CURRICULUM VITAE

For

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EDUCATION

2000-2002	**Master of Physical Therapy**, Elon University, Elon College, NC, Department of Physical Therapy Education
1990-95	**Doctor of Philosophy**, Auburn University, Auburn, AL Department of Health and Human Performance Major Area of Study: Biomechanics Minor Area of Study: Exercise Physiology; Nutrition
1986-87	**Master of Science**, Washington State University, Pullman Washington, Department of Physical Education Major Area of Study: Biomechanics Minor Area of Study: Exercise Physiology
1980-83	**Bachelor of Arts**, Linfield College, McMinnville, Oregon Department of Mathematics and Department of Physical Education Double Major in Mathematics and Physical Education.
1978-80	**Associate of Arts**, Walla Walla Community College, Walla Walla, Washington.

WORK EXPERIENCE

2002 to Current

California State University, Sacramento, Sacramento, CA
College of Health and Human Services
Department of Physical Therapy

Professor of Physical Therapy

Courses taught in the CSUS Master of Physical Therapy Program:
1) PT 200 Pathokinesiology
2) PT 206 Therapeutic Measurements and Techniques
3) PT 220 Therapeutic Exercise 1
4) PT 226 Therapeutic Agents
5) PT 260 Certified Strength and Conditioning Specialist Elective
6) KINS 068 Weight Training

2003 – Current

Murieta Physical Therapy & Health Club, Rancho Murieta, CA
Physical Therapist and Personal Trainer

1998 to 2002

Duke University Medical Center, Durham, NC
Division of Orthopaedic Surgery, Department of Surgery, and Department of Physical Therapy and Occupational Therapy

Assistant Professor of Orthopaedic Surgery
Director of the Michael W. Krzyzewski Human Performance Biomechanics Laboratory

Courses taught in Duke Doctor of Physical Therapy Program:
1) PT 307 Human Movement Sciences I/Biomechanics
2) PT 322 Arthrological and Pathological Movement Science

2002 to Present

Elon University, Elon, NC
Department of Physical Therapy Education.
Lecturer. Elective courses taught: Certified Strength and Conditioning Specialist; Biomechanics of the Throwing Shoulder and Elbow; Knee Biomechanics During Common Open and Closed Kinetic Chain Rehabilitation Exercises.

1997-1998

California Polytechnic State University, San Luis Obispo, CA
College of Science and Mathematics; Department of Physical Education and Kinesiology. Assistant Professor and Pre-Physical Therapy Coordinator. Graduate and undergraduate courses taught: Mechanical Kinesiology, Biomechanics, Human Muscle Anatomy, Human Anatomy and Physiology, Weight Training, and Progressive Strength Training.

1996-97	**California Polytechnic State University**, San Luis Obispo, CA College of Science and Mathematics; Department of Physical Education and Kinesiology. Lecturer and Pre-Physical Therapy Coordinator. Undergraduate and graduate courses taught: Mechanical Kinesiology, Biomechanics, Human Muscle Anatomy, Weight Training, and Progressive Strength Training.
1991-1996	**American Sports Medicine Institute**, Birmingham, AL Biomechanist and Researcher: Research Division
1994-96	**University of Alabama at Birmingham**, Birmingham, AL Instructor. Undergraduate and graduate courses taught: Applied Kinesiology, Mechanical Analysis of Motor Skills.
1995	**Linfield College**, McMinnville, OR. Instructor. Undergraduate courses taught: Kinesiology, Foundation and Development in Physical Education.
1993-95	**SportsLife Fitness Club** and **Gold's Gym**, Birmingham, AL. Personal Trainer.
1992	**University of Alabama at Birmingham**, Birmingham, AL Instructor: Weight Training.
1990-91	**Auburn University**, Auburn, AL. Instructor: Weight Training.
1988-90	**Walla Walla Community College**, Walla Walla, WA Instructor: Physics, Algebra, Pre Calculus, Computer Concepts, Computer Programming, Word Processing, Circuit Weight Training, and Tennis.
1983-89	**Clarkston High School**, Clarkston, WA. Instructor: Mathematics and Computer Science
1988	**University of Idaho**, Moscow, ID. Instructor: Weight Training.
1986-87	**Washington State University**, Pullman, WA. Instructor: Weight Training.
1984-85	**Lewis Clark State College**, Lewiston, ID. Instructor: Fitness/Wellness, Weight Training, Aerobics.
1983-84	**Clarkston School District**, Clarkston, WA. Instructor: Summer Fitness - Weight Training and Conditioning.
1983	**McMinnville High School**, McMinnville, OR.

Student Instructor: Geometry, Math and Physical Education.

CLINICAL PHYSICAL THERAPY EXPERIENCES

2003 - Current	**Murieta Physical Therapy & Health Club,** Rancho Murieta, CA
2002	**Alamance Regional Medical Center Rehabilitation at Mebane Medical Park**, Mebane, NC Student Physical Therapist Out-patient rehabilitation
2002	**Alamance Regional Medical Center Physical and Sports Rehabilitation**, Burlington, NC Student Physical Therapist Out-patient orthopaedics and in-patient acute
2001	**Duke University Medical Center**, Durham, NC Student Physical Therapist Adult neurological rehab
1998	**Flanders Physical Therapy**, Portland, OR Student Physical Therapist Out-patient orthopaedics

BOOK CHAPTER PUBLICATIONS

Escamilla, R.F. Electromyographic activity during upper extremity sports. In K.E. Wilk, M.M. Reinold, & J.R. Andrews (Eds), The Athletes Shoulder. Elsevier: Philadelphia, In Press.

Escamilla, R.F. Open and closed kinetic chain rehabilitation for the upper extremity. In K.E. Wilk, M.M. Reinold, & J.R. Andrews (Eds), The Athletes Shoulder. Elsevier: Philadelphia, In Press.

Escamilla, R.F. Exercise testing and prescription. In K.P. Speer (Ed), Injury Prevention and Rehabilitation for Active Older Adults (pp. 19-47). Human Kinetics: Champaign, 2005.

Escamilla, R.F. & Wickham, R. Exercise based conditioning and rehabilitation. In G. Kolt & L. Snyder-Mackler (Eds), Physical Therapies in Sports and Exercise. Churchill Livingstone: 2003.

Escamilla, R.F., Lander, J.E., & Garhammer, J. Biomechanics of Powerlifting and Weightlifting Exercises. In W.E. Garrett & D.T. Kirkendall (Eds), Exercise and Sport Science (pp. 585-615). Lippincott Williams & Wilkens: Philadelphia, 2000.

Fleisig, G.S., **Escamilla, R.F.**, & Barrentine, S.W. Biomechanics of pitching: mechanism and motion analysis. In J.R. Andrews, B. Zarins, & K.E. Wilk (Eds.), Injuries in Baseball (pp. 3-22). Lippincott Raven: Philadelphia, 1998.

Fleisig, G.S., **Escamilla, R.F.**, & Andrews, J.R. Biomechanics of throwing. In J.E. Zachazewski, D.J. Magee, & W.S. Quillen, (Eds.), Athletic Injuries and Rehabilitation (pp. 332-353). Philadelphia: W.B. Saunders Company, 1996.

Escamilla, R.F. Normal and abnormal muscle and ligament physiology. In G.J. Sammarco (Ed.), Rehabilitation of The Foot and Ankle (pp. 77-94). St. Louis: Mosby, 1995.

REFERRED JOURNAL PUBLICATIONS

Taylor, M.K., Hodgdon, J.A., Griswold, L., Miller, A., Roberts, D., **Escamilla, R.** The effects of cervical resistance training on isometric and dynamic strength. Aviation, Space, and Environmental Medicine, In Press.

Escamilla, R.F., Barrentine, S.W., Fleisig, G.S. Zheng, N., Takada, Y., Kingsley, D., & Andrews, J.R. Pitching biomechanics as a pitcher approaches muscular during a simulated baseball game. American Journal of Sports Medicine, In Press.

Hreljac, A., Imamura, R., **Escamilla, R.F**., & Edwards, W.B. Effects of changing protocol, grade, and direction on the preferred gait transition speed during human locomotion. Gait and Posture, In Press.

Imamura, R.T., Hreljac, A., **Escamilla, R.F.**, & Edwards, W.B. A three-dimensional analysis of the center of mass for three different judo throwing techniques. Journal of Sports Science & Medicine, 5:2, 122-131, 2006.

Escamilla, R.F., Babb, E., DeWitt, R., Jew, P., Kelleher, P., Burnham, T., Busch, J., D'Anna, K., Mowbray, R., & Imamura, R.T. An Electromyographic Analysis of Traditional and Non-Traditional Abdominal Exercises: Implications for Rehabilitation and Training. Physical Therapy, 86:5, 656-671, 2006.

Fleisig, G.S., Kingsley, D., Loftice, J., Dinnen, K., Ranganathan, R., Dun, S., **Escamilla, R.F.**, & Andrews, J.R.. Kinetic comparison among the fastball, curveball, slider, and change-up in collegiate baseball pitchers. The American Journal of Sports Medicine, 34:3, 423-430, 2006.

Escamilla, R.F., McTaggart, M.S.C., Fricklas, E.J., DeWitt, R., Kelleher, P., Taylor, M.K., Hreljac, A., & Moorman, C.T. An Electromyographic Analysis of Commercial and Common Abdominal Exercises: Implications for Rehabilitation and Training. Journal of Orthopaedic & Sports Physical Therapy, 36:2, 45-57, 2006.

Hreljac, A., Imamura, R., **Escamilla, R.F.**, Casebolt, J., & Sison, M. Preferred and energetically optimal transition speeds during backward human locomotion. Journal of Sports Science & Medicine, 4: 446-454, 2005.

Elliott, B., Fleisig, G.S., Nicholls, R., & **Escamilla, R.F.** Technique effects on upper limb loading in the tennis serve. Journal of Science and Medicine in Sport, 6(1): 76-87, 2003.

Fleisig, G.S., Nicholls, R.L., Elliott, B.C., **Escamilla, R.F.** Kinematics used by world class tennis players to produce high-velocity serves. Sports Biomechanics, 2(1): 51-64, 2003.

Escamilla, R.F., Fleisig, G.S., Barrentine, S.W., Andrews, J.R., & Moorman, C.T., III. Kinematic and kinetic comparisons between American and Korean professional baseball pitchers. Sports Biomechanics, 1(2): 213-228, 2002.

Escamilla, R.F., Francisco, A.C., Kayes, A.V., Speer, K.P., & Moorman, C.T., III. An electromyographic analysis of sumo and conventional style deadlifts. Medicine and Science in Sports and Exercise, 34(4): 682-688, 2002.

Escamilla, R.F., Fleisig, G.S., Zheng, N., Lander, J.E., Barrentine, S.W., Bergemann, B.W., Andrews, J.R., & Moorman, C.T., III. Effects of technique variations on knee biomechanics during the dynamic squat and leg press exercises. Medicine and Science in Sports and Exercise, 33(9): 1552-1566, 2001.

Escamilla, R.F., Lowry, T.M., Osbaryl, D.C., & Speer, K.P. A biomechanical analysis of sumo and conventional deadlifts during the 1999 special olympics world games. Medicine and Science in Sports and Exercise, 33(8): 1345-1353, 2001.

Escamilla, R.F., Fleisig, G.S., Lowry, T.M., Barrentine, S.W., & Andrews, J.R. A three-dimensional biomechanical analysis of the squat during varying stance widths. Medicine and Science in Sports and Exercise, 33(6): 984-998, 2001.

Escamilla, R.F., Fleisig, G.S., Zheng, N., Barrentine, S.W., & Andrews, J.R. Kinematic comparisons of 1996 Olympic baseball pitchers. Journal of Sports Science, 19: 665-676, 2001.

Matsuo, T., **Escamilla, R.F**., Fleisig, G.S., Barrentine, S.W., & Andrews, J.A. Contributions of factors based on kinematic relationship to the inter-subject variability of baseball pitch velocity. Journal of Applied Biomechanics, 17(1): 1-13, 2001.

Escamilla, R.F. Knee biomechanics of the dynamic squat exercise. Medicine and Science in Sports and Exercise, 33(1): 127-141, 2001.

Escamilla, R.F., Francisco, A.C., Fleisig, G.S., Barrentine, S.W., Welch, C.M., Kayes, A.V., Speer, K.P., & Andrews, J.R. A three-dimensional biomechanical analysis of sumo and conventional style deadlifts. Medicine and Science in Sports and Exercise, 32 (7): 1265-1275, 2000.

Escamilla, R.F., Fleisig, G.S., Barrentine, S.W., Andrews, J.R, & Speer, K.P. Effects of throwing overweight and underweight balls on baseball throwing and pitching. Sports Medicine, 29(4): 259-272, 2000.

Fleisig, G.S., Barrentine, S.W., Zheng, N., **Escamilla, R.F**., & Andrews, J.R. Kinematic and kinetic comparison of baseball pitching among various levels of development. Journal of Biomechanics, 32(12):1371-1375, 1999.

Jones, K., Hunter, G., Fleisig, G., **Escamilla, R.**, & Lemak, L. The effects of compensatory acceleration on upper-body strength and power in collegiate football players. Journal of Strength and Conditioning Research, 13(2):99-105, 1999.

Escamilla, R.F., Fleisig, G.S., Zheng, N., Barrentine, S.W., Wilk, K.E., & Andrews, J.R. Biomechanics of the knee during closed kinetic chain and open kinetic chain exercises. Medicine and Science in Sports and Exercise, 30(4): 556-569, 1998.

Escamilla, R.F., Fleisig, G.S., Barrentine, S.W., Zheng, N., & Andrews, J.R. Kinematic comparisons of throwing different types of baseball pitches. Journal of Applied Biomechanics, 14(1):1-23, 1998.

Barrentine, S.W., Matsuo, T., **Escamilla, R.F**., Fleisig, G.S., & Andrews, J.R. Kinematic analysis of the wrist and forearm during baseball pitching. Journal of Applied Biomechanics, 14(1):24-39, 1998.

Barrentine, S.W., Fleisig, G.S., Whiteside, J.A., **Escamilla, R.F**., & Andrews, J.R. Biomechanics of windmill softball pitching with implications about injury mechanisms at the shoulder and elbow. Journal of Orthopaedic Sports Physical Therapy, 28(6):405-14, 1998.

Zheng, N., Fleisig, G.S., **Escamilla, R.F**., & Barrentine, S.W. An analytical model of the knee for estimation of internal forces during exercises. Journal of Biomechanics, 31(10):963-7, 1998.

Wilk, K.E., **Escamilla, R.F**., Fleisig, G.S., Barrentine, S.W., Andrews, J.R., & Boyd, M.L. A comparison of tibiofemoral joint forces and electromyography activity during open and closed kinetic chain exercises. American Journal of Sports Medicine, 24(4):518-527, 1996.

Fleisig, G.S., **Escamilla, R.F**., Andrews, J.R., Matsuo, T., Satterwhite, Y., & Barrentine, S.W. Kinematic and kinetic comparison between baseball pitching and football passing. Journal of Applied Biomechanics, 12(2):207-224, 1996.

Fleisig, G.S., Barrentine, S.W., & **Escamilla, R.F**. Biomechanics of Overhand throwing with implications for injuries. Sports Medicine, 21(6):421-437, 1996.

Fleisig, G.S. & **Escamilla, R.F**. Biomechanics of the elbow in the throwing athlete. Operative Techniques in Sports Medicine, 4(2):62-68, 1996.

Wilk, K.E., **Escamilla, R.F**., Fleisig, G.S., Arrigo, C.A., & Barrentine, S.W. Open and

closed kinetic chain exercise for the lower extremity: theory and clinical application. Athletic Training, 1(4): 336-346, 1995.

Fleisig, G.S., Andrews, J.R., Dillman, C.J., & **Escamilla, R.F**. Kinetics of baseball pitching with implications about injury mechanisms. American Journal of Sports Medicine, 23(2): 233-239, 1995.

MANUSCRIPTS CURRENTLY UNDER REVIEW IN REFERRED JOURNAL

None

NON-REFERRED JOURNAL PUBLICATIONS

Escamilla, R.F. The use of powerlifting aids in the squat. Powerlifting USA, 12(5):14-15, 1988.

PUBLISHED CONFERENCE ABSTRACTS/PROCEEDINGS

Escamilla, R.F., Zheng, N., Hreljac, A., Imamura, R., MacLeod, T.D., Edwards, W.B., Fleisig, G.S., & Wilk, K.E. Patellofemoral forces and stresses during lunge exercises. Conference Proceedings for the 30th Annual Meeting of the American Society of Biomechanics, 2006.

Escamilla, R.F., Zheng, N., Hreljac, A., Imamura, R., MacLeod, T.D., Edwards, W.B., Fleisig, G.S., & Wilk, K.E. Patellofemoral forces and stresses during squat exercises. Conference Proceedings for the 30th Annual Meeting of the American Society of Biomechanics, 2006.

Hreljac, A., Inamura, R., **Escamilla, R.F.**, MacLeod, T.D., Kawada, J., Krogh, S., & Stafford, J. Ankle and knee joint Kinetics in runners with and without lower extremity overuse injuries. Conference Proceedings for the 30th Annual Meeting of the American Society of Biomechanics, 2006.

Escamilla, R.F., Bonacci, L., Burnham, T., Busch, J., D'Anna, K., Edwards, B., Eliopoulos, P., MacLeod, T., Hreljac, A., Imamura, R.T., & Mowbray, R. A biomechanical analysis of squatting and lunging type exercises. Medicine and Science in Sports and Exercise, 38(5): 2006.

Barakatt, E.T., Ingram, J., **Escamilla, R.F.**, Andry, D., Ferreira, R., Ma, Z., Randall, P., Smith, M., and Smith, R. The validity of an inclinometer/valiper tool for measuring intrapelvic motion. Journal of Orthopaedic & Sports Physical Therapy, 36:1, A28, 2006.

Hreljac, A., Inamura, R., Edwards, B., & **Escamilla, R.F.** Kinetic factors influencing the gait transition speed during human locomotion. Conference Proceedings for the 29th Annual Meeting of the American Society of Biomechanics, 2005.

Escamilla, R.F., Babb, E., DeWitt, R., Jew, P., Kelleher, P., Burnham, T., Busch, J., D'Anna, K., and Mowbray, R. An electromyographic analysis of traditional and non-traditional abdominal exercises. Medicine and Science in Sports and Exercise, 37(5): 2005.

Escamilla, R.F., Barrentine, S.W., Fleisig, G.S., Zheng, N., Takada, Y., & Andrews, J.R. Pitching biomechanics as a pitcher approaches fatigue during a simulated baseball game. Proceedings of the 5th International Conference on Engineering of Sport. In Hubbard, M., Mehta, R.D., & Pallis, J.M. (eds.), The Engineering of Sport 5, Vol 1: 196-202, Davis, CA, 2004.

Hreljac, A., Inamura, R., Edwards, B., & **Escamilla, R.F.** Effects of changing protocol, grade, and direction on the preferred gait transition speed during human locomotion. Conference Proceedings for the 28th Annual Meeting of the American Society of Biomechanics, Portland, OR, X-CD Technologies Inc., 2004.

Escamilla, R.F., Tonini, C.D., Lai, I.Y., Lowry, T.M., Hreljac, A., and Imamura, R.T. Biomechanical analysis of sumo and conventional deadlifts in females during the special Olympics world games. Medicine and Science in Sports and Exercise, 35(5): S322, 2003.

Escamilla, R.F., Wilk, K.E., Snyder-Mackler, L., Fleisig, G.S., Fleming, B.C. Knee biomechanics during rehabilitation exercises. Medicine and Science in Sports and Exercise, 33(5): S183, 2001.

Escamilla, R.F., Lowry, T.M., Osbahr, D.C., & Speer, K.P. Biomechanical analysis of the deadlift during the 1999 special olympics world games. Conference Proceedings for the XIX International Symposium on Biomechanics in Sports, San Francisco, CA: 63-67, 2001.

Escamilla, R.F., Fleisig, G.S., Barrentine, S.W., Andrews, J.R., & Speer, K.P. Kinetic comparisons between american and korean professional baseball pitchers. Conference Proceedings for the 24th Annual Meeting of the American Society of Biomechanics, Chicago, IL: 263-264, 2000.

Escamilla, R.F., Fleisig, G.S., Lowry, T.M., Barrentine, S.W., Speer, K.P., & Andrews, J.R. A three-dimensional biomechanical analysis of the squat during varying stance widths. Medicine and Science in Sports and Exercise, 32(5): S197, 2000.

Speer, K.P., **Escamilla, R.F.**, Higgins, L.D., Press, J.M., & Toth, A. The greying of sports medicine: treating the active patient over the age of 60. Medicine and Science in Sports and Exercise, 32(5): S121, 2000.

Escamilla, R.F., Francisco, A.C., Fleisig, G.S., Welch, C.M., Barrentine, S.W., Kayes, A.V., & Andrews, J.R. A three dimensional kinetic analysis of sumo and conventional style deadlifts. Conferences Proceedings for the American Society of Biomechanics 23rd Annual Meeting, Pittsburgh, PA: 152, 1999.

Fleisig, G.S., Matsuo, T., **Escamilla, R.F.**, Barrentine, S.W., & Andrews, J.R. Kinematic differences between highly-skilled and less-skilled baseball pitchers. Conference Proceedings for the American Society of Biomechanics 23rd Annual Meeting, Pittsburgh, PA: 140, 1999.

Escamilla, R.F., Fleisig, G.S., Zheng, N., Barrentine, S.W., and Andrews, J.R. Kinematic comparisons of 1996 Olympic baseball pitchers. Conference Proceedings for the International Society of Biomechanics XVIIth Congress, Calgary, Alberta, Canada: 922, 1999.

Fleisig, G.S., Andrews, J.R., Dillman, C.J., **Escamilla, R.F.**, Barrentine, S.W., Zheng, N., and Jameson, E.G. Enhancing throwing performance and safety through biomechanics. Conference Proceedings for the International Society of Biomechanics XVIIth Congress, Calgary, Alberta, Canada: 144, 1999.

Fleisig, G.S., Barrentine, S.W., Zheng, N., **Escamilla**, R.F., Andrews, J.R., Nicholls, R.L., Elliott, B.C., Lyman, S.L., Osinsk, E.D. **A** practical evaluation tool for baseball pitching biomechanics. Conference Proceedings fro the Fifth IOC World Congress on Sport Sciences, Canberra, Australia, 1999.

Escamilla, R.F., Fleisig, G.S., Barrentine, S.W., and Andrews, J.R. Kinematic comparisons between american and korean professional baseball pitchers. Medicine and Science in Sports and Exercise, 31(5): S40, 1999.

Escamilla, R.F., Fleisig, G.S., Zheng, N., Barrentine, S.W., Wilk, K.E., & Andrews, J.R. Biomechanics of the knee during closed kinetic chain and open kinetic chain exercises. Medicine and Science in Sports and Exercise, 30(5): S48, 1998.

Fleisig, G.S., **Escamilla, R.F**., Barrentine, S.W., Zheng, N., & Andrews, J.R. Baseball pitching biomechanics at various levels of development. Medicine and Science in Sports and Exercise, 30(5): S172, 1998.

Escamilla, R.F., Zheng, N., Fleisig, G.S., Lander, J.E., Barrentine, S.W., Cutter, G.R., & Andrews, J.R. The effects of technique variations on knee biomechanics during the squat and leg press. Medicine and Science in Sports and Exercise, 29(5S): S156, 1997.

Zheng, N., Fleisig, G.S., **Escamilla, R.F.**, Barrentine, S.W. Quasistatic model of the knee during exercise. Conference Proceedings of the 1997 16th Southern Biomedical Engineering Conference, Biloxi, MI: 147-50, 1997.

Fleisig, G.S., **Escamilla, R.F**., Barrentine, S.W., Zheng, N., & Andrews, J.R. Kinematic and kinetic comparison of baseball pitching from a mound and throwing from flat ground. In American Society of Biomechanics: Conference Proceedings of the 20th Annual Meeting, Atlanta, GA: 153-54, 1996.

Zheng, N., Fleisig, G.S., **Escamilla, R.F**., Barrentine, S.W., Wilk, K.E., & Andrews, J.R. Forces of the knee during open and closed kinetic chain exercises. In American Society of Biomechanics: Conference Proceedings of the 20th Annual Meeting, Atlanta, GA: 75-76, 1996.

Fleisig, G.S., Zheng, N., Barrentine, S.W., **Escamilla, R.F**., Andrews, J.R., & Lemak, L.J. Kinematic and kinetic comparison of full-effort and partial-effort baseball pitching.. In American Society of Biomechanics: Conference Proceedings of the 20th Annual Meeting, Atlanta, GA: 151-52, 1996.

Fleisig, G.S., Zheng, N., Barrentine, S.W., **Escamilla, R.F**., Andrews, J.R., & Lemak, L.J. Kinematic and kinetic comparison of baseball pitching from a mound and throwing from flat ground. In American Society of Biomechanics: Conference Proceedings of the 20th Annual Meeting, Atlanta, GA: 153-54, 1996.

Escamilla, R.F. The effects of technique variations on the knee forces and muscle activity during the squat and leg press. Third IOC World Congress on Sport Sciences Congress Proceedings, Atlanta, Georgia: 278, 1995.

Escamilla, R.F., Fleisig, G.S., Alexander, J.R., & Andrews, J.R. A kinematic and kinetic comparison while throwing different types of baseball pitches. Medicine and Science in Sports and Exercise, 26(5S): S175, 1994.

Escamilla, R.F., Fleisig, G.S., Alexander, E., & Andrews, J.R. A kinematic and kinetic comparison while throwing different types of baseball pitches. Proceedings of the Eighth Biennial Conference of the Canadian Society for Biomechanics, Calgary, Alberta, Canada: 232-33, 1994.

Fleisig, G.S., **Escamilla, R.F**., Andrews, J.R., & Feldman, D.S. The biomechanics of baseball pitching injuries: Kinematic factors related to increased kinetics. Proceedings of the Eighth Biennial Conference of the Canadian Society for Biomechanics, Calgary, Alberta, Canada: 296-297, 1994.

Escamilla, R.F., Fleisig, G.S., & Andrews, J.R. A kinematic and kinetic comparison between baseball pitching and football passing. Medicine and Science in Sports and Exercise, 25(5S): S131, 1993.

Escamilla, R.F. & Sawhill, J. Cinematographical examination of powerlifting aids in squatting. Proceedings of the sixth International Symposium on Biomechanics in Sports. In Kreighbaum, E. & McNeill (eds.), Biomechanics in Sports VI, The International Society of Biomechanics in Sports: 207-223, Bozeman, MT, 1990.

VIDEO PUBLICATIONS

Fleisig, G.S., Andrews, J.R., Dillman, C.J., **Escamilla, R.F**., Thurston, B., Kuerten, B., Whiteside, J.A., & Wilk, K.E. The fine art of pitching and throwing. Emerald Coast Productions, American Sports Medicine Institute, 1993.

EDUCATIONAL PUBLICATIONS

Andrews, J.R., Chmielewski, T., **Escamilla, R.F.**, Fleisig, G.S., Wilk, K.E. Conditioning program for professional baseball pitchers. American Sports Medicine Institute, Birmingham, AL, 1997.

FUNDED RESEARCH GRANTS/PROJECTS

Escamilla, R.F. Knee Biomechanics During Common Lower Extremity Rehabilitation Exercises. $7000 awarded from the EARDA CSUS Pilot Grant, 2007, California State University, Sacramento, College of Health and Human Services, Sacramento, CA.

Escamilla, R.F. Knee Forces and Muscle Activity During Common Lower Extremity Rehabilitation Exercises. $7000 awarded from the EARDA CSUS Pilot Grant, 2006, California State University, Sacramento, College of Health and Human Services, Sacramento, CA.

Escamilla, R.F. Muscle Activation Patterns in Abdominal Exercises with Rehabilitation and Training Implications. $11,590 awarded from the CSUS Research and Creative Activity Award Program, 2005, California State University, Sacramento, CA.

Escamilla, R.F., Simovitch, R.W., & Moorman, C.T, III. Biomechanical analysis of the bench press with technique variations and injury implications. $5000 awarded from the Piedmont Grant, 2002, Duke University Medical Center, Orthopaedic Surgery, Durham, NC.

Fleisig, G.S., **Escamilla, R.F**., Nicholls, R.L., & Elliott, B.C. Fatigue and implications for injury in tennis serving. $26,680 awarded to the American Sports Medicine Institute by the International Olympic Committee Subcommission on Biomechanics and Physiology to conduct research at the 2000 Centennial Olympic Games, Sydney, Australia. IOC Research Project Coordinator: Dr. Bruce C. Elliott, Department of Human Movement and Exercise Science, The University of Western Australia, Nedlands, Western Australia.

Escamilla, R.E. Biomechanics of the knee during rehabilitation exercise. $4500.00 awarded by the University Services Summer Grant, 1998, Cal Poly, San Luis Obispo, CA.

Escamilla, R.E. Biomechanics of the knee during closed and open kinetic chain exercises. $5000.00 awarded by the University Services Summer Grant, 1997, Cal Poly, San Luis Obispo, CA.

Fleisig, G.S., **Escamilla, R.F**., Barrentine, S.W., & Zheng, N. Biomechanical comparisons of Olympic baseball pitchers and Olympic tennis players. $5000 awarded to the American Sports Medicine Institute by the International Olympic Committee Subcommission on Biomechanics and Physiology of Sport to conduct research at the 1996 Centennial Olympic Games, Atlanta, GA. IOC Research Project Coordinator: Dr. Ben Johnson, Department of Kinesiology and Health, Georgia State University, Atlanta, GA.

Fleisig, G.S., Barrentine, S.W., & **Escamilla, R.F**. Biomechanical differences between Classic and Dry-Joy golf shoes during a golf swing. $66,500.00 awarded to the American Sports Medicine Institute by Titleist and Foot-Joy Worldwide, 1993, Fairhaven, MA.

Fleisig, G.S., **Escamilla, R.F**., & Barrentine, S.W. Biomechanics of baseball pitching. $17,500.00 awarded to the American Sports Medicine Institute from the Chicago White Sox professional baseball organization, 1992-93, Chicago, IL.

Escamilla, R.F., Fleisig, G.S., & Dillman, C.J. The "rocker" exercise: A study of muscular involvement. $10,000.00 awarded to the American Sports Medicine Institute from The Rocker, 1991, Professional Products, Inc., Defuniak Springs, FL.

CURRENT RESEARCH GRANTS UNDER REVIEW

None

LONG TERM SPORTS MEDICINE COURSES

In 2005-2006 I co-developed a Long Term Sports Medicine Course, presented by the Northern California Sports Medicine Education. Course meets 3 hours per week from January to May annually.

CONSULTATIONS AND CLINICS

NSCA Alabama-Northern Florida In-Season Football Clinic. Topic: Biomechanics of Speed. Clinic Director: Ken Jones. Samford University, Birmingham, AL, July 1995.

Sports Medicine and Science Camp Seminar. Topic: Weight training and biomechanics. Camp Director: Ronald A. Feinstein, M.D. Sponsored by The American Sports Medicine Institute and Schaeffer Eye Clinic, Birmingham, AL, June 1995, 1996, 1997.

Seminar for Alabama State Correctional Officers. Topic: Health, Fitness, and Exercise. Hired by QuestCare, Dr. Richard McLaughlin - Medical Director, Birmingham, AL, Feb 1994.

Strength and conditioning specialist for HealthSouth Strengthening and Conditioning Camp, Birmingham, AL, June 1994.

SCIENTIFIC AND PROFESSIONAL PRESENTATIONS:

Patellofemoral stress and muscle activity during common knee rehabilitation exercises. Presented at the 3rd Congress of the International Association of Physical Therapists Working with Older People, Istanbul, Turkey, November 2006.

Strength and aerobic training for the older individual and exercise prescription. Presented at the 3rd Congress of the International Association of Physical Therapists Working with Older People, Istanbul, Turkey, November 2006.

Shoulder problems in older individuals: Evaluation and conservative treatment. Presented at the 3rd Congress of the International Association of Physical Therapists Working with Older People, Istanbul, Turkey, November 2006.

An electromyographic analysis of training and rehabilitation exercises using the swiss ball. Presented at the 2006 California Physical Therapy Association Annual Conference, San Jose, CA, October 2006.

Patellofemoral forces and stresses during lunge exercises. Presented at the 30th Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.

Patellofemoral forces and stresses during squat exercises. Presented at the 30th Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.

The Biomechanics and pathomechanics of specific overhead sports movements. Presented at the 2006 Annual Conference and Scientific Exposition of the American Physical Therapy Association, Orlando, FL, June 2006.

Core stability: Integration with lower extremity rehabilitation. Presented at the 2006 Annual Conference and Scientific Exposition of the American Physical Therapy Association, Orlando, FL, June 2006.

A biomechanical analysis of squatting and lunging type exercises. Presented at the 53rd annual Meeting of the American College of Sports Medicine, Denver, CO, June 2006.

Biomechanics, injury mechanisms, and rehabilitation of the knee. Presented at the Sportsmedicine Symposium, Chicago, IL, March 2006, New York, NY, May 2006.

Open and closed kinetic chain exercises for the lower extremity. Presented at the 24th Annual Injuries in Baseball Course, American Sports Medicine Institute, Woodland Hills, CA, January 2006.

Changes in swing mechanics with choking up. Presented at the 24th Annual Injuries in Baseball Course, American Sports Medicine Institute, Woodland Hills, CA, January 2006.

Pathomechanics, surgical interventions, rehabilitation and conditioning of the overhand throwing shoulder and elbow. Presented through the California Research Special Interest Group of the California Physical Therapy Association, Orange, CA, November 2005.

An electromyographic analysis of common lower extremity rehabilitation exercises. Presented at the 2005 California Physical Therapy Association Annual Conference, Ontario, CA, October 2005.

Biomechanical and electromyographical analysis of lower extremity exercises: implications for ACL and patellofemoral rehabilitation. Presented at the 2005 Annual Conference and Scientific Exposition of the American Physical Therapy Association, Boston, MA, June 2005.

Pathomechanics, rehabilitation, and functional training for the overhand throwing athlete. Presented at the 2005 Annual Conference and Scientific Exposition of the American Physical Therapy Association, Boston, MA, June 2005.

A biomechanical analysis of traditional and non-traditional abdominal exercises. Presented at the 52nd Annual Meeting of the American College of Sports Medicine, Nashville, TN, June 2005.

Knee forces and muscle activity during common lower extremity exercises: Implications for ACL and patellofemoral rehabilitation. Presented at the American Physical Therapy Association Combined Sections Meetings, New Orleans, LA, February 2005.

Pathomechanics of the throwing shoulder. Presented at the 2005 Shoulder Update: Surgical Techniques, Treatment Progression and Return to Activity, Sutter Health Sacramento Sierra Region, Rehabilitation Services Continuing Education, May 2005.

Training and conditioning modifications for the bad back and the bad knee. Presented at the 23rd Annual Injuries in Baseball Course, American Sports Medicine Institute, Scottsdale, AZ, January 2005.

Changes in pitching mechanics due to fatigue. Presented at the 23rd Annual Injuries in Baseball Course, American Sports Medicine Institute, Scottsdale, AZ, January 2005.

An electromyographical analysis of traditional and non-traditional abdominal exercises. Presented at the 2004 California Physical Therapy Association Annual Conference, Anaheim, CA, October 2004.

Pitching biomechanics as a pitcher approaches fatigue during a simulated baseball game. Presented at the 5th International Conference on Engineering of Sport, Davis, CA, September 2004.

Biomechanics. Chairperson at the 5th International Conference on Engineering of Sport, Davis, CA, September 2004.

A biomechanical analysis of abdominal exercises. Presented at the 2004 Annual Conference and Scientific Exposition of the American Physical Therapy Association, Chicago, IL, July 2004.

Biomechanics and pathomechanics of the throwing shoulder and elbow in relationship to injury prevention and performance enhancement. Presented at the 2004 Annual Conference and Scientific Exposition of the American Physical Therapy Association, Chicago, IL, July 2004.

Biomechanics and pathomechanics of the throwing shoulder and elbow: insight into the injury mechanism. Presented at the 51st Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, May 2004.

Biomechanics of lower extremity functional exercise: rehabilitation and neuromuscular considerations. Presented at the 51st Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, May 2004.

Pathomechanics, surgical interventions, and progressive rehabilitation of the overhand throwing athlete. Presented through the Northeast district of the California Physical Therapy Association, Sacramento, CA, May 2004.

Biomechanics of the throwing shoulder. Presented at the 2003 California Physical Therapy Association Annual Conference, Sacramento, CA, October 2003.

An electromyographic analysis of commercial and common abdominal exercises. Presented at the 2003 California Physical Therapy Association Annual Conference, Sacramento, CA, October 2003.

Biomechanical analysis of sumo and conventional deadlifts in females during the special olympics world games. Presented at the 50th Annual Meeting of the American College of Sports Medicine, San Francisco, CA, May 2003.

Exercises for the trunk and lower extremity. Presented at the 21st Annual Injuries in Baseball Course, American Sports Medicine Institute, Atlanta, GA, January 2003.

International pitching biomechanics. Presented at the 21st Annual Injuries in Baseball Course, American Sports Medicine Institute, Atlanta, GA, January 2003.

Rehabilitation exercises for stabilization and mobilization of the cervical spine. Presented at the Spencer Foundation Spinal Cord Injury Research Conference, Durham, NC, June 2002.

Lifting and bending biomechanics. Chairperson for free communication slide session at the 49th Annual Meeting of the American College of Sports Medicine, St. Louis, MI, June 2002.

Biomechanical analysis of the deadlift during the 1999 special olympics world games. Presented at the XIX International Symposium on Biomechanics in Sports, San Francisco, CA, June 2001.

Knee biomechanics. Presented at the XIX International Symposium on Biomechanics in Sports, San Francisco, CA, June 2001.

Knee biomechanics during rehabilitation exercises. Presented at the 48th Annual Meeting of the American College of Sports Medicine, Baltimore, MD, June, 2001.

Weight training modifications to decrease injuries and protect the surgery. Presented at the 19th Annual Injuries in Baseball Course, American Sports Medicine Institute, Phoenix, AZ, January 2001.

Do break away bases prevent ankle injuries? Presented at the 19th Annual Injuries in Baseball Course, American Sports Medicine Institute, Phoenix, AZ, January 2001.

Kinetic comparisons between American and Korean professional pitchers. Presented at the 24th Annual Meeting of the American Society of Biomechanics, Chicago, IL, July, 2000.

Training for maximizing strength and power in sport. Presented at the 2nd Annual Sports Performance Enhancement Workshop, Durham, NC, July 2000.

A three-dimensional biomechanical analysis of the squat with varying stance widths. Presented at the 47th Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, June, 2000.

Aerobic and anaerobic exercise in the older patient. Presented at the 47th Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, June, 2000.

Insight into injury: the K-Lab. Presented at the 2000 Annual Meeting of the Radiology and Orthopaedics of Sports Medicine, Raleigh, NC, May, 2000.

Biomechanics and kinematics of the knee. Presented at the Sports Expo 2000 Annual Meeting of the Moore Orthopaedic Clinic, Columbia, SC, April 2000.

Current biomechanical data on knee bracing. Presented at the Sports Expo 2000 Annual Meeting of the Moore Orthopaedic Clinic, Columbia, SC, April 2000.

Exercises for the lower extremity and trunk. Presented at the 18th Annual Injuries in Baseball Course, American Sports Medicine Institute, Tampa, FL, January 2000.

A three-dimensional kinetic analysis of sumo and conventional style deadlifts. Presented at the 23rd Annual Meeting of the American Society of Biomechanics, Pittsburgh, PA, October 1999.

Kinematic comparisons of 1996 olympic baseball pitchers. Presented at the XVIIth Annual Meeting of the International Society of Biomechanics Congress, Calgary, Alberta, Canada, August 1999.

Strength and power training. Presented at the 1st Annual Sports Performance Enhancement Workshop, Durham, NC, July 1999.

A three-dimensional kinematic analysis of sumo and conventional style deadlifts. Presented at the 1999 Annual Meeting of the National Strength and Conditioning Association, Kansas City, KA, June 1999.

Kinematic comparisons between American and Korean professional baseball pitchers. Presented at the 46th Annual Meeting of the American College of Sports Medicine, Seattle, WA, June 1999.

The impact of fatigue on coordinated shoulder muscle function. Presented at the 46th Annual Meeting of the American College of Sports Medicine, Seattle, WA, June 1999.

Biomechanics of the knee during closed kinetic chain and open kinetic chain exercises. Presented at the 45th Annual Meeting of the American College of Sports Medicine, Orlando, FL, June 1998.

Relationship between select kinematic parameters and ball velocity during baseball pitching. Presented at the XXVI FIMS World Congress of Sports Medicine, Orlando, FL, June 1998.

Biomechanics of sport. Chairperson for free communication slide session at the 45th Annual Meeting of the American College of Sports Medicine, Orlando, FL, June 1998.

Biomechanics and pathomechanics during baseball pitching. Presented at the 16th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1998.

Youth weight training for baseball. Presented at the 16th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1998.

The effects of technique variations on knee biomechanics during the squat and leg press. Presented at the 44th Annual Meeting of the American College of Sports Medicine, Denver, CO, June 1997.

The biomechanics of exercise. Presented at the California Association of Health, Physical Education, Recreation, and Dance State Convention, Los Angeles, CA, March 8, 1997.

Scientific assessment of olympic baseball. Presented at the 15th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1997.

Shoulder pathomechanics. Presented at the 15th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1997.

Problems in weight training for baseball. Presented at the 15th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1997.

Weight training for injury prevention in youth. Presented at the 15th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1997.

Weight training /body building for females. Presented at the Sports Medicine and Soccer Symposium, Birmingham, AL, July 27, 1996.

Weight training for soccer. Presented at the Sports Medicine and Soccer Symposium, Birmingham, AL July 26, 1996.

Biomechanics of knee rehabilitation exercises. Presented at the American Sports Medicine Institute's Sports Medicine Conference, Birmingham, AL, July 8, 1996.

Biomechanics of the throwing shoulder. Presented at the 63rd annual meeting of The American Academy of Orthopaedic Surgeons, 1996.

Shoulder pathomechanics in throwing. Presented at the 14th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1996.

Biomechanical analysis of the shoulder during weight training exercises. Presented at the Recent Advances in the Evaluation and Treatment of the Knee and Shoulder Course, HealthSouth Sports Medicine and Rehabilitation Center, Birmingham, AL, November, 1995.

The effects of technique variations on knee forces and muscle activity during the squat and leg press. Presented at the Third IOC World Congress on Sports Sciences, Atlanta GA, September 1995.

Special weight training for football and basketball. Presented at the 4th Annual Injuries in Football and Basketball Course, American Sports Medicine Institute, Birmingham, AL, May 1995.

Knee forces and muscle activity during the squat and leg press. Presented at the SEATA Athletic Trainer Clinical Symposium, Atlanta GA, March 1995.

Mechanical factors related to increased pitch velocity. Presented at the 13th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1995.

Biomechanics of the throwing shoulder. Presented at the 13th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1995.

Current concepts in anterior cruciate ligament rehabilitation. Presented at the American Orthopaedic Society for Sports Medicine Symposium (Knee Arthroscopy and Knee Instabilities), Birmingham, AL, October 1994.

A biomechanical comparison while throwing different types of baseball pitches. Presented at the Canadian Society for Biomechanics, Calgary, Alberta, August, 1994.

A kinematic and kinetic comparison while throwing different types of baseball pitches. Presented at the 41st Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, June 1994.

Principles of strength training in football and running. Presented at the 3rd Annual Injuries in Football and Wrestling Course, American Sports Medicine Institute, Birmingham, AL, May 1994.

Biomechanics of the elbow joint during pitching. Presented at the SEATA Athletic Trainer Clinical Symposium, Atlanta GA, March 1994.

Motion and stress analysis - research of the Spine. Presented at the Alabama Spine Institute & HealthSouth Medical Center Spine Symposium, HealthSouth Medical Center, Birmingham, AL, March, 1994.

Biomechanics of various pitches. Presented at the 12th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1994.

The baseball player in the 90's: Current concepts in conditioning and training. Presented at the 12th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1994.

Problems in weight training for baseball. Presented at the 12th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1994.

Advances in orthopaedics: biomechanics. Presented at the 3rd Annual Orthopaedic Update, HealthSouth Medical Center, Birmingham, AL, August 1993.

Strength training for the upper body. Presented at the 61st Annual University of Alabama Coaching Clinic, Tuscaloosa, AL, July 1993.

Functional biomechanics of sporting activities. Presented at HealthSouth Shoulder Specialization Course, Birmingham, AL, June 1993.

A kinematic and kinetic comparison between baseball pitching and football passing. Presented at the 40th Annual Meeting of the American College of Sports Medicine, Seattle, WA, June 1993.

The biomechanical difference between throwing a baseball and throwing a football. Presented at the 2nd Annual Injuries in Football and Wrestling Course, American Sports Medicine Institute, Birmingham, AL, May 1993.

Periodization and weight training techniques for football and wrestling. Presented at the 2nd Annual Injuries in Football and Wrestling Course, American Sports Medicine Institute, Birmingham, AL, May 1993.

Biomechanics: weight training. Presented at the SEATA Student Athletic Trainer Clinical Symposium, University of Alabama, Tuscaloosa, AL, February 1993.

Comparison of baseball and football throwing. Presented at the 11th Annual Injuries in Baseball Course, American Sports Medicine Institute, Birmingham, AL, January 1993.

Biomechanical analysis, pathophysiology, and clinical exam in the throwing shoulder. Presented at the American Sports Medicine Institute's Sports Medicine Conference, Birmingham, AL, September 1992.

Health and fitness essentials. Presented to the Birmingham Football Officials Association. Birmingham, AL, September, 1992.

Injuries in powerlifting. Presented at the American Sports Medicine Institute's Sports Medicine Conference, Birmingham, AL, June 1992.

Proper techniques, periodization, and biomechanical differences between weight training for football vs. powerlifting. Presented at the 1st Annual Injuries in Football Course, American Sports Medicine Institute, Birmingham, AL, May 1992.

Power training for the lower extremity. Presented at the 60th Annual University of Alabama Coaching Clinic, Tuscaloosa, AL, July 1992.

Cinematographical examination of powerlifting aids in squatting. Presented at the 6th International Symposium on Biomechanics in Sports, Bozeman, MT, July 1988.

PROFESSIONAL HONORS

1996 **Escamilla, R.F.**, Andrews, J.R., Fleisig, G.S., & Azar, F.M. Award winning videotape program entitled "Biomechanics of the Throwing Shoulder". Awarded by The American Academy of Orthopaedic Surgeons at their 63rd annual meeting.

Zheng, N., Fleisig, G.S., **Escamilla, R.F.**, Barrentine, S.W., Wilk, K.E., Andrews, J.R. Paper entitled "Forces of the knee during open and closed kinetic chain exercises". Clinical Biomechanics finalist, American Society of Biomechanics.

PROFESSIONAL MEMBERSHIP

2001-present	American Physical Therapy Association
1999-present	American Society of Biomechanics
1995-present	American College of Sports Medicine
2001-present	International Society of Biomechanics in Sports

1990-present National Strength and Conditioning Association

JOURNAL REVIEWER

1997-present Medicine and Science in Sports and Exercise

1997-present The Journal of Orthopaedic & Sports Physical Therapy

1998-present The Journal of Applied Biomechanics

2000-present Journal of Athletic Training

2001-present European Journal of Applied Physiology

2002-present Physical Therapy in Sport

2002-present Journal of Biomechanics

2002-present Sports Biomechanics

2004-present Journal of Sports Sciences

2006-present Sports Engineering

2006-present Strength and Conditioning Research

SELECT SAMPLE OF UNIVERSITY SERVICE

2005-present **University Faculty Senate**, California State University, Sacramento, CA

2003 **University Faculty Senate**, Alternate, California State University, Sacramento, CA

1998-2002 **Third Year Research Mentor in Biomedical Engineering Program for Duke University Medical Students**, Duke University Medical Center, Durham, NC

1998-2002 **Clinical Research Committee Member and Advisor for Duke University Physical Therapy Students**, Duke University Medical Center, Durham, NC

1998-2002 **Thesis and Senior Project Committee Member in Biomedical Engineering**, Duke University, Durham, NC

1998-2002 **Presenter for Community Outreach and Development**, Duke University, Durham, NC

1998-2002 **Student Internship Program**, Duke University, Durham, NC

1996-98 **University Academic Senate**, California Polytechnic State University, San Luis Obispo, CA

SELECT SAMPLE OF COMMUNITY SERVICE

2005 Associate Editor for North American for the peer review journal "Physical Therapy in Sport".

2005 Presentation entitled "Pathomechanics of the Throwing Shoulder" - Presented at the 2005 Shoulder Update: Surgical Techniques, Treatment Progression and Return to Activity, Sutter Health Sacramento Sierra Region, Rehabilitation Services Continuing Education, May 2005.

2005 Presentation entitled "Pitching mechanics, injury risks, and pitch types in youth baseball" – presented at Kaiser Little League Coaches Clinic, Sacramento, CA

2005 Presentation entitled "Knee forces and muscle activity during common lower extremity exercises: Implications for ACL and patellofemoral rehabilitation" – presented at UC Davis Sports Medicine Conference, Sacramento, CA

2004 Presentation entitled "Biomechanics of the throwing shoulder and elbow" – presented at UC Davis Sports Medicine Conference, Sacramento, CA

2003 Presentation entitled "Aerobic and anaerobic exercise for the elderly" – sponsored by the CSUS Life Center, Sacramento, CA

2002 Presentation entitled "Weight training in youth" – presented at the Teer House, Duke University, Durham, NC

2001 Presentation entitled "Biomechanics and sports medicine" – presented to the Sports Science State High School Camp, Durham, NC

2001 Presentation entitled "Fitness testing and exercise prescription for high school students" - presented to the Durham Academy Summer Sports Camp", Durham, NC

2000 Presentation entitled "Aerobic and anaerobic exercise testing and prescription in the older patient" – presented to physical therapists in the community, Duke University, Durham, NC

2000 Presentation entitled "A career in sports medicine" – presented to the North Carolina School of Science and Math", Durham, NC

1999 Presentation entitled "Strength and power training" - Presented at the 1st Annual Sports Performance Enhancement Workshop, Durham, NC

1998 Presentation entitled "Health and fitness for a life" – presented at the Teer House, Duke University, Durham, NC

SELECT SAMPLE OF CONTINUING EDUCATION

2003 Attended the California Physical Therapy Association annual conference and pre-conference workshop in Sacramento, CA

2003 Attended the American Sports Medicine Institute's "Injuries in Baseball Course" in Atlanta, GA

2002 Attended the 49th Annual Meeting of the American College of Sports Medicine, St. Louis, MI

2001 Attended the North Carolina Physical Therapy annual conference, Greensboro, NC

2001 Attended "Recent Advances in the Treatment of the Knee, Shoulder, and Elbow" presented by Kevin Wilk, P.T., Northeast Seminars, Durham, NC

2001 Attended the XIX International Symposium on Biomechanics in Sports, San Francisco, CA

2000 Attended the 24th Annual Meeting of the American Society of Biomechanics, Chicago, IL

2000 Attended the 2000 Annual Meeting of the Radiology and Orthopaedics of Sports Medicine, Raleigh, NC

CERTIFICATION OF LICENSURE

2003 – Current Physical Therapist (CA) – License Number PT28369

2002 – 2004 Physical Therapist (NC) – License Number 9003

OTHER CERTIFICATIONS

2006 – Present	Fellow for the American College of Sports Medicine (F.A.C.S.M.)
1992 - Current	Certified Strength and Conditioning Specialist (C.S.C.S.) – Personal trainer to high school, college and professional athletes
1992 - Current	Certification in CPR

ATHLETIC HONORS

1995	W.N.P.F. 1995 World Powerlifting Champion, Atlanta, GA W.N.P.F. 1995 National Powerlifting Champion, Savanna, GA
1994	W.N.P.F. 1994 World Powerlifting Champion, Lancaster, PA W.N.P.F. 1994 National Powerlifting Champion, Atlanta, GA
1993	W.N.P.F. 1993 World Powerlifting Champion, Daytona Beach, FL
1978-1983	College - Conference Champion in football and track.
1974-1978	High School - Most valuable and inspirational awards in football, wrestling, and track; "Outstanding Athlete" and boxing awards.

EXECUTIVE MEDICAL BOARD MEMBER

1998 to Present	The Spencer Foundation for Spinal Cord Injury Research and Rehabilitation, Durham, NC

REFERENCES

James R. Andrews, M.D., Orthopaedic Surgeon, Alabama Sports Medicine and Orthopaedic Center. HealthSouth Medical Center, Birmingham, AL 35205. 205-930-7000

Kevin E. Wilk, P.T., National Director of Research, HealthSouth Medical Center, Birmingham, AL, 35205. 205-930-4700

Lynn Snyder-Mackler, P.T., Sc.D., Associate Professor, Physical Therapy Department, University of Delaware, Newark, DE, 19716. 302-831-3613

Glenn S. Fleisig, Ph.D., Director of Biomechanics Research, American Sports Medicine Institute,
Birmingham, AL, 35205. 205-918-2139

Claude T. Moorman, M.D., Director, Duke Sports Medicine, Duke University Medical Center, Durham, NC 27710. 919-684-3867