

CURRICULUM VITAE

1. ACADEMIC HISTORY

Name: Kathy J. Simpson

Present Rank: Associate Professor

Proportion of Time Assigned: 69% Instruction and 31% Research

Tenure Status: Tenured

Administrative Title: None

Graduate Faculty Status: Provisional- September 1988
Full- May 1991; reappointment May, 1998.

Highest Degree: Ph.D., University of Oregon, 1987

Academic Positions:

1994 - present	University of Georgia	Associate Professor
1987- 1994	University of Georgia	Assistant Professor
1984- 1987	University of Oregon	Graduate Research Assistant, Biomechanics
1983-1987	University of Oregon	Graduate Teaching Assistant
1981-1982	Washington State University	Graduate Teaching Assistant

Other Professional Positions:

1977-1981	Puyallup School District	Instructor
1982-1983	District	

2. RESIDENT INSTRUCTION AND CONTINUING EDUCATION (in semester hr units)

Current Course Instruction

Credit load for 2 yr rotation = 24 cr hr:

- *Every term:*
 - EXRS 8350 (1-2 hr; since 2003, always 2 cr)
 - EXRS 4200 (4 hr)
 - EXRS 8990 (1 cr); in addition, supervising/teaching several students (undergraduate and graduate students) who are involved in various independent study classes.
- *Every spring:* EXRS 3600 (2 cr)
- *Every other fall term:* EXRS 7350 (3 cr.)

Additional: Graduate and undergraduate (undergraduate: Fall 1991 through Summer 1992) student advisement. .10 FTE for operating and supervising student activities, carrying out budget responsibilities, maintaining/updating equipment, and writing software for the Biomechanics Laboratory.

A. Courses of Instruction (current through Fall, 2000)

(Note. The course numbers and titles can appear confusing- when we were one department with Physical Education, all prefixes were PED. When the Dept. of Exercise Science was formed, the prefix used = EXS. Some courses were modified; new ones added at this time. Last, as of the 1998-1999 academic year, UGA moved to a semester system. Courses now have prefix EXRS, with some new course numbers or course modifications.)

1. EXRS 3600 Applied Biomechanics 2 sem. hr- (formerly EXS 360/360L and PED 360 Kinesiology 4 sem. hr.) - Analysis and application of Newton's Laws as they influence human motion. Application of anatomical principles to human motion topics, such as physical training, injury prevention and rehabilitation (taught once every year to undergraduate and graduate students; no. of students ranges from 28 -76/class).
2. EXRS 4200/4200L & 62000/6200L Biomechanics I (formerly EXS 380/380L). Application of mechanical principles to human movement situations, including Newtonian analyses of physical movements, equipment design and introduction to etiology of traumatic and repetitive injuries (is taught 1x/year; no. of students: 25 - 84/class).
3. EXS 4800/4800L & 6800/6800L Biomechanics II (formerly EXS 480). Effects of mechanical forces on bones, muscles and connective tissue. Analyze the biomechanics of specific regions of the body and mechanically-induced injuries (taught twice to 59 students).
4. EXRS 7350 Biomechanics (formerly EXS 735, Biomechanics of Motor Skills). Application of mechanical principles to human movement situations, including Newtonian analyses of physical movements, equipment design and internal biomechanics as it relates to injury etiology (was taught 1x/year until 1996; now taught 1x/every other year; no. of students/term: 10-21).
5. EXRS 8350 (formerly EXS 835). Methods in Biomechanics. Methods in human movement biomechanics including electromyography, motion measurement, kinetic analyses, modeling and anthropometry (is taught every semester (quarter) to approximately 4-6 students/term).EXRS 8900 (formerly EXS 890). Biomechanics Seminar. Each semester (quarter), approximately 5-6 students present original research, discuss papers and current topics, and perform original research.
6. Following 600 offerings reflect courses offered prior to EXRS 8350 (EXS 835)- (not relevant to instruction that occurred after 1994)

PED/EXS 600 - Special Problems in Physical Education/Exercise Science (master's students) and PED 899 - Research Seminar in Physical Education/ Exercise Science (doctoral students). Used to cover following advanced topics in biomechanics:

- a. Biomechanics Seminar. Student and instructor presentations related to current topics: rearfoot motion, landing and impact, and open topics. Also performed pilot testing of experiments related to topics (taught 13 times to 49 students).
 - b. Research Methods and Instrumentation in Biomechanics. Signal analysis, data processing and methodology in videography (taught twice to 10 students). Replaced by EXS 835.
 - c. Advanced Methods and Instrumentation in Biomechanics. Advanced study of research methodology used in biomechanics. Advanced techniques developed for use of biomechanics instrumentation. Introduction to instrumentation not covered in introductory level class (taught 6 times to 26 students). Replaced by EXS 835.
 - d. Interdisciplinary Biomechanics and Motor Learning Seminar. Study of current and potential interdisciplinary research (taught once to 7 students).
 - e. Advanced Topics in Biomechanics. Taught as regular class to 16 students for 6 quarters.
7. PED 899 Doctoral Seminar in Physical Education - (Supervised 4 student in topics not listed above - 9 quarters).
 8. PED 960 - Educational Research in Physical Education - "Research Methods and Instrumentation in Biomechanics" (Taught once to 3 regularly-enrolled and 4 audit students). Replaced by EXS 835.
 9. PES 963 Critique of Literature in Physical Education - (Supervised 6 students).
 10. PEB Courses - Taught 28 courses to 294 students.

B. Academic Advising

Graduate Students: as of Feb., 2004

Degree	Advisor	Committee	Current	Completed	
				Advised	Committee
M.Ed.	6	15	2	5	14
M.A.	6	5	2	4	5
Ed.D.	2	8	2	2	6
Ph.D. [§]	4	18	2	2	18

[§]Prior to 1997, there was no biomechanics Ph.D. program.

Undergraduate Advising:

Advised 35 undergraduate Exercise and Sport Science majors from Fall 1991 through Summer 1992.

C. Supervision of Internships and Practica

BIOL 4690H Undergraduate Research in Biology (Honors). All undergraduate biology honors students choose a researcher to work under. Have had 1- 3 students enrolled in course participating in ongoing research during most semesters since 1998.

PED 780 - Practicum in Physical Education - Supervised 5 students in selected aspects of programming and research for the following students:

EXRS 3480 Practicum in Exercise Science Research. Have had 35 undergraduate students (as of Spring, 2003) participate in ongoing laboratory research projects.

D. Program and Course Development**Course Development:**

1. PED 360/360L- Kinesiology Laboratory. Kinesiology Laboratory (now EXRS 3600/3600L) Biomechanics and Applied Anatomy Laboratory) is required of all Physical Education and Dance majors (and was required of all Exercise Science students prior to offering EXRS 3800). All of the laboratory activities and manual were developed and have been revised yearly.
2. EXRS 4200/4200L & 6200/6200L (formerly EXS 380/380L)- Biomechanics I. Mechanics of human movement. Required for all Exercise Science majors, starting 1993-1994.
3. EXRS 4800/4800L & 6800/6800L (formerly EXS 480/480L)- Biomechanics II. Tissue biomechanics and applied anatomy. Required for all Exercise and Sport Science majors starting 1993-1994. As of 1999, is an elective course.
4. EXRS 8350 (formerly EXS 835)- Advanced Biomechanics. Required course of all biomechanics and motor learning students. Laboratory activities developed.
5. EXRS 3510- Biomechanical Foundations of Coaching. Designed for the student outside of the School of Human Performance interested in coaching certification.
6. Materials for three classes taught as special topics were developed. These classes dealt with various conceptual and methodological topics needed by biomechanics and other graduate students.

- a. PED 960- Educational Research in Physical Education, "Research Methods and Instrumentation in Biomechanics." PED 960 has been offered to graduate Exercise Science students emphasizing biomechanics and has been taken by doctoral students from other areas, e.g. exercise physiology and motor learning. Was used first to teach these concepts prior to developing EXS 835L.
- b. PED 600- Special Problems in Physical Education, "Advanced Research Methods and Instrumentation in Biomechanics." PED 600 was a required course for biomechanics students. This course also served the needs of motor learning students.
- c. PED 600. Special Problems in Physical Education "Advanced Biomechanics." Required of graduate students emphasizing biomechanics and also taken by motor learning students. Development of weekly lectures, reading materials, assignments and laboratory activities. Was used prior to developing EXS 835.

Program Development (sole originator):

Biomechanics emphases developed for the following current Exercise and Sport Science programs:

- a. undergraduate major.
- b. M.A. program.
- c. Ed.D. program option.
- d. Ph.D. program.

E. Publications Related to Teaching

Barthels, K. M., Greer, N., McCaw, S. T., and Simpson, K J. (1991). Summary of the undergraduate curriculum discussion. In J. Wilkerson, E. Kreighbaum, and C. Tant (Eds.) Teaching Kinesiology and Biomechanics in Sports. Proceedings of the Third National Symposium on Teaching Kinesiology and Biomechanics in Sport (pp 51-55).

F. Grants Related to Instruction

A Centralized, Interdisciplinary Computer-based Teaching Laboratory in the School of Health and Performance. Development of multi-disciplinary laboratory experiences using critical technology in motor behavior, biomechanics, and exercise physiology. Co-PI. Office of Instructional Development, 2003, \$15,980.

SITES: Seamless, Integrated Technology-Based Learning in Exercise Science. Project to develop multimedia learning modules for various exercise science topics for use in lectures, laboratories, independent study courses. P.I. Office of Instructional Development, 2002, \$205,584, unfunded.

HARP: Human Activity Resource Platform. Project to develop multi-disciplinary resource base and videography instructional modules. P.I. Office of Instructional Development and College of Education, 1995, \$53,035.

Power ON! Project to develop multi-media instructional module on biomechanical topics. Office of Instructional Development, 1995, \$3,834.

Project to develop Kinesiology/Biomechanics Laboratory activities and laboratory manual and to purchase equipment. PI. Office of Instructional Development, Lilly Program, 1988, \$3,000.

G. Recognition and Awards Related to Instruction

University of Georgia Lilly Fellows Program. One of seven junior faculty selected for the 1988-1989 program. The purpose of the program is to increase instructional effectiveness and potential success as a faculty member at the University of Georgia.

H. Biomechanics Laboratory Supervision

As Director of the Biomechanics Laboratory, Dr. Simpson has been solely responsible for the design of the laboratory and the initial purchasing of equipment. Currently, Dr. Simpson supervises/performs: equipment maintenance, budget operations, and the writing and upgrading of user's equipment manuals, software manuals and computer programs (VisualBasic) appropriate for instructional, graduate student and faculty use. Dr. Simpson has provided assistance to faculty and graduate students outside of biomechanics needing equipment and expertise.

I. Other Instructional Activities

1. Assisted with instructional programs and collaborative instructional efforts between University of Zululand and University of Georgia during visit to University of Zululand, KwaDlangezwa, South Africa, March 2002. *Knowledge Exchange and Learning Partnership (KELP)*, a network that promotes the development of joint courses and collaborative research and service projects in a wide range of development disciplines. U.S. Agency for International Development (US AID) Foundation.
2. Member of ad-hoc committee charged with making changes to the Guidelines for Teaching Kinesiology and Biomechanics (Biomechanics Academy), 1998-2000.
3. Co-chair of discussion group of undergraduate curriculum at 3rd National Symposium on Teaching Kinesiology and Biomechanics. Purpose was to make recommendations for changes to Guidelines for Teaching Kinesiology and Biomechanics (Kinesiology Academy, 1976) Ames, IA, July 1991.
4. Office of Instructional Development Teaching Improvement Program (TIPS), participant, Winter - Spring 1988.

5. Advisor to Rho Tau Chapter (physical therapy student society). Department of Exercise Science, 1993 - 2002.
6. Member, National Academic Committee for 4th National Symposium on Teaching Kinesiology and Biomechanics in Sports, 1997-1999.
7. Guest lecturer for following classes and workshops:

EXRS 2010. Introduction to Exercise Science. *Biomechanics*. Lecture once/semester (Fall, Spring, Summer, 1988-present).

PEDS 3720. Foundations of Physical Education. *Biomechanics: An Introduction* (Fall, 2004).

RLST 8990. Doctoral Seminar in Recreation and Leisure Studies *Biomechanical Adaptations- Impact and Locomotor Activities*, Dept. Recreation and Leisure Studies (Spring, 2003, Fall, 2003).

PESS 7210, Motor Learning. *Effect of Physics on the Consistency and Variability of Movement*, Department of Physical Education (Spring 1991).

PESS 7210, Motor Learning. Biomechanical Terms Used in Motor Learning, Department of Physical Education (Spring 1989).

DANC 3520, Theory and Practice in Modern Dance Techniques. Lower Extremity Injuries of Dancers, Dance Department (Spring 1988).

DED 3520, Theory and Practice in Modern Dance Techniques. Musculature of the Trunk, Neck and Glenohumeral Region, Dance Department (Fall 1992).

Invited Lecturer, The Contras: Encountering Harmful Resistance (Contraindications of Exercises). 1991 Physical Education Summer Teacher Workshop, Department of Physical Education and Sport Studies.

Invited Lecturer, The Do's and Don'ts of Exercise. 1993 Physical Education Summer Teacher Workshop, Department of Physical Education and Sport Studies.

Invited Lecturer, Back Up!. 1994 and 1995 Physical Education Summer Teacher Workshop, Department of Physical Education and Sport Studies.

3. SCHOLARLY ACTIVITIES

A. Publications

- * processed through stringent editorial review
- ** invited publications that carry prestige and recognition.

Refereed Articles:

- * Asayama, I., Chamnongkich, S., Simpson, K. J., Kinsey, T.L., & Mahoney, O.M.(2005). Reconstructed hip joint position and abductor muscle strength after total hip arthroplasty. Journal of Arthroplasty, 0(0), 1-7 (in press).
- * Simpson, K. J., Williams, S. L., DelRey, P., Ciapponi, T., & Wen, S. L. (2001). Locomotor Characteristics Exhibited During Paralympic Long Jump Competitions of Classifications “Below-“ and “Above-Knee Amputee. International Journal of Applied Sport Science, 13(1), 1-17.
- * Simpson, K. J., Cravens, S., Higbie, E., Theodorou C., & DelRey, P. (1999). A comparison of the Sport Stirrup, Malleoloc, and Swede-O ankle orthoses for the foot-ankle kinematics of a rapid lateral movement. International Journal of Sports Medicine, 20, 396-402.
- * Simpson, K. J., & Jiang, P. (1999). Foot landing position during gait influences ground reaction forces. Clinical Biomechanics, 396-402.
- * Shewokis, P. A., Del Rey, P. & Simpson, K. J. (1998). Is contextual interference due to retroactive interference? Research Quarterly for Sport and Exercise, 69, 70-74.
- * Simpson, K. J., & Kanter, L. (1997). Bone-on-bone forces at the ankle and knee joints during dance landings-I: Factors influencing axial force parameters. Medicine and Science in Sports and Exercise, 29, 916-927.
- * Simpson, K. J., & Pettit, M. (1997). Forces at the ankle and knee joints during dance landings-II: Factors influencing shear force parameters. Medicine and Science in Sports and Exercise, 29, 928-937.
- * Simpson, K. J., & Odum, S. (1996). Estimated patellofemoral compressive forces and contact forces during dance landings. Journal of Applied Biomechanics, 12, 1-14.
- * Del Rey, P., Simpson, K. J., Lapena, D. C., & H. C. Chung. (1996). A virtual pattern generator for designing motor behavior tasks. Perceptual and Motor Skills, 82, 64-66.
- * Del Rey, P., Liu, X., & Simpson, K. J. (1994). Can retroactive inhibition explain contextual interference effects when recalling a single movement? Research Quarterly for Exercise and Sport, 65(2), 20-26.

- * Simpson, K. J., Jiang, P., Shewokis, P. A., Odum, S., and Reeves, K. T. (1993). Kinematic and plantar pressure adjustments to downhill gradient during gait. Gait and Posture, 3, 1(3), 172-179.
- * Simpson, K. J., Alduwaisan, S., Shewokis, P. A., & Reeves, K. T. (1992). Factors influencing rearfoot kinematics during a rapid lateral braking movement. Medicine and Science in Sports and Exercise, 5, 586-594.
- * Simpson, K. J., & Bates, B. T. (1990). The effects of speed on lower extremity joint moments generated during the support phase during running. International Journal of Sport Biomechanics 6(3), 309-324.
- * Simpson, K. J., Bates, B. T., & McCaw, S. T. (1989). Impact force accommodation to additional loads. In G. DeGroot, A. Hollander, P. Huijing, and G. van Ingen Schenau (Eds.), Biomechanics XI-B (pp.701-704). Champaign: Human Kinetics.
- * Bates, B. T., Simpson, K. J., & Panzer, V. P. (1989). Intraday variability of two performer measurement systems. In G. DeGroot, A. Hollander, P. Huijing, and van Ingen Schenau (Eds.), Biomechanics XI-B (pp. 1089-1092). Champaign: Human Kinetics.
- * Bates, B. T., Simpson, K. J., & Panzer, V. P. (1987). The evaluation of subject, shoe and movement variability. In E. Patla (Ed.) Biomechanics X-B (pp. 909-912). Champaign: Human Kinetics.

Chapters:

- * Simpson, K. J. (2nd edition: 2005; 1st edition: 2000). Scholarly study of physical activity: Biomechanics. In S. Hoffman (Ed.) Introduction to Physical Activity. Champaign, IL: Human Kinetics, pp.350-380.
- * Simpson, K. J., Wang, H., & Ciapponi, T. (2000). Biomechanics of landing. In W. Garrett (Ed.) Textbook of Sports Medicine, Williams & Wilkins, pp. 539- 550.

Bulletins or Reports:

- Simpson, Kathy J., Ferrara, M., Wang, H., Casto, S., Mahoney, O., Kinsey, T. (2001). Comparison of a Single-Radius Versus Multi-radius Total Knee Replacement Design for Biomechanical and Functional Outcomes of Various Tasks. Technical Report for Stryker-Howmedica-Osteonics, Inc.
- Simpson, Kathy J., Wang, H., Ciapponi, T., McKee, E. (2000). Sprint mechanics observed at the 1998 FlexSprint Invitational. Technical Report for Flex-Foot, Inc.
- Simpson, Kathy J., Cravens, S., & Theodorou, C. (1997). A comparison of the inversion restraints provided by various ankle orthoses during a rapid lateral movement. Technical Report for Bauerfeind, Inc.

Simpson, Kathy, Williams, S., & Del Rey, P. (1997). Long jump event- amputees: 1996 Paralympics. Technical Report #1. Technical Report for Flex-Foot Corporation and Disability Sports USA.

Simpson, K., Williams, S., Ciapponi, T., et al. (1997). Sent out 28 individualized technical reports to 1996 Paralympic amputee long jumpers.

Simpson, K. J. (1990). Lateral Stability of the Asahi MX-SL Court Shoe During Rapid Sideward Movements. Technical Report for Asahi, Inc.

Bates, B. T., & Simpson, K. J. (1987). Shoe Evaluation Report. Technical report for George S. Cole and Associates.

Abstracts and Proceedings:

* Chamnongkich, S, Asayama, I, Simpson, KJ, Kinsey, TL, & Mahoney, OM. (2005). The effects of femoral offset on hip abductor muscle function. Proceedings of the 72nd Annual Meeting of the American Academy of Orthopedic Surgeons, on CD-ROM.

* ¹Benjamin L. Patritti, ²Kathy J. Simpson and ³Lee Nolan

* K Brakke, DM Fragaszy, K Simpson, E Hoy, & Y-C Chu (2005). Kinematic analysis of arm coordination in 12- to 24-month-old children during a bimanual percussion task. Proceedings of the Motor Development and Learning Conference (in press).

* Wang H, Simpson KJ, Ferrara MS, Chamnongkich S, Casto SR, Kinsey TL, Mahoney OM (2004). The Influence of Femoral Component Design on Bilateral Tka Patients' Chair Rising Movement – a Ground Reaction Force Analysis Approach. Proceedings of the 71st Annual Meeting of the American Academy of Orthopedic Surgeons, on CD-ROM.

* Mahoney OM, Vural AM, Ferrara MS, Kinsey TL, & Simpson K. (2004). Improved range of motion after total knee replacement with restoration of tibial slope. Proceedings of the 71st Annual Meeting of the American Academy of Orthopaedic Surgeons, on CD ROM.

* K. Brakke, A. Gunn, D. Fragaszy, E. Hoy, & K. Simpson. (2004). Bimanual percussion during the second year of life. Proceedings of the 2004 International Conference on Infant Studies, on CD-ROM.

* H. Wang, H., Simpson, K., Ferrara, M., Chamnongkich, S., Casto, S., Kinsey, T., & Mahoney, O.M. (2003). The biomechanical influence of total knee arthroplasty design on sit-to-stand performance. Proceedings of the 70th Annual Meeting of the American Academy of Orthopedic Surgeons, pp. 402.

* H. Wang, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, & O.M. Mahoney. (2003). Biomechanical comparison between the single-radius and

multi-radius total knee arthroplasty designs for the stand-to-sit movement. Proceedings of the 49th Annual Meeting of the Orthopedic Research Society, pp. 1326.

- * D. Fragaszy, S. Cummins-Sebree, E. Hoy, K. Simpson, and S. Chamnongkich (2003). Becoming tool users. Presentation at conference honoring Eleanor Gibson, "Further Developments", Cornell University, CD-ROM link.
- * Karen Brakke, Angelica Gunn, Dorothy Fragaszy, Erica Hoy, Kathy Simpson. Bimanual percussion during the second year of life. Presentation at conference honoring Eleanor Gibson, "Further Developments", Cornell University, Ithaca, NY, Oct. 2003.
- * Simpson, K. (2002). A comparison of isokinetic strength between single- and multi-knee flexion axis total knee arthroplasty limbs. IVth World Congress of Biomechanics Proceedings, CD-ROM link.
- * Wang, H., Simpson K., Ferrara, M., Chamnongkich, S, Casto, S., Kinsey, T., Mahoney, O.M. (2002). A comparison between single-radius and multi-radius total knee arthroplasties for stand to sit (an EMG and kinematic study). IVth World Congress of Biomechanics Proceedings, CD-ROM link.
- * Mahoney, O.M., Kinsey, T.L., Casto, Chamnongkich, S.,S.R., Ferrara, M., Wang, H.& Simpson, K.J. (2002). Laboratory demonstration of mechanical and functional advantages of a single-radius TKA design. 69th Annual Meeting Proceedings of the American Academy of Orthopaedic Surgeons, pp. 442.
- * Wang, H., Simpson, K., Ferrara, M., Chamnongkich, S., Casto, S., & Mahoney, O. (2001). Does a multi-radius total knee arthroplasty knee function similar to a healthy knee? (A case study). Book of Abstracts of the XVIIIth Congress of the International Society of Biomechanics, pp. 24-25 and In G. Hans and M. Roland (Eds.) Proceedings of the XVIIIth Congress of the International Society of Biomechanics, CD-ROM link.
- * Wilder, J.A., Simpson, K. J., & Bennett, G. (2002). A comparison of kinematic restraint for two prophylactic ankle braces during flat and inverted drop surface landings.
- * Wang, H., Simpson, K., Ferrara, M., Chamnongkich, S., Casto, S., & Mahoney, O. (2000). Strength evaluation of a single radius total replacement (a case study). Conference Proceedings of the Twenty-Fourth Annual Meeting of the American Society of Biomechanics, pp. 163-164.
- * Ciapponi, T., Simpson, K. J., Wang, H., & McKee, E. (1999). Kinematic characteristics of transtibial sprinters. In W. Herzog & A. Jinha (Eds.) Proceedings of the XVII Congress of the International Society of Biomechanics, pp.261.
- * Wang, H., Simpson, K. J., Ciapponi, T., McKee, E. (1999). Kinematic characteristics of transfemoral sprinters. In W. Herzog & A. Jinha (Eds.) Proceedings of the XVIIth Congress of Biomechanics, pp. 661.

- * Simpson, K. J., Cravens, S. & Theodorou, C. (1998). Effect of ankle orthoses on angular kinematics of rapid change of lateral direction movement. Medicine and Science in Sports and Exercise, 30, S269.
- * Simpson, K. J., Williams, Ciapponi, Wen, H., Nance, M. & Valleala, R. (1998). Regulation of locomotion by above-knee amputee performers during the approach phase of the long jump. Proceedings of the Third North American Congress on Biomechanics, pp. 465-466.
- * Jameson, G., & Simpson, K. J. (1997). Responses of ankle joint kinetics to natural, high and low knee flexion Landings. Proceedings of the 21st Annual Meeting of the American Society of Biomechanics, (pp. 102), Clemson, SC: Clemson University Press.
- * Jiang, P., & Simpson, K.J. (1997). The effect of foot landing position on angular kinematics of the foot-ankle complex during gait. Proceedings of the International Society of Biomechanics in Sport, pp. 94.
- * Williams, S., Simpson, K.J., & DelRey, P. (1997). Visual targeting during the long jump approach of male below-knee Paralympic athletes. In J. Wilderson, K. Ludwig, & W. Zimmermann (Eds.) Abstracts of the XV International Society of Biomechanics in Sport, pp. 49.
- * Williams, S., Simpson, K.J., & DelRey, P. (1997). Targeting strategies during the approach phase of the long jump of female amputee performers at the 1996 Paralympics. Proceedings of the North American Society for the Psychology of Sport and Physical Activity, pp.53.
- * Baldwin, A.C., Stevenson, S.W., Gregory, C.M., Simpson, K. J., & Dudley, G.A. (1997). Adaptive responses to eccentric exercise in 60 yr olds. Medicine and Science in Sports and Exercise, S254.
- * Stevenson, S.W., Baldwin, A.C., Gregory, C.M., Simpson, K.J. & Dudley, G.A. (1997). Eccentric exercise alters gait in older individuals. Medicine and Science in Sports and Exercise, S159.
- * Donahue, B., Higbie, B., Simpson, K. J., & Wisenbaker, J. (1996). Changes over time in plantar pressure of women using semi-rigid orthotics for excessive forefoot varus. Medicine and Science in Sports and Exercise, 28(5), S26.
- * Simpson, K. J., & Kanter, L. (1993). Bone-on-bone axial forces during dance landings (abstract). Program and Abstracts of the 11th International Symposium on Biomechanics in Sports. Amherst, MA: ISBS.
- * Simpson, K. J., & Odum, S. (1993). Factors influencing estimated patellofemoral pressures during dance landings (abstract). Medicine and Science in Sports and Exercise, 25(5), S196.

- * Simpson, K. J., & Pettit, M. (1992). Factors influencing ankle and knee shear force parameters during dance landings. Proceedings of Second North American Congress on Biomechanics (pp. 549-550). Chicago: Organizing Committee, NACOB.
- * Simpson, K. J., & Pettit, M. (1992). Factors influencing ankle and knee shear force parameters during dance landings (abstract). Journal of Biomechanics, 360.
- * Simpson, K. J., Shewokis, P., & Odum, S. (1991). In-shoe plantar pressure changes during negative gradient gait at various velocities (abstract). In C. Tant, P. E. Patterson, S. L. York (Eds.) Biomechanics in Sports IX. Proceedings of the 9th International Symposium on Biomechanics in Sports (pp. 51). Ames, IA: ISBS.
- * Simpson, K. J., Shewokis, P. A., & Reeves, K. T. (1991). Factors related to lateral stability during a rapid lateral braking movement (abstract). Medicine and Science in Sports and Exercise, 23(4), S139.
- * Simpson, K. J., Tant, C., and Shewokis, P. (1991). Effects of velocity and gradient on temporal kinematics during downhill walking (abstract). XIIIth International Congress on Biomechanics Book of Abstracts (pp. 464-465). Perth, Australia: Department of Human Movement Studies, University of Western Australia.
- * Simpson, K. J. (1991). Factors related to rearfoot kinematics during a rapid braking movement (abstract). XIIIth International Congress on Biomechanics Book of Abstracts (pp. 461-464). Perth, Australia: Department of Human Movement Studies, University of Western Australia.
- * Simpson, K. J. (1990). Individual joint moment strategies utilized during the support phase of running. In E. Kreighbaum and A. McNeill (Eds.) Biomechanics in Sports VI. Proceedings of the 6th International Symposium on Biomechanics in Sports. (pp. 465-468). Bozeman: ISBS.
- * Simpson, K. J., & Bates, B. T. (1989). The effect of running speed on lower extremity joint moments during the support phase (abstract). XII International Congress of Biomechanics (pp. 321). Del Mar: Academic Publishers.
- * Dufek, J. D., Bates, B. T., McCaw, S. T., & Simpson, K. J. (1989). Intra/Interday performance variability of two measurement systems (abstract). Medicine and Science in Sports and Exercise, 20(2), S76.
- * Simpson, K. J., DeVita, P. D., & McGinnis, P. M. (1988). Ground reaction force differences between forward and retro running (abstract). International Journal of Sports Medicine, 9(2): 147. (Rated among the top 30 from 76 submissions.)
- * Simpson, K. J., Bates, B. T., & McCaw, S. T. (1987). Impact force accommodation to additional loads (abstract). Abstracts of the XI International Congress of Biomechanics, Amsterdam: Free University Press, pp. 295.

- * Bates, B. T., McCaw, S. T., Simpson, K. J. & Dufek, J. S. (1987). Intraday variability of two measurement systems (abstract). Abstracts of the XI International Congress of Biomechanics, Amsterdam: Free University Press, pp. 23.

Book Reviews:

Simpson, K. J. (2000). Biomechanics in Ergonomics. Review published in Journal of American Physical Therapy Association.

Simpson, K. J. (1996). Three-dimensional analysis of human movement. The GAHPERD Journal, 30, (12), 69-70.

Multi-Media Materials Reviews:

Simpson, K. J. (1996). YMCA Healthy Back Video. The GAHPERD Journal, 30,(12), 68.

Articles in Review:

H. Wang, K. J. Simpson, M.S. Ferrara, S. Chamnongkich, T. Kinsey, & O.M. Mahoney (1st revision in review). Biomechanical differences exhibited during sit-to-stand between total knee arthroplasty designs of varying radii. Submitted to Journal of Arthroplasty.

H. Wang, K. J. Simpson, S. Chamnongkich, T. Kinsey, & O.M. Mahoney. (In review). A biomechanical comparison between the single-axis and multi-axis total knee arthroplasty systems for the stand-to-sit movement. Submitted to Clinical Biomechanics.

K.J. Simpson, M.S. Ferrara, H. Wang, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney (In review). Biomechanical and Functional Outcomes of Single- Versus Multi-Knee Flexion/Extension Axis Arthroplasty Systems. Submitted to Clinical Orthopedics and Related Research.

K. Brakke, D. Fragaszy, K. Simpson, C. Hoy, & E. Cummins-Sebree (In review). The production of unimanual and bimanual percussion in 12- to 14-month-old children. Submitted to Infant Behavior and Development.

Other Work in Progress:

Simpson, K.J., Fragaszy, D., Sigurdsson, P., & Chang, Y.C. Tool use development: How does Motor Coordination of Young Children Change with Age? To be submitted to Journal of Motor Behavior, Spring, 2005.

BL Patrilli, KJ Simpson, & L Nolan. (2005). Approach velocity profiles of elite male and female lower-limb amputee long jumpers. To be submitted to International Journal of Sport Sciences, July, 2005.

Fragaszy, D., Simpson, K.J., Sigurdsson, P., & Chang, Y.C. Ecological analysis of exploratory and motor behaviors exhibited during early stages of learning to use tool. To be submitted to International Journal of Developmental Neuroscience, Spring, 2005.

Simpson, K. J., Wang, H., Ciapponi, T., & McKee, E. Kinematics of sprinting exhibited by transtibial and transfemoral amputee athletes at the 1998 FlexFoot International Invitational. To be submitted to Journal of Applied Sport Sciences, October, 2004.

B. Creative Contributions Other Than Formal Publications

Serving as mentor for Dr. D. M. Fragaszy, Professor and Chair, Program, University of Georgia in Faculty Study in Second Discipline. Involves collaborative research on topic of emergence of motor patterns developed while learning a novel movement task.

C. Grants Received

Comparison of a Single Radius Versus Multiradius Total Knee Replacement Design for Biomechanical and Functional Outcomes of Various Tasks, Howmedica-Osteonics, Inc., 2001, (\$64,350 direct costs), co-principal investigator (50% with one other co-principal investigator). Wrote proposal, budget.

University of Georgia TKR Research Proposal, Athens Orthopedic Clinic, P.A., 1999, (\$5,900), co-principal investigator (50% with one other co-PI). Wrote proposal, budget.

A Comparison of the Inversion Restraints Provided by Various Ankle Orthoses, Bauerfeind USA, Inc., 1997, \$4,703 (\$3,210 direct costs), principal investigator.

Outreach-Based Exercise Program to Reduce Muscle Weakness and Falls in Postmenopausal Women, College of Education Service Grant, 1997, \$8,725, principal investigator.

Ignored No More:- Improving the Techniques of Amputee-Classified Paralympic Long Jumpers Improves the Sport for All, College of Education Multicultural Grant, \$575, principal investigator.

Outreach-Based Exercise Program to Reduce Osteoporosis in Post-Menopausal Women, College of Education Service Grant, 1995, \$9,800, principal investigator.

The Effect of Practice Schedule on Inter- and Intra-Limb Coordination, College of Education Summer Research Grant, 1995, \$8,150, principal investigator.

Long Term Changes in Plantar Pressures Due to Semi-Rigid Orthotics in Subjects With Excess Forefoot Varus, Novel, Inc., 1994, \$10,000, Principal Investigator for equipment loan; Podiatry Arts Laboratory, \$5,000, Co-Principal Investigator.

The Effect of Footwear Design on Lateral Foot Motion During Tennis, Asahi, Incorporated. Principal Investigator, 1990, \$1,400.

College of Education Summer Research Grant, 1989, \$2,662.

Proposal co-authored with George Gazda and Jack Razor. Georgia Foundation for equipment to equip the Biomechanics Laboratory, 1988, \$10,000.

Project to develop kinesiology laboratory activities and laboratory manual and to purchase equipment. Principal Investigator. Office of Instructional Development, Lilly Program, 1988, \$3,000.

The Contributions of Ground Reaction Force Components to Longitudinal Knee Joint Forces During a Selected Dance Movement, Principal Investigator. Faculty Research Grant, Vice President's Office for Research, University of Georgia, 1988, \$4,300.

College of Education Summer Research Grant, 1988, \$2,500.

The Effect of Running Speed on Support Phase Lower Extremity Joint Moments, Principal Investigator. Sigma Xi, Research Society Grants-in-Aid of Research, 1987, \$640.

Shoe Evaluation, Co-Principal Investigator. George S. Cole and Associates, 1987, \$5,000.

The Effect of Running Speed on Support Phase Lower Extremity Joint Moments, Principal Investigator. University of Oregon Graduate School, 1986, \$500.

Grants in Review:

Patterns of bimanual coordination in early childhood, Consultant. K. Brakke, P.I. SCORE grant proposal submitted to the National Institutes of Health, June, 2004. \$335,377. Under review.

Grants submitted but not funded:

Development of Bimanual Coordination in Early Childhood, Consultant. K. Brakke, P.I. AREA grant submitted to the National Institutes of Health, September, 2003, \$150,000. Not funded (priority score 206; am waiting for results of SCORE grant before re-applying)

Bone Response to Gymnastics Training in Young Girls, Senior Personnel (10%). NIH: NICHD, \$2,153,673 (\$55,185). PI: Richard Lewis. Submitted revision, June, 2003.

Grants in progress:

Do the Design Elements of the NRG[®] TKA Improve Patient Function and Biomechanics More Rapidly than the ScorpioFlex[®] TKA?, PI, Stryker, Inc. \$380,000, Due: March. 5, 2005.

D. Recognitions and Outstanding Achievements

Awards and Honors:

University of Georgia's Faculty Study in a Second Discipline Program. 1997-1998. Goal of the program is to increase interdisciplinary scholarly work through understanding and cooperation among faculty in disparate fields of study.

E. Areas in Which Research Is Done

Dr. Simpson's research has been focused primarily on the biomechanics of the lower extremity, particularly joint loading, and *factors mediating lower extremity joint loading*, e.g., subject responses to impact situations. Significance of research is important in understanding

mechanisms involved in causing lower extremity injuries, bone stress reactions and osteoarthritis. Second area of impact is how lower extremity total joint replacements affect lower extremity loading and physical function of implant recipients.

Specific foci of this area of inquiry:

- (1) For high impact landings, determining how performers protect the lower extremity from excessive forces and torques by modeling the performer as a nonlinear dynamical system and investigating various factors that influence bone-on-bone and other tissue loading.
- (2) For highly skilled runners and long jumpers with a unilateral lower extremity amputation, understanding how the interaction between effective movement technique, compensatory movement techniques and sport prosthesis design potentially affects the impact loading on the residual limb
- (3) Ascertaining the effects of various external devices (total joint replacements, footwear and prophylactic joint braces) on potential tissue stress that are deleterious or beneficial.

As part of the biomechanical research involving runners/long jumpers with a lower extremity amputation, a strong *outreach component* also has been included. For any athlete who has requested a biomechanical movement technique analysis based on the data that we have obtained at competitions, we have provided an individualized analysis. We also have provided summary analyses to coaches from various countries. The effort involves a team of undergraduate students who perform the entire biomechanical analyses of their given athletes, including the individualized reports provided to their athletes.

More recently, Dr. Simpson, in collaboration with other colleagues in the Dept. and an orthopedic group in Athens, has begun a line of inquiry regarding *how the design of total knee replacement components influences knee mechanics in regards to performing activities of daily living (e.g., rising from a chair), knee muscle strength, flexibility, balance, etc.* Currently, we have obtained external funding and have completed the first study. Investigating biomechanical issues related to total knee replacement design and effectiveness is anticipated to become the major focus and source of external funding.

A minor area of focus has been the interaction of biomechanics with motor learning/control. This interdisciplinary work has focused on *how performer's movements are shaped by the interaction of physical laws and cognitive processes.* Specifically, Dr. Simpson has been investigating how: (1) how various types of cognitive interference due to practice schedule influences changes in limb kinematics and performance and 2) visual perception and processing influences the running pattern during targeting tasks. Currently, Dr. Simpson, in collaboration with Drs. D. Fragaszy of UGA and K. Bakke of Spelman College, are investigating the development of upper extremity motor coordination for bimanual tasks and tool use. The first studies from this line of inquiry are in progress.

F. Supervision of Student Research

Dr. Simpson has supervised 27 independent study projects/courses involving a total of 50 enrolled and numerous audit/volunteer students.

Dr. Simpson is currently directing 2 doctoral theses. Have directed 7 theses/dissertations.

G. Editorship and Related Activities for Learned Societies

Editorial Board Member:

International Journal for Applied Sport Science, 1999 - present (official publication of the Korea Sport Science Institute- selected to be on the first editorial board)

Section Editor:

Research Quarterly in Exercise and Sport, 1996-2003.

Reviewer for Journals:

Journal of Applied Biomechanics, 1997-present.

Journal of Ergonomics, 2000-present.

Journal of Gerontology: Biological Sciences, 1999-2000.

Journal of Health, Physical Education, Recreation and Dance, 1993-present.

Medicine, Exercise, Nutrition and Health, 1991-present.

Medicine and Science for Exercise and Sport, 1991-present.

Pediatric Exercise Science, 1989-1992.

Research Quarterly in Exercise and Sport, 1990-1996.

Book Reviews:

Biomechanics, by McGraw-Hill (blind review), 2001.

Biomechanics in Ergonomics edited by Shrawan Kumar; Taylor & Francis, Ltd., 2000.

Mechanics for Coaches by Jerry Carnes; Human Kinetics, 1993.

H. Convention Papers

* published counterpart

** invited presentation

Underline indicates who presented paper if not listed as first author.

International:

- * Brakke, K. E., Gunn, A., Fragaszy, D. M., Hoy, E., Cummins-Sebree, S., Chamnongkich, S., & Simpson, K. (May 2004). Bimanual percussion during the second year of life. Poster presented at the 14th biennial International Conference on Infant Studies. Chicago, IL.
- * Simpson, K.J., Chamnongkich, S., Ferrara, M., Wang, H., Casto, S., Kinsey, T., Mahoney, O.M. (2002). A comparison of isokinetic strength between single- and multi-knee flexion axis total knee arthroplasty limbs (2002). Presentation at IVth World Congress of Biomechanics, Calgary, AB.
- * Wang, H., Simpson K., Ferrara, M., Chamnongkich, S., Casto, S., Kinsey, T., Mahoney, O.M. (2002). A comparison between single-radius and multi-radius total knee arthroplasties for stand to sit (an EMG and kinematic study). Presentation at IVth World Congress of Biomechanics, Calgary, AB.
- * Wang, H., Simpson, K., Ferrara, M., Chamnongkich, S., Casto, S., & Mahoney, O. (2001). Does a multi-radius total knee arthroplasty knee function similar to a healthy knee? Presentation at XVIIIth Congress of the International Society of Biomechanics, Zurich, Switzerland.
- * Ciapponi, T., Simpson, K. J., Wang, H., & McKee, E. (1999). Kinematic characteristics of transtibial sprinters. Presentation at the XVII Congress of the International Society of Biomechanics, Calgary, Alberta.
- * Wang, H., Simpson, K. J., Ciapponi, T., McKee, E. (1999). Kinematic characteristics of transfemoral sprinters. Poster presentation at the XVII Congress of the International Society of Biomechanics, Calgary, Alberta.
- * Simpson, K. J., Williams, Ciapponi, Wen, H., Nance, M. & Valleala, R. (1998). Regulation of locomotion by above-knee amputee performers during the approach phase of the long jump. Presentation at the Third North American Congress on Biomechanics, Waterloo, Ontario.
- * Jiang, P., and Simpson, K.J. (1997, June). The effect of foot landing position on angular kinematics of the foot-ankle complex during gait. Presentation at International Society of Biomechanics in Sports meeting, Denton, TX.

- * Williams, S., Simpson, K.J., & DelRey, P. (1997). Visual targeting during the long jump approach of male below-knee amputee Paralympic athletes. Presentation at International Society of Biomechanics in Sports meeting, Denton, TX.
- * Simpson, K. J., & Kanter, L. (1993, June). Bone-on-bone axial forces during dance landings. Presentation at International Society of Biomechanics in Sports meeting, Amherst, MA.
- * Simpson, K. J., & Pettit, M. (1992, August). Factors influencing ankle and knee shear force parameters during dance landings. Presentation at NACOB II: The Second North American Congress on Biomechanics Meeting, Chicago, IL.
- * Simpson, K. J., Shewokis, P., & Odum, S. (1991, July). In-shoe plantar pressure changes during negative gradient gait at various velocities. Presentation at International Society of Biomechanics in Sports meeting, Ames, IA.
- * Simpson, K. J. (1991, December). Factors related to rearfoot kinematics during a rapid braking movement. Presentation for International Society of Biomechanics meeting, Perth, Australia.
- * Simpson, K. J., Tant, C. & Shewokis, P. (1991, December). Effects of velocity and gradient on temporal kinematics during downhill walking. Presentation for International Society of Biomechanics meeting, Perth, Australia.
- * Simpson, K. J., & Bates, B. T. (1989, June). The effect of running speed on support phase lower extremity joint moments. Presentation at the June 1989 International Society of Biomechanics meeting, Los Angeles, CA.
- * Simpson, K. J. (1988, July). Individual joint moment strategies utilized during the support phase of running. Presentation at the July 1988 meeting of the International Society of Biomechanics in Sport, Bozeman, MT.
- * Simpson, K. J., Bates, B. T., & McCaw, S. T. (1987, June). Impact force accommodation to additional loads. Presentation at the International Society of Biomechanics meeting, Amsterdam, Holland.
- * Bates, B. T., McCaw, S. T., Simpson, K. J., & Dufek, J. S. (1987, June). Intraday variability of two measurement systems. Presentation at the International Society of Biomechanics meeting, Amsterdam, Holland.

- * Bates, B. T., McCaw, S. T., Simpson, K. J., & Dufek, J. S. (1987, June). Intraday variability of two measurement systems. Presentation at the International Society of Biomechanics meeting, Amsterdam, Holland.

National:

- * Mahoney OM, Vural AM, Ferrara MS, Kinsey TL, Simpson K. Poster exhibit. American Academy of Orthopaedic Surgeons 71st Annual Meeting, San Francisco, March 2004
- * D. Frigaszy, S. Cummins-Sebree, E. Hoy, K. Simpson, S. Chamnongkich. Becoming tool users. Presentation at conference honoring Eleanor Gibson, "Further Developments", Cornell University, Ithaca, NY, Oct. 2003.
- * Karen Brakke, Angelica Gunn, Dorothy Fragaszy, Erica Hoy, Kathy Simpson. Bimanual percussion during the second year of life. Presentation at conference honoring Eleanor Gibson, "Further Developments", Cornell University, Ithaca, NY, Oct. 2003.
- * H. Wang, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. (2003). The biomechanical influence of total knee arthroplasty design on sit-to-stand performance. Presentation at the 70th Annual Meeting of the American Academy of Orthopedic Surgeons. New Orleans, LA. February, 2003.
- * H. Wang, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. Biomechanical comparison between the single-radius and multi-radius total knee arthroplasty designs for the stand-to-sit movement. Proceedings of the 49th Annual Meeting of the Orthopedic Research Society. New Orleans, LA. February, 2003. pp. 1326.
- * Wilder, J.A., Simpson, K. J., & Bennett, G. (2002). A comparison of kinematic restraint for two prophylactic ankle braces during flat and inverted drop surface landings. Meeting of the American College of Sports Medicine, St. Louis, MO.
- * Mahoney, O. M., Tullos, H. S., Kinsey, T., Ferrara, M. J., Simpson, K., Casto, S. R., Wang, H., Chamnongkich, S. (2002). Laboratory demonstration of mechanical and functional advantages of a single-radius design in TKA [total knee arthroplasty]. American Academy of Hip and Knee Society, Dallas, TX.

- * Wang, H., Simpson, K., Ferrara, M., Chamnongkitch, S., Casto, S., & Mahoney, O. (2000). Strength evaluation of a single radius total replacement (a case study). Twenty-Fourth Annual Meeting of the American Society of Biomechanics, Chicago, IL.
- * Jiang, P., Simpson, K. J., & McGorry, R. (1998, June). The effect of foot landing orientation on muscle moments of foot-ankle complex during gait. Meeting of the American College of Sports Medicine, Orlando, FL.
- * Simpson, K. J., Cravens, S. & Theodorou, C. (1998, June). Effect of ankle orthoses on angular kinematics of rapid change of lateral direction movement. Meeting of the American College of Sports Medicine, Orlando, FL.
- ** Simpson, K., Ciapponi, T. (1998, May). Biomechanics of Amputee Running. Presentation at the Flex Foot Course, San Diego, CA.
- * Jameson, G., & Simpson, K. J. (1997, September). Responses of Ankle Joint Kinetics to Natural, High and Low Knee Flexion Landings. Meeting of the American Society of Biomechanics, Clemson, SC.
- * Williams, S., Simpson, K.J., & DelRey, P. (1997, June). Visual targeting during the long jump approach of male below-knee amputee Paralympic athletes. Meeting of the North American Society for the Psychology of Sport and Physical Activity, Denver, CO.
- * Baldwin, A.C., Stevenson, S.W., Gregory, C.M., Simpson, K. J., & Dudley, G.A. (1997, May). Adaptive responses to eccentric exercise in 60 yr olds. Meeting of the American College of Sports Medicine, Denver, CO.
- * Stevenson, S.W., Baldwin, A.C., Gregory, C.M., Simpson, K.J. & Dudley, G.A. (1997, May). Eccentric exercise alters gait in older individuals. Meeting of the American College of Sports Medicine, Denver, CO.
- * Donahue, B., Higbie, B., Simpson, K. J., & Wisenbaker, J. (1996, May). Changes over time in plantar pressure of women using semi-rigid orthotics for excessive forefoot varus. Presentation at the American College of Sports Medicine Meeting, Cincinnati, OH.
- * Simpson, K. J., & Odum, S. (1993, June). Factors influencing estimated patellofemoral pressures during dance landings. Poster presentation at the American College of Sports Medicine Meeting, Seattle, WA.

- * Simpson, K. J., Shewokis, P. A., Reeves, K. T. (1991, May). Factors related to lateral stability during a rapid lateral braking movement. Presentation at the American College of Sports Medicine meeting, Orlando, FL.
- ** Simpson, K. J. (1990, February). Biomechanics and Tennis Footwear Design- What is Important For Performance and Injury-Free Wear? Presentation at national sales meeting of Asahi, Inc., Atlanta, GA.
- * Dufek, J. D., Bates, B. T., McCaw, S. T. & Simpson, K. J. (1988, May). Intra/day performance variability of two measurements systems. Presentation at the American College of Sports Medicine meeting, Dallas, TX.
- Bates, B. T., McCaw, S. T., Dufek, J. & Simpson, K. J. (1987, November). Interday variability of two measurement systems. Presentation at the Engineers in Medicine and Biology Society meeting, Boston, MA.
- Simpson, K. J., Abendroth-Smith, J., Bates, B. T. & Dufek, J. (1988, April). The determination of asymmetry during gait using an in-shoe pressure system. Presentation at the American Alliance of Health, Physical Education, Recreation and Dance meeting, Kansas City, MO.
- Robertson, R. N., Simpson, K. J. & McGinnis, P. M. (1987, April). The relationship between muscle activation and joint moments during jumps performed from five starting positions. Poster presentation at the American Alliance for Health, Physical Education, Recreation and Dance meeting.

Regional, State and Local

- Gunn, A., Brakke, K. Smith, A., Fragaszy, D., Hoy, E., Simpson, K., & Chamnongkich, S. (March 2004) Phase relationships of young children's bimanual percussion activity. Poster presented at the 50th annual meeting of the Southeastern Psychological Association, Atlanta, GA.
- ** Simpson, K. J. (1992, April). Fact or Fancy: Footwear Design Concepts. Departments of Biology, Physics and Exercise Science, Berry College.
- * Simpson, K., Odum, S. & Shewokis, T. (1989, February). In-shoe pressure changes during downhill walking at various speeds. Presentation at the Southeast Region of American College of Sports Medicine Meeting, Columbia, SC.

- * Simpson, K. J., DeVita, P. D. & McGinnis, P. M. (1988, January). Ground reaction force differences between forward and retro running. Presentation at Southeast Region of American College of Sports Medicine meeting, Winston-Salem, NC.

- ** Simpson, K. J. (1987, December). Biomechanical and behavioral significance of joint moment analysis to the understanding of locomotor movements. Division of Physical Education and Human Movement Studies, University of Oregon.

- Dufek, J. S., Simpson, K. J. & Wiese, D. (1987, March). The effect of overground and treadmill walking on selected temporal and kinetic measurements - A pilot study. Presented at the Northwest Regional American College of Sports Medicine meeting. Selected as the best student paper presented.

- Simpson, K. J., & Bates, B. T. (1986, October). The evaluation of foot function during gait utilizing a force platform system and electrogoniography system. Oregon Alliance for Health, Physical Education, Recreation and Dance meeting.

- Simpson, K. J., Dufek, J. S., & DeVita, P. (1984, October). Computer graphics in biomechanics. Poster presentation and demonstration at the Third Annual Pacific Northwest Computer Conference.

- Simpson, K. J., & DePauw, K. (1982, October). The differences in movement reactions among individuals of various hand preferences. Washington Alliance for Health, Physical Education, Recreation and Dance meeting.

I. Symposia

- * Li Li, Hondsinski, J., Maraj, B., & Simpson, K.J. Vision as an Integral Part of Motor Skill Control, 2003. Symposium at Southeast Chapter of American College of Sports Medicine, Atlanta, GA.

- * Hortobagyi, T., DeVita, P., Simpson, K. J. One day you may be the patient: biomechanics in clinical evaluations, 1996. Symposium at the American College of Sports Medicine meeting, Cincinnati, OH.

- * Simpson, K., Donahue, B., Pettit, M and Higbie, B. Injuries, footwear, orthotics and rearfoot motion, 1995. Symposium at Southeast Chapter of American College of Sports Medicine, Virginia Beach, VA.

** "Meet the Researchers". A symposium put on by the student section of the Research Consortium of the American Alliance of Health, Physical Education, Recreation and Dance (April, 1991).

4. PUBLIC SERVICE

A. Public Service

Elected Offices in National Organizations:

Co-Chair, Executive Board, Biomechanics Interest Group of American College of Sports Medicine, 2000-2002.

Chair, Biomechanics Academy of American Alliance of Health, Physical Education, Recreation and Dance, 1993-1994.

Abstract, Symposium and Grant Reviews for Scientific/Professional Societies:

Reviewer for Congressionally-Directed Peer Reviewed Medical Research Program (PRMRP), June, 2003

Reviewer for the Arkansas Science & Technology Authority, Basic Research Grant Program, April, 2001.

Reviewer for The Wellcome Trust, Joint Infrastructure Fund, London, UK, May, 2000.

Reviewer for US Civilian Research & Development Foundation, Cooperative Grants Program 1999-2000, Feb, 2000.

Research Consortium symposium proposals, American Alliance of Health, Physical Education, Recreation and Dance, 1998, 1999, 2001.

Ad-hoc reviewer for student research grant proposals, American College of Sports Medicine, 1990.

Free communications papers for Southeast Chapter of American College of Sports Medicine, 1992.

Sessions Chaired at Scientific Meetings:

Olympic Scientific Congress, presider at Biomechanics Special Session II for one of six invited scholars from the USSR, August, 1987.

International Society of Biomechanics, presider for biennial meeting, 1989.

International Society for Biomechanics in Sport, presider for 1989, 1991, 1993 and 1997 annual meetings.

American Alliance for Health, Physical Education, Recreation and Dance, presider for 1989, 1991 and 1993 meetings of Biomechanics Academy.

American College of Sports Medicine, presider for 1996 meeting; moderator for clinical colloquium for 1999 meeting.

Southeast Chapter of American College of Sports Medicine, presider for 1990, 1993, 1994, 2000, 2002 meetings.

Professional Organizations Committees:

American Society of Biomechanics:

Executive Board Member, Chair of Communications Committee (2003-present)

American College of Sports Medicine:

Executive Board Member, Biomechanics Interest Group (1998-2002)

Ad-Hoc Member, Women's Health Issues (1993-1994)

International Society of Biomechanics:

Ad-Hoc Member, International Standards and Terminology for Biomechanics (1992-1994) involved in determining standards for complex coordinate systems for ankle-foot region.

5. UNIVERSITY SERVICE

University Governance Committee Membership:

Graduate Council (1993-1996); Chair of Curriculum Committee, Fall, 1995 - Spring, 1996.

College Governance Committee Membership:

College of Education Awards Committee (?; 2004-present)

Multi-Cultural Diversity Task Force (1994-2000; 2003-present)

Graduate Faculty Appointment/Reappointment Committee (2000-2001)

College of Education Multicultural Requirement Dean's Committee (1999-2000)

College of Education Faculty Senate (2000-2002)

School and Department Governance Committee Membership:

Once department was split from Physical Education and Sport Studies, until present academic year, we had limited number of official departmental governance committees.

Have served on several School committees for 3rd year reviews and for 7 year faculty reviews (School was dissolved in 2004)

School's Staff Award Committee, Chair (1995-1996)

Department's Committee to Develop Computer Competency Exam (1991-1992)

Physical Education Graduate Program Committee (1989-1991)

Physical Education Undergraduate Program Committee (1989-1991)

Physical Education Student Affairs Committee (1989-1990)

Department's Lou Kindig Scholarship Committee (1996-1997)

Department's Soule Scholarship Committee (1987-1990); Chair (1989)

Department's College of Education Faculty Teaching Award Committee (1990)

Department's Graduate Ad-Hoc Committee to Evaluate Alternatives for Presenting Dissertations and Theses (1988)

School's Committee for Future Directions and Facility Design for School Computer Laboratory (1987)