of commonly used clinical examination measures and patient self-report instruments.
2000	Michael D. Ross	Committee Member	The Relationship Between Patient Disability and Selected Clinical Measures Following Anterior Cruciate Ligament Reconstruction
2001	Dina L. Jones	Committee Member	The role of physical activity on the need for revision total knee arthroplasty in individuals with osteoarthritis of the knee.
2001	Brian Pease	Committee Member	Defining subgroups of patients with a stiff and painful shoulder: An analytical model using cluster analysis.
2002	John Vairo	Committee Member	Neuromuscular landing performance subsequent to ipsilatera semitendinosis gracilis autograft anterior cruciate ligament reconstruction.
2003	Sameera Aljedi	Committee Member	Cross-cultural adaptation of the Oswestry Low Back Pain Disability Index for Arabic speaking patients.
2003	Fawzi Bouzabar	Committee Chair	Quadriceps fatigue in individuals with knee osteoarthritis.



## DISERTATION THESES SUPERVISED

2003	John D. Childs	Committee Member	Validation of a Clinical Decision Rule for Identifying Patients Likely to Respond Favorably to Manipulation: A Randomized Clinical Trial
2003	RobRoy Martin	Committee Chair	Development of a patient reported measure of function for the foot and ankle.
2005	Sara Piva	Committee Member	Association between impairments and function in response to physical therapy in individuals with patellofemoral pain
2006	Ahmad Al-Ghadir	Committee Chair	Conservative treatment of plantar fasciitis with dorsiflexion night splints and medial arch supports: A prospective randomized study.
2006	Cathy Bieber-Parrott	Committee Member	Development of a mobility disability instrument based upon the World Health Organization's International Classification of Functioning
2006	Jamie Ghigiarelli	Committee Member	The effects of a seven week heavy elastic band and weighted chain program on maximum upper body strength and power in a sample of division 1-AA football players
2006	Robert Lofgren	Committee Member	Validity of a multiple choice test and a performance test in an employment setting.
2006	Kory Stauffer	Committee Member	The comparison of the max jones quadrathlon with the vertical jump and windgate cycle tests as a method to assess anaerobic power in female division I college basketball players
2008	Alexandra Gill	Committee Member	The association between lower extremity movement patterns and physical function in people with knee osteoarthritis
2008	Shelley Fetchen Dicesaro	Committee Member	Biomechanical differences of the lower extremity during a landing and jumping task in prepubescent girls and boys
2008	Min-Mei Shih	Committee Member	Multiple perspectives of the functional status of stroke survivors at 3 months post stroke
2008	Michael Schneider	Committee Member	Prospective cohort study of manual versus mechanical manipulation methods for sub-acute low back pain
2011	David Longerstedt	Committee Member	Restoring knee function: Clinical and functional consequences and responses following ACL injury, surgery and rehabilitation
2012	Jason Woollard	Committee Chair	Deviation of a clinical prediction rule for maximizing the probability of successful arthroscopic subacromial decompression in patients with chronic subacromial

## DISERTATION THESES SUPERVISED

			impingement syndrome.
2014	Tanja Roy	Committee Member	Risk factors for musculoskeletal injuries in deployed female soldiers
Current	Gustavo Almeida	Committee Member	Reliability and responsiveness of physical activity measures following exercise intervention in patients post total knee arthroplasty

## MASTERS THESES SUPERVISED

1991	John Beauchamp	Committee Member	Control of lower extremity bisection: Effect on intratester reliability and variability of measuring calcaneal inversion/eversion and the subtalar neutral joint position.
1991	Hsiou-Ann Hu	Committee Member	Test-retest reliability of the one-legged vertical jump test and the one-legged standing hop test.
1992	Abdulazeem Kamkar	Committee Chair	Electromyographic analysis of serratus anterior muscle exercises.
1992	David J. Pezzullo	Committee Member	A comparison of vertical jump enhancement using plyometric and strength footwear shoes versus plyometrics alone.
1992	Jeffery R. Weiss	Committee Member	Electromyographic analysis of the minisquat exercise.
1993	Marnie Allergrucci	Committee Member	Shoulder kinesthesia in healthy unilateral upper extremity athletes.
1993	Frances E. Huber	Committee Chair	Intratester reliability of the KT 1000 arthrometer in the assessment of posterior laxity of the knee.
1993	Joel C. Ninos	Committee Chair	Electromyographic analysis of the squat performed in 0 and 30 degrees of lower extremity turn-out.
1993	Cathy Bieber Parrott	Committee Chair	Reliability study of the Isobex muscle testing device and correlation of pain to force production during testing.
1994	Jiu-jeng Lin	Committee Chair	Fine wire electromyographic analysis of the lower trapezius.
1995	Marta I. Delgado	Committee Chair	The relationship between impairments and disability following knee ligament reconstruction: A review of 189 patients.
1995	Patrick A. Sheehy	Committee Member	An electromyographic study of VMO and VL activity during closed kinetic chain concentric and eccentric activity.

## MASTERS THESES SUPERVISED

1996	R. Scott Kamenski	Committee Chair	The reliability of the DONJOY Custom Contour measuring device – Mark II.
1997	Lori A. Kuligowski	Committee Member	Effects of warm whirlpool, cold whirlpool and contrast therapy on delayed onset muscle soreness.
1997	Robert L. Sterner	Committee Member	The effects of fatigue on shoulder proprioception.
1998	Kathleen J. Pantano	Committee Chair	A pilot study of the relationship between physical impairments and disability in the anterior cruciate ligament reconstructed knee at long-term follow-up.

**\*Note:** Requirement for theses for Masters of Science in Physical Therapy was eliminated in 1997.

## TRAINING OF SPORTS PHYSICAL THERAPY RESIDENTS

1994-1995	Kathleen Pantano	Currently Associate Professor , Department of Health Sciences, Cleveland State University, Cleveland, Ohio
1995-1996	Daniel Rehak	Currently Facility Director for Centers for Rehab Services
1996-1997	Randy Neri	Currently employed at Sprint Sports Injury Treatment Center of Northeastern Pennsylvania, Clarks Summit, PA
1999-2001	Erica Baum	Currently employed as sports physical therapist at UPMC Center for Sports Medicine. .
1999-2001	Tara Ridge	Currently employed as sports physical therapist at UPMC Center for Sports Medicine. Physical therapist and Coordinator of Clinical Education. Also serves as adjunct assistant professor In Department of Physical Therapy at University of Pittsburgh
2000-2002	Brian Klucinec	Currently employed as sports physical therapist at Drayer Physical Therapy Institute
2001 -2003	Keelan Enseki	Senior Physical Therapist and Residency Program Director for Orthopedic Physical Therapy Residency Centers for Rehab Services, UPMC Center for Sports Medicine, Pittsburgh, PA. Orthopedic Physical Therapy Residency Program Director. Also serves as Adjunct Clinical Professor, University of Pittsburgh School of Health and Rehabilitation Sciences
2001 -2003	Christian L. Lyons	Assistant Chief, Physical Therapy Element, MacDill Hospital, 6th Medical Group, MacDill Air Force Base, Fla
2001 - 2003	Joel B Robb	Assistant Chief of Physical Medicine, RAF Lakenheath, 48th

## TRAINING OF SPORTS PHYSICAL THERAPY RESIDENTS

Medical Group, Lakenheath, United Kingdom

2002 -2003      Alon Rabin      Facility Manager, Accelerated Rehabilitation Center  
Farmington Hills, Mich

### RESEARCH

GRANT NUMBER	GRANT TITLE	ROLE IN PROJECT	YEARS INCLUSIVE	SOURCE/ AMOUNT
	Neuromuscular Recovery After Anterior Cruciate Ligament Reconstruction: Effect of Femoral Nerve Block Analgesia	Co-Investigator	2001-2003	International Anesthesia Research Society \$75,000
	Double-blind, multicenter study evaluating the safety of OMS103HP and vehicle in patients undergoing anterior cruciate ligament reconstruction.	Co-Investigator	01/01/06 to 12/31/06	Omeros \$158,986
	Double-blind, multicenter study phase 3 study comparing the efficacy and safety of OMS103HP and vehicle in patients undergoing anterior cruciate ligament reconstruction.	Co-Investigator	01/01/06 to 12/31/06	Omeros \$188,875
	Outcomes after anterior cruciate ligament (ACL) reconstruction: Effect of femoral nerve block anesthesia	Co-Investigator	2001 – 2006	National Institute of Arthritis, Musculoskeletal and Skin Diseases \$758,430
RO1 AR048760-01A1	Knee stability training in individuals with knee osteoarthritis.	Co-Investigator	01/01/04 to 12/31/07	National Institute of Arthritis, Musculoskeletal and Skin Diseases \$1,425,000
	Clinical outcomes research & educational activities.	Co-Investigator	01/01/05 to 12/31/09	Biomet \$550,000

<b>GRANT NUMBER</b>	<b>GRANT TITLE</b>	<b>ROLE IN PROJECT</b>	<b>YEARS INCLUSIVE</b>	<b>SOURCE/ AMOUNT</b>
	Validation of the Knee Function Composite Test: A Pilot Study	Principal Investigator	03/15/07 to 03/14/08	Omeros Corporation \$67,931
	(West-PI) Topical Nitroglycerin in the Treatment of Patellar Tendonitis: A Randomized, Controlled Trial,” for the Sandy Kirkley Clinical Outcome Research Grant offered by the American Orthopaedic Society for Sports Medicine (AOSSM).	Co-Investigator	01/01/2008 – 07/07/2011	AOSSM \$20,000
	Development and Validation of a Self-Report Knee OA Risk Assessment Tool	Co-Investigator	01/15/09 – 01/14/10	Arthritis Foundation
	Magnetic Resonance Imaging and Clinical outcomes After Three Different Treatments for ICRS Grade II or III Femoral Condyle Chondral Lesions Concomitant with Partial meniscectomy	Co_Investigator	03/01/2010 – 02/28/2012	Arthrocare
1RO1AR056630-03A1	Single-vs Double-Bundle ACL Reconstruction: A Prospective Randomized Trial	Co-Principal Investigator (20% Effort) 2.40 calendar	09/01/2010 – 08/31/2014	National Institutes for Arthritis Musculoskeletal Skin Diseases (NIAMS) \$2,856,788
	Systematic Review of Clinical outcome Measures for Sports-Related Conditions Involving the Knee, Shoulder, Hip and Foot/Ankle	Principal Investigator (1% Effort) 0.12 calendar	12/31/2012 – 12/31/2013	American Orthopaedic Society for Sports Medicine \$40,080
1RO11AR064047-01	Knee CAT Study – Validity of the PROMIS Pain interference and Physical Function CATs	Principal Investigator (20% Effort) 2.40 calendar	09/12/2012 – 08/31/2016	National Institute of Arthritis Musculoskeletal and Skin Diseases

<b>GRANT NUMBER</b>	<b>GRANT TITLE</b>	<b>ROLE IN PROJECT</b>	<b>YEARS INCLUSIVE</b>	<b>SOURCE/ AMOUNT</b> \$988,539
	Content Analysis and Refinement of the AM-PAC Basic Mobility Domain Item Bank for Computer Adaptive Testing. \$30,000 Pilot Project in Rehabilitation Outcomes Measurement	Co-Investigator	2014	Boston ROC within the Health & Disability Research Institute

### **OTHER RESEARCH ACTIVITIES**

#### **Grant Reviewer**

1997 to 2004	Grant Reviewer for Pennsylvania Athletic Trainers' Society
2001 to 2004	Grant Reviewer for Aircast Foundation
2001 to present	Grant Reviewer for Competitive Medical Research Fund University of Pittsburgh Medical Center
2012	Grant Reviewer for National Institutes of Health Ad-hoc Reviewer for Neurological, Aging, and Musculoskeletal Epidemiology (NAME) Study Section (February 9, 2012)

### **OTHER RESEARCH ACTIVITIES**

#### **EDITORIAL BOARD**

2013 - Present	Sports Health: A Multidisciplinary Approach
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#### **MANUSCRIPT REVIEWER**

1990 to present	Journal of Orthopaedic and Sports Physical Therapy
1992 to 2002	Journal of Sports Rehabilitation
1997 to present	Physical Therapy
1997 to present	American Journal of Sports Medicine
1998 to present	Journal of Athletic Training
2006 to present	Archives of Physical Medicine & Rehabilitation
2006 to present	Arthritis Care & Research
2006 to present	Clinical Orthopedic and Related Research

#### **UNIVERSITY AND SCHOOL**

2002 to present	Reviewer, University of Pittsburgh Institutional Review Board for Biomedical Research
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## **UNIVERSITY AND SCHOOL**

2002 to present	Member, University of Pittsburgh Senate Athletic Committee
2008 to present	Member, University of Pittsburgh Athletics Compliance Committee
2008 to 2011	Faculty Representative, University of Pittsburgh Board of Trustees Athletics Committee
2008 to 2011	Member, University of Pittsburgh School of Health and Rehabilitation Sciences Alumni Society Board
2011 to present	Mentor, University of Pittsburgh Student Health Pro Bono Physical Therapy Clinic
2014 to 2015	Faculty Representative, University of Pittsburgh Board of Trustees Athletics Committee

## **COMMUNITY AND PROFESSIONAL**

### **American College of Rheumatology**

2007 to 2010	Member – Quality of Care Subcommittee
2008 to 2011	Member - American College of Rheumatology Committee on Journal and Publications

### **American Orthopaedic Society for Sports Medicine**

1998 to Present	Psychometric Consultant to the International Knee Documentation Committee of the American Orthopaedic Society for Sports Medicine
2003 to Present	Ad-Hoc Member - Research Committee - American Orthopaedic Society for Sports Medicine
2010 to Present	Chair, Outcome Measures Consensus Task Force

### **American Physical Therapy Association**

1994 to 1995	Member - Task Force on Clinical Residency
1997 to 1999	Member – Committee on Clinical Residency Credentialing
2000 - 2001	Chair – Committee on Clinical Residency Credentialing
2010 - 2014	Member - American Board of Physical Therapy Residency and Fellowship Education
2010 - 2012	Member, Combined Sections Meeting Review Work Group
2010 - present	Member, Ad Hoc Advisory Panel for National Outcomes Database
2007 - present	Alternate Section Delegate, House of Delegates
2013 - 2014	Member – Physical Therapy Outcomes Registry Task Force
2015 - present	Scientific Director - Physical Therapy Outcomes Registry of the American Physical Therapy Association

### **American Society of Shoulder and Elbow Therapists**

1993 to 1994	Chairman – Nominating Committee
1994 to 1995	Chairman-Research Committee
1996 to 2000	Member – Research Committee
1998 to 1999	President Elect & Chairman Membership Committee
1999 to 2000	President-American Society of Shoulder and Elbow Therapists
2000 to 2001	Past President & Chairman Program Committee

### **Federation of State Boards of Physical Therapy**

1997 to 1998 Delegate – Federation State Board of Physical Therapy  
1997 to 1998 Member – Task Force on Continued Clinical Competence  
1998 to 2000 Chairman – Committee on Continued Clinical Competence  
1999 to 2000 Alternate Delegate– Federation State Board of Physical Therapy

### **Journal of Sports Physical Therapy**

2004 to 2008 Director – Journal of Sports & Physical Therapy Board of Directors

### **International Society for Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine**

1998 to 1999 Member – Outcomes Committee

### **International Knee Documentation Committee – Meniscus Documentation Subcommittee**

2007 - current Member - Meniscus Documentation Subcommittee

### **Orthopaedic Section of the American Physical Therapy Association**

1999 to 2002 Member – Research Committee  
2002 to 2003 Chairman – Research Committee  
2003 to 2007 Director – Board of Directors  
2007 to 2013 President –Board of Directors  
2010 to Present Chair, National Orthopaedic Physical Therapy Outcomes Database Task Force  
2011 to 2012 Member, Clinical Research Network Task Force

### **Pennsylvania State Board of Physical Therapy**

1995 to 1999 Member  
1999 to 2005 Chairman

### **Section on Research of the American Physical Therapy Association**

2009 to Present Member, Edge Task Force

### **Study Sections**

March 20, 2013 NIAMS (National Institute of Arthritis, Musculoskeletal and Skin Diseases) Special Emphasis Panel (SEP), NIAMS Small Grant Program for New Investigators.



November 5 -6, 2013	NIAMS (National Institute of Arthritis, Musculoskeletal and Skin Diseases) Special Emphasis Panel (SEP), ZAR1 CNR M1 for review of R03 research grant applications, received in response to PAR-AR-12-045, NIAMS Small Grant Program for New Investigators.
April 1 – 2, 2014	NIAMS (National Institute of Arthritis, Musculoskeletal and Skin Diseases) Special Emphasis Panel (SEP), ZAR1 CNR M1 for review of R03 research grant applications, received in response to PAR-AR-12-045, NIAMS Small Grant Program for New Investigators.
October 22-23, 2014	NIAMS (National Institute of Arthritis, Musculoskeletal and Skin Diseases) Review R03 grant applications (Small Grant Program for New Investigator, <a href="#">PAR-12-045</a> )
February 28-19, 2014	NIAMS (National Institute of Arthritis, Musculoskeletal and Skin Diseases) RO3IAM Review
February 12-13, 2015	Neurological, Aging and Musculoskeletal Epidemiology (NAME) Study Section.
July 2015	NIAMS Clinical Trial AMSC Member Conflict Review Panel. National Institute of Arthritis and Musculoskeletal and Skin Diseases. July 2015
October 2015	Neurological, Aging and Musculoskeletal Epidemiology (NAME) Study Section. October 2015

**Sports Physical Therapy Section of American Physical Therapy Association**

1994 to 1996	Chairman – Clinical Residency Committee
1997 to 2001	Vice President – Clinical Residency Special Interest Group