

SHERRY L. WERNER

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EDUCATION

University	Dates	Degree
Slippery Rock University	1982-1986	BS
Indiana University	1986-1988	MS
The Pennsylvania State University	1992-1996	PhD

PROFESSIONAL APPOINTMENTS

Institution	Dates	Position
Slippery Rock University	1984-1986	Physics/Kinesiology Laboratory Assistant
Indiana University	1986-1988	Associate Instructor/ Research Assistant
U.S. Olympic Committee	1988-1989	Research Assistant
American Sports Med. Institute	1989-1991	Biomechanist
Steadman-Hawkins Sports Med Fdn	1994	Consultant
The Pennsylvania State University	1992-1996	Graduate Assistant
Steadman-Hawkins Sports Med Fdn	1996-1997	Research Fellow
Steadman-Hawkins Sports Med Fdn	1998-2000	Director of Upper Extremity Research
Tulane Institute of Sports Medicine	2001-2006	Coordinator, Human Performance Laboratory
Tulane Univ School of Medicine	2001-2006	Research Assistant Professor, Dept of Orthopaedics
LSU Health Science Centers	2002-2006	Gratis Faculty, Physical Therapy Dept
TMI Sports Performance	2006-present	Director, Human Performance Center

PUBLICATIONS

- Werner SL. *Selected Kinematic and Kinetic Parameters of the Windmill Softball Pitch*, unpublished master's thesis, Indiana University, 1989.
- Dillman CJ, Fleisig GF, Werner SL, Andrews JR. Biomechanics of the shoulder in sports: Throwing activities, *Postgraduate Advances in Sports Medicine*, Forum Medicum, Inc., 1991.
- Wick HJ, Dillman CJ, Werner SL, Fleisig GS, Wisleder D, Lemak L, Andrews JR. A kinematic comparison between baseball pitching and football passing, *Sports Medicine Update*, Summer, 1991.
- Werner SL, Fleisig GS, Dillman CJ, Andrews JR. Biomechanics of the elbow during baseball pitching, *Journal of Orthopedic and Sports Physical Therapy*, 17(6), 274-278, 1993.
- Zatsiorsky VM, Werner SL, Kaimin MA. Basic kinematics of walking: Step length and step frequency (a review), *Journal of Sports Medicine and Physical Fitness*, 34(2), 109-134, 1994.
- Dillman CJ, Fleisig GS, Werner SL, Andrews JR. Biomechanics of the shoulder in sports: Throwing activities, in *The Shoulder: A Balance of Mobility and Stability*, American Academy of Orthopaedic Surgeons, 1993.
- Werner SL. *The Effects of Spine Compression on Lumbar Intervertebral Discs Using Quantitative Magnetic Resonance Imaging*, unpublished doctoral dissertation, The Pennsylvania State University, 1995.
- Werner SL, Murray TA, Levy M, Smith SL, Plancher KD, Hawkins RJ. *Report to the Coaches: Softball Pitching at the 1996 Olympic Games*, 1997.
- Werner SL. Softball Pitching at the 1996 Olympic Games, *ADVANCE for Directors of Rehabilitation*, September, 1997.
- Werner SL. Biomechanics of the Elbow and Throwing Mechanisms, In Plancher KD, Baker CD (eds.): *Operative Strategies of the Elbow*, 1998.
- Werner SL, Plancher KD. Biomechanics of wrist injuries in sports, *Clinics in Sports Medicine*, 17(3), 407-420, 1998.
- Murray TA, Cook TD, Werner SL, Schlegel TF, Hawkins RJ. The effects of extended play on professional baseball pitchers, *American Journal of Sports Medicine*, 29(2):137-142, 2001.
- Werner SL, Murray TA, Hawkins RJ. Relationship between throwing mechanics and elbow valgus in professional baseball pitchers, *Journal of Shoulder and Elbow Surgery*, 11(2):151-5, 2001.
- Werner SL, Gill TJ, Murray TA, Cook TD, Hawkins RJ. Relationships between throwing mechanics and shoulder distraction in professional baseball pitchers, *American Journal of Sports Medicine*, 29(3): 354-358, 2001.

- Wisleder D, Werner SL, Kraemer WJ, Fleck S, Zatsiorsky VM. A method to study lumbar spine response to axial compression during MR imaging: technical note, *Spine*, 26(18), E416-420, 2001.
- Guido JA, Werner SL. The use of biomechanical analysis to decrease medial elbow pain in a collegiate baseball pitcher: a case report, submitted for publication, *Journal of Orthopedic and Sports Physical Therapy*, 2003.
- Werner SL, Guido JA, McNeice RP, Richardson JL, Delude NA, Stewart GW. Biomechanics of youth windmill softball pitching, *American Journal of Sports Medicine*, 33, 552-560, 2005.
- Werner SL, Jones DG, Guido JA, Brunet ME. Kinematics and kinetics of elite windmill softball pitching, *American Journal of Sports Medicine*, 34, 597-603, 2006.
- Werner SL, Guido JA, Nofsinger CC, Stewart GW, McNeice RP, Van Dyke T. Shoulder distraction in collegiate baseball pitching, accepted for publication, *Journal of Shoulder and Elbow Surgery*, 2005.
- Suri M, Werner SL, Guido JA, McNeice RP, Brunet ME, Jones DG. Biomechanical comparison between college and professional baseball pitchers, submitted for publication, *Journal of Shoulder and Elbow Surgery*, 2005.

PRESENTATIONS

- Smith, SL, Werner, SL, "Biomechanics of the Javelin Throw," American Alliance of Health, Physical Education, and Recreation, Denver, CO, 1989.
- Werner SL, "Biomechanics of the Throwing Shoulder," South Texas Sports Medicine Workshop, Corpus Christi, TX, June 1, 1990.
- Werner SL, "Biomechanics of the Elbow in Throwing," National Athletic Training Association, Indianapolis, IN, June 10-13, 1990.
- Werner SL, "Biomechanical Analysis of Football Passing," Bowden Academy, Samford University, Birmingham, AL, June 22, 1990.
- Werner SL, "Elbow Kinetics in Pitching," First World Congress of Biomechanics, University of San California- San Diego, CA, September 4, 1990.
- Werner SL, "Biomechanics of the Throwing Elbow," American Sports Medicine Institute Fellows Seminar, Birmingham, AL, January 14, 1991.
- Werner SL, "Analysis of Valgus Extension Overload in Pitching," Injuries in Baseball Course, Birmingham, AL, January 25, 1991.
- Werner SL, "Mechanics of Softball Pitching," American Sports Medicine Institute Fellows Seminar, Birmingham, AL, April 8, 1991.

- Dillman CJ, Werner SL, "Valgus Extension Overload in Baseball Pitching," American College of Sports Medicine Annual Meeting, Orlando, FL, May 31, 1991.
- Werner SL, "Biomechanics," presentation at Resource Learning Center, Cahaba Heights Elementary School, Birmingham, AL, May 23, 1991.
- Werner SL, "Comparative Analysis Between Baseball Pitching and Football Passing," American Sports Medicine Institute Fellows Seminar, Birmingham, AL, June 24, 1991.
- Plancher KD, Werner SL, "Hand and Wrist Injuries in the Athlete," American Orthopaedic Society for Sports Medicine, Palm Desert, CA, June 26, 1994.
- Plancher KD, Werner SL, Dillman CJ, Hawkins RJ, "Biomechanics of the Wrist in Pitching," The Athlete's Hand and Wrist Symposium, Scottsdale, AZ, November 15, 1994.
- Murray TA, Werner SL, Smith SL, "A Kinematic Analysis of Softball Hitting," IOC World Congress on Sports Sciences, Atlanta, GA, September 20, 1995.
- Werner SL, Smith SL, Murray TA, "Elbow and Shoulder Kinetics in Softball Pitching," IOC World Congress on Sports Science, Atlanta, GA, September 21, 1995.
- Werner SL, Zatsiorsky VM, "Lumbar Spine Under Mechanical Load: An MRI Study *In Vivo*," American Society of Biomechanics Annual Meeting, Atlanta, GA, October 18, 1996.
- Werner SL, "Elbow and Shoulder Kinetics in Softball Pitching," Steadman-Hawkins Sports Medicine Foundation Annual Fellows Meeting, Vail, CO, December 7, 1996.
- Werner SL, "Biomechanics: The Olympic Softball Project," All-star Fastpitch Coaches Showcase, Pittsburgh, PA, March 1, 1997.
- Feltner ME, Werner SL, "Biomechanics of Throwing and Throwing-Related Injuries," Clinical Lecture at American College of Sports Medicine Annual Meeting, Denver, CO, May 30, 1997.
- Werner SL. "The 1996 Olympic Softball Experience," International Sports Medicine Symposium, Columbus, GA, July 12, 1997.
- Werner SL. "Analysis of Elbow and Shoulder Stress in Windmill Softball Pitching at the 1996 Olympic Games," International Sports Medicine Symposium, Columbus, GA, July 13, 1997.
- Werner SL. "The Relationship Between Windmill Softball Pitching Kinetics and Kinematics," Biomechanics of Pitching Seminar, Brisbane, Australia, August 21, 1997.
- Werner SL. "Shoulder Joint Stress in Olympic Softball Pitchers," Steadman-Hawkins Sports Medicine Foundation Annual Fellows Meeting, Vail, CO, December 8, 1997.
- Werner SL. "Gait and Throwing Development Across the Lifespan," invited lecture, Regis University, Denver, CO, April 21, 1998.

- Gill TG, Werner SL, Mair S, Murray T, Hawkins RJ. "Injury Prevention in the Throwing Athlete: A Biomechanical Study," American Academy of Orthopaedic Surgeons 66th Annual Meeting, Anaheim, CA, February 8, 1999.
- Werner SL and Hawkins RJ. "Pitching Mechanics and Joint Stress in the Throwing Arm," 1999 Professional Baseball Athletic Trainers Society Spring Training Seminar, Mesa, AZ, March 3, 1999.
- Hawkins RJ and Werner SL. "Instability Implications in the Overhead Athlete," 1999 Professional Baseball Athletic Trainers Society Spring Training Seminar, Mesa, AZ, March 3, 1999.
- Cook TD and Werner SL, "Biomechanics of Windmill Pitching," ASMI 18th Annual Injuries in Baseball Course, Saint Petersburg, FL, January 27, 2000.
- Werner SL and Cook TD, "Elbow Valgus and Its Relationship to Pitching Mechanics in Major League Baseball Pitchers," ASMI 18th Annual Injuries in Baseball Course, Saint Petersburg, FL, January 28, 2000.
- Werner SL, Murray TA, Schlegel T, Cook TD, "The Effects of Extended Play in Professional Baseball Pitching," American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 1, 2000.
- Werner SL and Murray TA, "Passing Mechanics of NFL Quarterbacks," American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 3, 2000.
- Cook TD, Werner SL, Murray TA, Hawkins RJ, "Relationships Between Kinematics and Kinetics in Professional Baseball Pitchers," American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 3, 2000.
- Werner SL, Plancher KD, Guerrero R, "Shoulder Joint Stress in Olympic Softball Pitchers," American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 3, 2000.
- Werner SL, "Biomechanics of Throwing," Current Concepts on the Knee and Shoulder," New Orleans, LA, December 2, 2001.
- Werner SL, "Biomechanics of the Lower Extremity in Running," Louisiana Sports Medicine Society Meeting, New Orleans, LA, December 8, 2001.
- Werner SL, "Biomechanics in Sports Medicine," Tulane Orthopedic Residents Research Meeting," New Orleans, LA, January 29, 2002.
- Werner SL, "Biomechanics in Women's Soccer," Louisiana Sports Medicine Society Meeting, New Orleans, LA, December 14, 2002.
- Pariser G, Guido J, Borne S, Thoms R, Turni A, Werner S. "A Comparison of EMG Activity Of The Quadriceps Musculature During A Traditional and Modified Wall-Squat Exercise," Combined Sections Meeting, APTA, Tampa, FL, February 15, 2003.
- Werner, SL, "Biomechanics of Throwing," Tulane University Health Sciences Center Orthopaedic Biomaterials/Biomechanics Symposium, New Orleans, LA, September 27, 2003.

- Werner SL, Brown TD, Stewart GW, VanDyke T, Guido JA, McNeice RP. "Relationship Between Throwing Mechanics and Shoulder Distraction in Collegiate Baseball Pitchers." Louisiana Orthopaedic Association Annual Meeting, New Orleans, LA, November 7, 2003.
- Werner SL, "Biomechanics of the Elbow and Wrist in Throwing," Southeast Athletic Training Association Meeting, Atlanta, GA, March 26, 2004.
- Werner SL, "Biomechanics of Throwing," Tulane Health Sciences Center Department of Orthopaedics Sports Medicine Grand Rounds, April 14, 2004.
- Werner SL, "Biomechanics of the Windmill Pitch and Its Implication for Injury," Combined Sections Meeting, American Physical Therapy Association, New Orleans, LA, February 25, 2005.
- Nofsinger C, Werner SL, "Ground Reaction Forces in Collegiate and Professional Pitchers," 73rd Annual Meeting of the American Academy of Orthopaedic Surgeons, Chicago, IL, March 23, 2006.
- Werner SL, Jones DG, Montgomery S, Suri M, Guido JA, McNeice R, Brunet ME, Hawkins RJ, "Biomechanical Comparison between College and Professional Baseball Pitchers," The American Orthopaedic Society for Sports Medicine Annual Meeting, Hershey, PA, June 29 - July 2, 2006.

GRANTS AND CONTRACTS

- United States Olympic Committee grant of \$9,000 for "Elbow Kinetics in Pitching," accepted and endorsed by United States Baseball Federation, June, 1990.
- College of Health and Human Development dissertation grant of \$500 for "Magnetic Resonance Imaging and the Effects of Spine Compression on Lumbar Intervertebral Discs," from The Pennsylvania State University, January, 1995.
- International Olympic Committee Subcommittee on Biomechanics and Physiology Olympic Research Project Grant for "The Relationship Between Kinematics and Kinetics in Windmill Softball Pitching," February, 1995.
- College of Health and Human Development Alumni Society Grant of \$500 for "Magnetic Resonance Imaging and the Effects of Spine Compression on Lumbar Intervertebral Discs," from The Pennsylvania State University, May, 1995.
- National Football League Charities Grant of \$20,000 for "The Biomechanics of Shoulder Impingement," January, 1998.
- International Olympic Committee Subcommittee on Biomechanics and Physiology Olympic Research Project Grant for "The Effects of Extended Play on the Kinematics and Kinetics of Windmill Softball Pitchers," January, 2000.

SUPERVISION OF STUDENT RESEARCH

- Fore J. Is the Abdomenizer as Effective as the Abdominal Curl? Masters Thesis, University of Alabama at Birmingham, 1990.
- Levy M. Influence of Kicking Styles in Soccer on Ball Accuracy. Masters Thesis, University of Wyoming, 1991.
- Zawaski S. An Investigation of Forced Use and TENS Treatments for Childhood Hemiparesis. Honors Thesis, Biomedical Engineering, Tulane University, 2002.
- Giveans R. Lower Extremity Kinetics in Female Volleyball Players. Senior Thesis, Biomedical Engineering, Tulane University, 2003.
- Kronberg C. Landing Leg Reaction Force During Baseball Pitching. Honors Thesis, Biomedical Engineering, Tulane University, 2003.
- Romero P. The Effects of Orthotics on Lower Extremity Kinematics. Senior Thesis, Biomedical Engineering, Tulane University, 2003.
- Sebbag A. Kinetic and Kinematic Analysis of the Plant Leg During the Soccer Kick. Senior Thesis, Biomedical Engineering, Tulane University, 2003.
- Taguma D. The Effects of Orthotics on Foot and Ankle Kinematics in Patients With Plantar Fasciitis. Senior Thesis, Biomedical Engineering, Tulane University, 2003.
- Conant A. Lower Extremity Kinetics in Female Basketball Athletes. Senior Thesis, Biomedical Engineering, Tulane University, 2004.
- Palumbo M. Kinematic and Kinetic Analysis of Collegiate Pitchers. Honors Thesis, Biomedical Engineering, Tulane University, 2004.
- Smith S. Comparison of Hand Dominance in Baseball Pitching. Senior Thesis, Biomedical Engineering, Tulane University, 2004.
- Wright N. Effects of Lower Extremity Kinematics on Knee Kinetics. Honors Thesis, Biomedical Engineering, Tulane University, 2004.

AWARDS AND HONORS

Graduated Magna Cum Laude, Slippery Rock University
National Dean's List, Slippery Rock University
COSIDA Softball Academic All-American Selection
Phi Eta Sigma Freshman Honorary
Dollars for Student Scholars Scholarship
Chairman's Award for Best Presentation in the Physical Sciences, Third IOC World Congress on
Sport Science, September, 1995

PROFESSIONAL ORGANIZATIONS

Delta Psi Kappa

President of Slippery Rock University chapter of National Physical Education Honorary,
1985-1986

American Society of Biomechanics

Member, 1992-present

International Society of Biomechanics

Member, 1992-present

International Society of Biomechanics in Sports

Member, 1997-present

American College of Sports Medicine

Member, 1997-present

PROFESSIONAL SERVICES

- Collection and analysis of U.S. Men's and Women's Ski Team data for Visa Gold Medal Program, Beaver Creek, CO, November 10-14, 1990.
- Preparation and presentation of video analysis of Bo Jackson's injury for NBC television interview, April 29, 1991.
- Data collection and analysis of softball pitching at Pan American Trials, U.S. Olympic Training Center, Colorado Springs, CO, June 17-21, 1991.
- Coordination and instruction of A.S.M.I. Softball Pitching Clinics, Birmingham, AL, July 22-26, 1991.
- Pitching instruction at various softball camps and clinics (including Penn State University Softball Camp) September, 1989-present.
- Preparation of monthly column for Fastpitch World magazine, November, 1991-present.
- Independent product analysis of the Finch Windmill pitching machine, Penn State University, March - May, 1993.
- Data collection and analysis of softball pitching, catching and hitting at USA Softball Peak Camp, Long Beach, CA, January 26-30, 1994.
- Data collection and analysis of softball pitching at the U.S. Olympic Festival, Denver, CO, July 21-26, 1995.
- Coaches' education workshop, Canadian National Softball Team, Softball Canada, Toronto, ON, December 18-21, 1995.
- Little League Softball Advisory Committee, January, 1997 to present.
- Advisor to Little League Baseball, 2000 to present.
- Data collection and analysis of softball pitching and coaches' education seminar as part of Biomechanics of Pitching Seminar, Softball Australia, Brisbane, Queensland, August 20-28, 1997.
- Presentation of proposed rule changes based on results of 1996 Olympic softball pitching project, Little League Baseball/Softball Annual Meeting, San Antonio, TX, January 10, 1998.
- Data collection and analysis of upper and lower body electromyography of the luge start, U.S. Luge Team, Lake Placid, New York, November 20-28, 1999.
- Data collection and analysis of the golf swing, Greg Norman's Shark Shootout, November, 1999.
- Pitching Coach/Consultant, Voodoo Softball, New Orleans, LA, 2001-present.
- Sports Medicine Clinic for Throwing Athletes and Coaches, Houma, LA, May 23, 2004.

RELATED SKILLS

Visual basic, Fortran, C++, Minitab and SPSSX computer languages
Word Perfect, Power Point, Word, SOLO, Lotus, Excel software
Direct Linear Transformation technique
PEAK Video/Computer Motion Measurement system
Motion Analysis Corporation EVaRT system
AMTI and Bertec Force Plate systems
Motion Labs EMG system
Noraxon Telemyo/Myosoft EMG system`