

# Jan M. Hondzinski, Ph.D.

## CONTACT INFORMATION

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## EDUCATIONAL BACKGROUND

*Ph.D. in Exercise Science, University of Iowa, December 1998.*

*Level IV Teaching Endorsement in Mathematics, University of Utah, 1991.*

*M.S. in Health Education, University of Utah, August 1990.*

*B.S. in Physical Education and Mathematics (minor), University of Utah, 1986.*

## PROFESSIONAL EXPERIENCE

*Associate Professor. Louisiana State University, 2007-present.*

*Assistant Professor. Louisiana State University, 2001-2007.*

*Post-Doctoral Associate. University of Minnesota, 1999-2001.*

*Teaching and Research Assistant. University of Iowa, 1992-8.*

*Teacher/Coach. Cottonwood High School (Utah), 1986-1992.*

## TEACHING

### Honors and Awards

*TIAA-CREF Service-learning Faculty Award, Louisiana State University, 2005.*

*LSU Campus Federal Credit Union Teaching Enhancement Funds for presenting at the 2003 International Conference On Civic Education Research conference.*

*LSU Campus Federal Credit Union Teaching Enhancement Funds for presenting at the 2003 Southeast American College of Sports Medicine Conference.*

*LSU Campus Federal Credit Union Teaching Enhancement Funds for attending the 2002 Eye Tracking Research & Applications Symposium.*

*Lou Alley Scholarship for teaching and research contributions (also see below).  
University of Iowa, 1997-8.*

*McCloy Scholarship for scholarly accomplishments and contributions.  
University of Iowa, 1993-4.*

*Physical Education Scholarship for teaching track. University of Utah, 1982-6.*

## Courses Taught

*Louisiana State University, 2001-present.*

Graduate:

Motor control  
 Visuomotor control  
 Motor control and the vestibular system  
 Sensory systems and motor control

Undergraduate:

Neuromotor control of human movement  
 Human anatomy

*University of Minnesota, 2001*

Graduate:

Neuroanatomy laboratory

*University of Iowa, 1994-8*

Graduate:

Human gross anatomy laboratory

Undergraduate:

Introductory biomechanics  
 CPR/first aid  
 PE skills courses

*Cottonwood High School, (Utah) 1986-1992.*

Mathematics courses

## RESEARCH

### Publications in Refereed Journals

1. Hondzinski, J. M., & Cui, Y. (2006). Allocentric cues do not always improve whole body reaching performance. *Exp Brain Res*, 174(1):60-73.
2. Cui, Y., & Hondzinski, J. M. (2006). Gaze tracking accuracy in humans: Two eyes are better than one. *Neurosci Lett*, 396(3), 257-262.
3. Hondzinski, J. M. (2004). Comparing human reaches across three viewing conditions in a step and reach task. *Neurosci Lett*, 357(1), 25-28.
4. Breteler, M. D., Hondzinski, J. M., & Flanders, M. (2003). Drawing Sequences of Segments in 3D: Kinetic Influences on Arm Configuration. *J Neurophysiol*, 89(6), 3253-3263.
5. Flanders, M., Hondzinski, J. M., Soechting, J. F., & Jackson, J. C. (2003). Using arm configuration to learn the effects of gyroscopes and other devices. *J Neurophysiol*, 89(1), 450-459.
6. Hondzinski, J. M. (2003). Making neuroscience simple by promoting metacognition. *Acad Exch Quart*, 7(4), 286-291.
7. Wood, R. H., Hondzinski, J. M., & Lee, C. M. (2003). Evidence of an association among age-related changes in physical, psychomotor and autonomic function. *Age Ageing*, 32(4), 415-421.
8. Hondzinski, J. M., & Darling, W. G. (2001). Aerial somersault performance under three visual conditions. *Motor Control*, 5(3), 281-300.
9. Reifel Saltzberg, J., Hondzinski, J. M., & Flanders, M. (2001). Humans adapt the initial posture in learning a whole-body kicking movement. *Neurosci Lett*, 306(1-2), 73-76.
10. Darling, W. G., Hondzinski, J. M., & Harper, J. G. (2000). Gaze direction effects on perceptions of upper limb kinesthetic coordinate system axes. *Exp Brain Res*, 135(3), 360-372.

11. Darling, W. G., & Hondzinski, J. M. (1999). Kinesthetic perceptions of earth- and body-fixed axes. *Exp Brain Res*, 126(3), 417-430.
12. Darling, W. G., & Hondzinski, J. M. (1997). Visual perceptions of vertical and intrinsic longitudinal axes. *Exp Brain Res*, 116(3), 485-492.
13. Sands, W. A., Hondzinski, J. M., Shultz, B. B., & George, G. S. (1995). A comparison of subtalar joint maximal eversion while jogging on the minitrampoline and floor. *J Orthop Sports Phys Ther*, 22(2), 65-72.

### Manuscripts in Review

- Kadivar Z, Hondzinski JM, Magill RA. Temporal aspects of gait during rhythmic auditory stimulation in healthy adults. *Gait Posture* (in review)
- Hondzinski JM, Li L, Welsch M. Age-related and sensory declines offer insight to whole body control during a goal-directed movement. *Exp Brain Res* (internal review)
- Hondzinski JM, Li L, Cui Y, Welsch M. Spatial inaccuracy and instability due to peripheral neuropathy improve with gait and Tai Chi training. *Motor Control* (internal review)

### Invited Conference Presentations

#### *National and International:*

1. Hondzinski, J. M. Exercise alters movement strategies in peripheral neuropathy patients. In Li, L., Hass, C., Hondzinski, J. M., Knight, C. A., & Messier, S. P. (2006, May/June). *Evaluation of interventions for special populations using biomechanical outcomes*. Presentation at the 53rd Annual Meeting of the American College of Sports Medicine, Denver, Colorado.
2. Exner, P., Fleener, M. J., Goodson, M., Hondzinski, J. M., Lee, A., & Munro Hendry, P. (2006, January). *Leaving colleges of education behind: re-visioning roles through community partnerships*. Presentation at the American Association of Colleges for Teacher Education San Diego, California.
3. Babin, E. H., Cuddeback, M. M., Hondzinski, J. M., Jacobs, D. K., Lemieux, C. M., & Normand, D. (2003, November). *Service-learning faculty as reflective practitioners*. Presentation at the International Conference on Civic Education Conference, New Orleans, Louisiana.

#### *Regional:*

4. Li, L., Gardner, R., Hondzinski, J. M., Wood, R., & Welsch, M. (2005, January). *Exercise intervention for peripheral neuropathy patients: using an integrated approach to examine improvements*. Presentation at the Southeast American College of Sports Medicine Atlanta, Georgia.
5. Hondzinski, J. M., Li, L., Maraj, B., & Simpson, K. (2003, January). *Vision as an integral part of motor skill control*. Presentation at the Southeast American College of Sports Medicine Atlanta, Georgia.

### Research Conference Presentations

#### *National and International:*

6. Duet, M., Heil, D.P., Black, C., Hondzinski, J.M., & Li, L. (2008, May) *Physical Activity Monitor Recordings are Task and Population Dependent*. Presentation at the 55<sup>th</sup> Annual meeting of the American College of Sports Medicine Indianapolis, Indiana. [published in: *Medicine & Science in Sports & Exercise*. 40(5): S120].

7. Amano, S., Shah, N., Magill, R., Hondzinski, J.M., & Li, L. (2008, May) *People with Peripheral Neuropathy Have Normal Motor Control Capacity*. Presentation at the 55<sup>th</sup> Annual meeting of the American College of Sports Medicine Indianapolis, Indiana. [published in: *Medicine & Science in Sports & Exercise*. 40(5): S88].
8. Klumpp, M.L. & Hondzinski, J.M. (2007, October/November). *Kinematic differences among vestibular patients and young and old controls performing vestibular exercises*. Presentation at the 37th Society for Neuroscience Annual Meeting, San Diego, California.
9. Hondzinski, J M. & Kwon, T.Y. (2007, June). *Prediction of final pointing errors using gaze and body orientations*. Presentation at the North American Society for the Psychology of Sport and Physical Activity Annual Conference, San Diego, California.
10. Kwon, T.Y., Cui, Y., & Hondzinski, J.M. (2006, October). *Interactions among step, arm, and gaze orientations during pointing tasks*. Presentation at the 36th Society for Neuroscience Annual Meeting, Atlanta, Georgia.
11. Cui, Y., Kwon, T.Y., & Hondzinski, J.M. (2006, October). *Peripheral neuropathy influences accuracy in goal-directed reaching tasks*. Presentation at the 36th Society for Neuroscience Annual Meeting, Atlanta, Georgia.
12. Kadivar, Z., Magill, R.A., & Hondzinski, J.M. (2006, October). *Temporal aspects of gait during rhythmic auditory stimulation in healthy adults*. Presentation at the 36th Society for Neuroscience Annual Meeting, Atlanta, Georgia.
13. Hondzinski, J. M., Cui, Y., & Li, L. (2005, June). *Whole-body coordination in peripheral neuropathy patients correlates with dynamic gait indices*. Presentation at the North American Society for the Psychology of Sport and Physical Activity Annual Conference, St. Pete Beach, Florida. [published in: *J of Sport Exercise Psy*, 27(Suppl.), S77-8.]
14. Hondzinski, J. M., & Klumpp, M. L. (2005, November). *Kinematics of certain vestibular rehabilitation exercises reveal left and right asymmetries for unilateral vestibular patients*. Presentation at the 35th Society for Neuroscience Annual Meeting, Washington, DC.
15. Klumpp, M. L., & Hondzinski, J. M. (2005, November). *Head movements with and without visual fixation may be the key to successful vestibular rehabilitation*. Presentation at the 35th Society for Neuroscience Annual Meeting, Washington, DC.
16. Cui, Y., & Hondzinski, J. M. (2004, October). *Comparing reaches in peripheral neuropathy patients: standing vs stepping*. Presentation at the 34th Society for Neuroscience Annual Meeting, San Diego, California.
17. Hondzinski, J. M., & Cui, Y. (2004, June). *Reaching errors are not always larger in darkness during a step and reach task*. Presentation at the North American Society for the Psychology of Sport and Physical Activity Annual Conference, Vancouver, British Columbia, Canada. [published in: *J of Sport Exercise Psy*, 26(Suppl.), S93.]
18. Hondzinski, J. M., & Cui, Y. (2004, October). *Allocentric cues do not always improve whole body reaching performance*. Presentation at the 34th Society for Neuroscience Annual Meeting, San Diego, California.
19. Cui, Y., Grodesky, J. M., & Hondzinski, J. M. (2003, November). *Determining gaze position accuracy for right and left head rotations*. Presentation at the 33rd Society for Neuroscience Annual Meeting, New Orleans, Louisiana.
20. Grodesky, J. M., Cui, Y., & Hondzinski, J. M. (2003, November). *Gaze direction alterations when reaching to real and remembered targets*. Presentation at the 33rd Society for Neuroscience Annual Meeting, New Orleans, Louisiana.
21. Hondzinski, J. M., Grodesky, J. M., & Cui, Y. (2003, June). *Accuracy of gaze direction measured by a binocular head-mounted system*. Presentation at the North American Society for the Psychology of Sport and Physical Activity Annual

- Conference, Savannah, Georgia. [published in: *J of Sport Exercise Psy*, 25(Suppl.), S70.]
22. Grodesky, J. M., Li, L., & Hondzinski, J. M. (2002, August). *Variability and stability change with walking velocity—what is the relationship between the two?* Presentation at the IV World Congress of Biomechanics, Calgary, Alberta, Canada.
  23. Hondzinski, J. M. (2002, May/June). *Whole body reaches are influenced by gaze direction and target eccentricity.* Presentation at the 49th Annual Meeting of the Medicine and Science in Sports and Exercise St Louis, Missouri. [published in: *Med Sci Sport Exer*, 34(5, Suppl.), S39.]
  24. Hondzinski, J. M. (2002, August). *Comparing movements across three visual conditions in a step and reach task.* Presentation at the IV World Congress of Biomechanics, Calgary, Alberta, Canada.
  25. Klein Breteler, M. D., Hondzinski, J. M., & Flanders, M. (2001, November). *Reaching and drawing in 3D: evidence for look-ahead planning.* Presentation at the 31st Society for Neuroscience Annual Meeting, San Diego, California.
  26. Hondzinski, J. M., Soechting, J. F., & Flanders, M. (2000, November). *Dealing with the velocity-dependent loads induced by gyroscopic action.* Presentation at the 30th Society for Neuroscience Annual Meeting, New Orleans, Louisiana.
  27. Hondzinski, J. M., Darling, W. G., Logue, M., & Kuo, H. C. (1999, October). *Role of ambient vision in aerial performances.* Presentation at the 29th Society for Neuroscience Annual Meeting, Miami Beach, Florida.
  28. Darling, W. G., Hondzinski, J. M., & Harper, J. G. (1998, November). *Gaze direction effects on kinesthesia.* Presentation at the 28th Society for Neuroscience Annual Meeting, Los Angeles, California.
  29. Hondzinski, J. M., Darling, W. G., & Bordignon, A. M. (1997, September). *Accuracy of trunk alignment to visually specified axes is similar in gymnasts and non-gymnasts.* Presentation at the 21st Annual Meeting of the American Society of Biomechanics, Clemson University, South Carolina.
  30. Hondzinski, J. M., & Darling, W. G. (1993, October). *Perception of vertical trunk alignment.* Presentation at the 17th Annual Meeting of the American Society of Biomechanics, Iowa City, Iowa.

*Regional:*

31. Klumpp, M., deVeer, M., Hondzinski, J. M., & Wood, R. (2005, January). *The vestibulosympathetic reflex: hemodynamic responses to horizontal semi-circular canal activation.* Presentation at the Southeast American College of Sports Medicine, Atlanta, Georgia.
32. Hondzinski, J. M., & Cui, Y. (2004, January). *Reaching errors to remembered targets begin early in a step and reach task.* Presentation at the Southeast American College of Sports Medicine, Atlanta, Georgia.
33. Hondzinski, J. M., Soechting, J. F., & Flanders, M. (1999, October). *Perturbing kinetically optimal arm movements.* Presentation at the First Annual Computational Neuroscience Symposium, Minneapolis, Minnesota.
34. Hondzinski, J. M., Darling, W. G., & Bordignon, A. M. (1994, November). *Perception of trunk alignment in standing, suspended and inverted positions.* Presentation at the 4th Annual Iowa Space Conference (NASA), Iowa City, Iowa.

**Other Presentations**

35. Hondzinski, J. M. (2005, November). *Quantifying functional effects of vestibular rehabilitation in vestibular patients: an NIH R03 grant submission* Presentation at the Kinesiology Brown Bag Lunch Series. Louisiana State University.

36. Hondzinski, J. M. (2005, November). *Training effects in patients with chronic vestibular disorders and peripheral neuropathy*. Presentation at a Chancellor's Distinguished Lectures Series luncheon. Louisiana State University.
37. Hondzinski, J. M. (2003, June). *Comparing reaches across three visual conditions in a step and reach task*. Invited seminar speaker. University of Minnesota.

## Grants and Funding

### *Funded:*

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|------|---|
| 2007 | Hondzinski, J. M. Travel Funds for presenting at the North American Society for the Psychology of Sport and Physical Activity Annual Conference, San Diego, California. <i>LSU Office of Research and Graduate Studies</i> . \$750. |
| 2006 | Hondzinski, J. M. Travel Funds for presenting at the 53 <sup>rd</sup> Annual Meeting of the American College of Sports Medicine, Denver, Colorado. <i>LSU Office of Research and Graduate Studies</i> . \$750.                      |
| 2005 | Solmon, M., Hondzinski, J. M., & Landin, D. Human Movement Instructional Laboratory. <i>LSU Student Technology Grant</i> . \$99,341.  |
| 2004 | Hondzinski, J. M., Wood, R. H., & Klumpp, M. Nervous and Circulatory System Degeneration in the Elderly. <i>LSU Council on Research Faculty Research Grant Program</i> . \$10,000.  |
| 2004 | Hondzinski, J. M. Travel Funds for presenting at the North American Society for the Psychology of Sport and Physical Activity Annual Conference, Savannah, Georgia. <i>LSU Office of Research and Graduate Studies</i> . \$750.     |
| 2003 | Hondzinski, J. M. Using Eye Movements to Assess Driving Vigilance. <i>LSU Summer Stipend Grant</i> . \$5,000.   |
| 2003 | Hondzinski, J. M. Travel funds for presenting at the Southeast American College of Sports Medicine Conference, Atlanta, Georgia. <i>Campus Federal Credit Union Teaching Enhancement Funds</i> . \$400.                             |
| 2003 | Hondzinski, J. M. Travel funds for presenting at the International Conference On Civic Education Research Conference, New Orleans, Louisiana. <i>Campus Federal Credit Union Teaching Enhancement Funds</i> . \$300.                |
| 2002 | Hondzinski, J. M. Travel funds for attending the IV World Congress of Biomechanics, Calgary, Alberta, Canada. <i>LSU Research &amp; Graduate Studies Junior Faculty Travel Funds</i> . \$1000.                                      |
| 2002 | Hondzinski, J. M. Service-Learning Incentive Grant. <i>LSU Center for Community Engagement, Learning &amp; Leadership</i> . \$3,000.  |
| 2002 | Hondzinski, J. M. Travel funds for attending the Annual Eye Tracking Research & Applications Symposium, New Orleans, Louisiana. <i>Campus Federal Credit Union Teaching Enhancement Funds</i> . \$664.                              |

### *Extramural Proposals Not Funded:*

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|------|--|
| 2007 | Li, L. & Hondzinski J.M. Balance and gait of people with peripheral neuropathy:<br>A pilot study for a promising intervention modality. <i>The Neuropathy Association</i> . \$80,000.  |
| 2006 | Hondzinski, J. M. & Klumpp, M. L. Quantifying Functional Effects of Vestibular Rehabilitation in Vestibular Patients. <i>National Institutes of Health, National Institute on Deafness and Other Communication Disorders Small Grant Program, R03</i> . \$217,210.               |
| 2005 | Hondzinski, J. M., Klumpp, M. L., & Wood, R. H. Quantifying Functional Effects of Vestibular Rehabilitation in Vestibular Patients. <i>National Institutes of Health, National Institute on Deafness and Other Communication Disorders Small Grant Program, R03</i> . \$220,500. |

- 2004 Wood, R. H., Hondzinski, J. M., Klumpp, M., & Fabre, J. Vestibulocardiac Reflexes and Human Aging. *American Heart Association*, \$139,600.
- 2003 Sodhi, M., Herv, J. Y., & Hondzinski, J. M. Development of Methods for In Situ Eye Movement Data Collection and Analysis. *National Science Foundation: Information Technology*, \$940,899.
- 2002-3 Sodhi, M., Hondzinski, J. M., Jenssen, G., & Lamond, B. Glance Analysis of Driver Eye Movements to Evaluate Driving Distraction. *American Automobile Association*. 2003: \$227,639, 2002: \$199,880.
- 2000 Hondzinski, J. M. Neural Control of Whole Body Movement. *Individual National Research Service Award. Department of Health and Human Services*, \$218,160.

*Intramural Proposals Not Funded:*

- 2007 Welsch M, & Hondzinski J.M. Linking Vascular Function to Physical Performance and Coordination in Individuals with Peripheral Neuropathy. *LSU Faculty Research Grant Program*. \$9,996.20. [wrong review section]
- 2005 Li, L., Aghazadeh, F., Harrison, L., Hondzinski, J. M., Lopez, M. J., & Monroe, T. Field Motion Analysis Laboratory. *LSU Student Technology Grant*. \$90,072.
- 2001 Hondzinski, J. M. Do we look before we step? *LSU Summer Stipend Grant*. \$5,000.

**Professional Memberships**

American Alliance for Health, Physical Education, Recreation and Dance (1985)  
 American College of Sports Medicine (1995, 2002)  
 American Society of Biomechanics (1994-97, 1999-present)  
 International Society of Biomechanics (2001-present)  
 North American Society for the Psychology of Sport and Physical Activity (2003-present)  
 Society for Neuroscience (1999-present)  
 Southeast American College of Sports Medicine (2003)

**Major areas of research interests**

Motor Control and Sensorimotor integration  
 (with emphasis is in whole-body movement control)

*Ongoing projects for the Sesorimotor Lab include:*

- Effects of gaze direction and lower body movement on goal-directed upper body movement direction, amplitude and response time
- Effects of visual field use on response time in hit and avoid tasks
- Endpoint accuracy and coordination in subjects with peripheral neuropathy
- Quantifying whole-body coordination strategies of vestibular patients pre- and post- rehabilitation
- Effects of auditory stimuli on temporal aspects of cyclic motions
- Effects of auditory stimuli on multidirectional stepping in Parkinson's patients

*Other ongoing projects:*

- Physical training and control strategies in subjects with peripheral neuropathy
- Coordination, vestibular, and autonomic function of the aging system

**SERVICE****Professional Service***External Reviewer for Promotion and Tenure:*

University of Idaho

*Manuscripts Reviewed for:*

Academic Exchange Quarterly, Acta Psychologica, Experimental Brain Research, European Journal of Applied Physiology, Human Movement Science, Motor Control

*Book Chapter Reviewer.*

Performed a comparative review of Chapter 14 The Cardiovascular System: The Heart in the anatomy text: Tortora, G. J., & Petti, K. *Principles of Human Anatomy*. New York: John Wiley & Sons, Inc. 2004

*Abstract Reviewer.*

LSU Life Course and Aging Center (LCAC) Annual Conference—student abstracts (Reviewer chair 2005; Reviewer 2007, 2004) and the 3<sup>rd</sup> Annual International Conference on Service-Learning Research. May 2003.

*Professional critic.*

Solicited for professional advise regarding the research of Dr. David Burke (Harvard Medical School) for the Eagle-Tribune newspaper. See article: Discovering 'qi' By Julie Kirkwood, Monday, June 28, 2004.

<http://www.eagletribune.com/framesets/search.htm>

*Session co-chair.*

The American Society of Biomechanics, 17<sup>th</sup> Annual Meeting, 1993.

**Committees and Involvement***University*

|              |   |
|--------------|---|
| 2005-present | Faculty advisor for the student organization (co-advisor 2005-6), Sigma Phi Omega Honor Society in Gerontology.   |
| 2005-present | LSU Service-Learning Grants and Awards Committee member.  |
| 2003-present | LSU Life Course and Aging Center (LCAC) member<br>LCAC Enhancement Awards Committee member (2005)<br>LCAC Annual Conference Committee—student committee, chair (2005); student poster committee member (2004).<br>Chair of the LCAC Art/Logo Contest (2004) |
| 2001-present | LSU Graduate Committee member   |
| 2005         | Committee member for LSU Chancellor's Distinguished Lecture series, Dr Chodzko-Zajko  |
| 2002-2005    | Invited to discuss my experience in service-learning. Focus session in 2005 and Workshops in 2002-2004.   |
| 2001-2004    | LSU Policy, Planning and Resource Allocation Committee member   |

*College and Department*

|              |  |
|--------------|--|
| 2008-present | College of Education Dean's Advisory Board   |
| 2008-present | Division Leader of the Motor Behavior division in the Department   |
| 2007-present | Tenured Faculty Committee member   |
| 2006-present | College of Education Awards Committee member   |
| 2006-present | Dept of Kinesiology Awards Committee member  |
| 2004-present | Guest Lecturer in KIN 2501 History and philosophy of Kinesiology. Fall and Spring semesters. Summer 2007-present |
| 2001-present | Director of the Sensorimotor Laboratory  |

|           |  |
|-----------|--|
| 2008-2009 | Motor Development search committee chair               |
| 2007-2008 | Motor Learning search committee member                 |
| 2007-2008 | Exercise Psychology search committee member            |
| 2006-2007 | Exercise Physiology search committee member            |
| 2002-2003 | Exercise Psychology search committee member            |
| 2001-2007 | Dept of Kinesiology Technology Committee member        |
| 2001      | Dept of Kinesiology Mission Statement Committee member |

### *Community Involvement*

|              |  |
|--------------|--|
| 2007-present | Present at local Parkinson's Disease support group   |
| 2005-2008    | Member for the Louisiana Fall Prevention Initiative  |
| 2005         | Participated in the Baton Rouge <i>Life After 50 Expo</i>  |
| 2001-2007    | Established 8 community partnerships in local elementary/middle schools for the service-learning component in KIN 3517, where students present a neural related fact-and-activity session to local 4 <sup>th</sup> , 5 <sup>th</sup> and 6 <sup>th</sup> grade children. |