

**VITAE**  
**RONALD VICTOR CROCE**

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**University Address**

Department of Kinesiology  
University of New Hampshire  
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Durham, NH 03824  
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**PERSONAL DATA**

Birth Date: 12/01/50; Height: 5'10; Weight: 190 lbs.

**EDUCATION**

University of New Mexico  
Albuquerque, NM, May 1983

Ph.D. Exercise Science-Motor Control and Special  
Populations; Minor: Cognitive Neuropsychology

Honor Society of Phi Kappa Phi

**Dissertation:** *The effects of EMG biofeedback on  
strength gains and IEMG levels of the quadriceps  
femoris muscle.*

Temple University  
Philadelphia, PA, May 1975

M.Ed. Kinesiology--Motor Learning and  
Control

Brooklyn College  
Brooklyn, NY, May 1973

B.S. Physical Education and General Science  
Cum Laude graduate.

**ADDITIONAL EDUCATION**

Medical Neuroscience  
Clinical Neuroanatomy

University of Arkansas Medical Sciences

Analysis of Human Motion

Boston University

**PROFESSIONAL EXPERIENCE**

- 1985 - Present                      **University of New Hampshire, College of Health and Human Services**  
   **Chair, Kinesiology Department (2009- 2013; 1995-1999, acting 2003)**  
   **Professor of Kinesiology (1996-Present)**  
   **Associate Professor (1990-1996)**  
   **Assistant Professor (1985-1990)**
- 1983 - 1985                         **University of Arkansas, Little Rock College of Education**  
   **Assistant Professor of Physical Education**  
   Coordinator of Corrective Therapy and Pediatric Exercise Program, Department of Health and Physical Education.
- 1981 - 1983                         **Albuquerque Public Schools**  
   Adapted Physical Education Teacher (K-12).
- 1980 - 1983                         **University of New Mexico**  
   Supervisor and Therapist - The Therapeutic and Corrective Exercise Clinic, Department of Health, Physical Education, and Recreation.
- 1980 - 1983                         **University of New Mexico**  
   Coordinator of Corrective Exercise and Motor Skills Program, The Perceptual Motor Learning School, Department of Health, Physical Education, and Recreation.
- 1979                                     **Albuquerque Veterans Administration Hospital,**  
   Albuquerque, NM  
   800-Hr Practicum in Kinesiotherapy (Certified June, 1982).
- 1975 - 1976                         **American School of Florence, Florence, Italy**  
   Instructor: Taught both girls and boys Physical Education (grades 1-12), Health Education (middle school), and Biology (upper school).

1975 - 1977

**Scuola di Medicina**, Florence, Italy  
Attended first-year medical school classes

### **CERTIFICATIONS**

**New Mexico State Teacher Certification in  
Physical Education and Corrective Physical  
Education** (Certification #08762)

**New York State Teacher Certification in  
Health & Physical Education & General Science**  
(Certification #12942602)

**Certified Kinesiotherapist (KTC)**  
(Certification #915)

### **INSTRUCTIONAL ACTIVITY at UNH**

- KIN 652: Clinical Kinesiology (Applied Musculoskeletal Anatomy) (undergraduate)
- KIN 653A: Musculoskeletal assessment Lab (undergraduate)
- KIN 653B: Biomechanics of Human Motion (undergraduate)
- KIN 706/806: Neurology (undergraduate/graduate)
- KIN 706/ 806L: Neurology Lab (undergraduate/graduate)
- KIN 825: Motor Control Issues in Dysfunction (graduate)
- KIN 842: Psychomotor Assessment (graduate)
- KIN 844: Medical and Exercise Issues in Disability (graduate)

### **DEPARTMENT AND UNIVERSITY SERVICE**

- Awards & Celebrations Committee (2017-present)
- Chair, Department of Kinesiology (2009-2014, 1995-1999); Acting Chair (2003).
- School of Health and Human Services, Chair Post-Tenure Review Committee (2000-present)
- School of Health and Human Services, Academic Policy Committee (1991-1997; Chair 1993-1997)
- School of Health and Human Services, Interdisciplinary Committee on Developmental Disabilities Research Council (appointed for the 19877-1988 academic year)

## PROFESSIONAL AWARDS

- College of Health and Human Services “Career Research Award” -- FY 2006-2007
- UNH Fraternity Association “Outstanding Faculty of The Year” -- FY 2003-2004.
- State of New Hampshire Excellence in Education Award-- "Outstanding Teacher in Higher Education"-- FY 2000-2001. Award is given to a faculty member from one of the state institutions of higher learning as the highest recognition of excellence in teaching.
- University of New Hampshire, "Jean Brierley Teaching Excellence Award"-- FY 2000-2001. Award represents the highest recognition of excellence in teaching at the university.
- University of New Hampshire "Teaching Excellence Award-School of Health and Human Service"-- FY 1991-1992.
- Research Fellowship, School of Health and Human Services-- spring 1993.

## CURRENT PROFESSIONAL COMMITTEES AND SERVICE

- Editorial Board, *Clinical Kinesiology* (1989-present).
- Editorial Board, *Adapted Physical Activity Quarterly* (1992-1999), currently guest reviewer.
- Reviewer for *Perceptual & Motor Skills* (2000-present), *Archives of Physical Medicine and Rehabilitation* (2004-present), *Isokinetics and Exercise Science* (2008-present), *Muscle & Nerve* (guest reviewer), *Research in Developmental Disabilities* (guest reviewer)

## MOST RECENT PRESENTATIONS

- March, 2018, Rome, Italy: Presentation at Forco-Italico University (University Institute of Motor Sciences), Rome, Italy, **TITLE OF PRESENTATION: DEVELOPMENT & IMPLEMENTATION OF THE BEIJING FITNESS TEST (BFT)**
- June, 2017, London, UK, ICKESS 2017: 19th International Conference on Kinesiology, Exercise and Sport, **TITLE OF PRESENTATION: “INTERRELATIONSHIP BETWEEN QUADRICEPS’ ACTIVATION AND INHIBITION AS A FUNCTION OF KNEE-JOINT ANGLE AND MUSCLE LENGTH: A TORQUE AND ELECTRO- AND MECHANOMYOGRAPHIC INVESTIGATION.”**
- June, 2015, San Diego, CA., 19th International Congress of Parkinson’s Disease and Movement Disorders, **TITLE OF PRESENTATION: "WALKING SPEED AND SWITCHING ATTENTION IN INDIVIDUALS WITH PARKINSON'S DISEASE."**

- June, 2015, San Diego, CA., 19th International Congress of Parkinson's Disease and Movement Disorders, **TITLE OF PRESENTATION: "HIGH-FREQUENCY EXERCISE IMPROVES EXECUTIVE FUNCTION IN INDIVIDUALS WITH PARKINSON'S DISEASE."**
- May 2015, Durham, NH, First Annual UNH Adapted Physical Education Conference. **TITLE OF PRESENTATION: "NORM- AND CRITERION-REFERENCED ASSESSMENT: FUTURE TRENDS IN MOTOR ASSESSMENT."**
- June 2014, Minneapolis, Minnesota, Sport Psychology and Motor Control Conference, **TITLE OF PRESENTATION: "INFORMATION PROCESSING, MOTOR CONTROL, AND LEARNING IN INDIVIDUALS WITH COGNITIVE IMPAIRMENTS PAPER PRESENTED IN "COGITA ERO SUM OR AMBULO ERO SUM SYMPOSIUM – NASPA."**
- November 2014, Maine AHPERD Conference: 2014 Keynote Speaker -- Adapted Physical Education. **TITLE OF PRESENTATION: "PAST EXPERIENCES AND FUTURE TRENDS IN MOTOR ASSESSMENT."**

### PAST PRESENTATIONS

**April, 2013**  
**Florence, Italy**

**Interdisciplinary Conference of the Academic Disciplines.** Title of Presentation: *Gait deficiencies In individuals with Down syndrome: A motor control perspective with implications for pedagogical intervention.*

**April 2013**  
**Charollete, NC**

**National AAHPERD Conference.** Title of Presentation: *Spatial and temporal variability of gait parameters in Down syndrome.*

**November 2012**  
**Rockport, Maine**

**Maine State Physical Education Conference.** Title of Presentation --Workshop. *Application of motor learning strategies to improve motor skill acquisition in individuals with disabilities.*

**January 2009**  
**Boston, MA**

**Eastern Athletic Trainers Association Northeast Regional Conference.** Title of Presentation: *Closed versus open chain movements on surface electromyography of the knee*

**July 2006**  
**Salzburg, Austria**

**24th International Symposium on Biomechanics in Sports--ISBS-2006.** Title of Presentation: *Knee valgus in self-initiated vertical jump landings: Developmental and gender comparisons.*

**July 2006**  
**Reston, VA**

**NCPERID Conference.** Title of Presentation:  
*Comparison of Isokinetic Peak Force and Power in Visual Impairments.*

**June 2006**  
**Turin, Italy**

**17th Congress of the International Society of Electrophysiology and Kinesiology.** Title of Presentation: *Angle- and velocity-specific alterations in torque and SEMG activity of the quadriceps and hamstrings during isokinetic extension-flexion movements.*

**June 2005**  
**Indianapolis, Indiana**

**National Athletic Trainers Annual Conference.** Title of presentation: *Gender comparisons of knee kinetics with and without perturbation.*

**January 2005**  
**Boston, MA**

**Eastern Athletic Trainers Association Northeast Regional Conference.** Title of presentation: *Analysis of isokinetic and closed-chain movements for hamstring Reciprocal co-activation.*

**January 2005**  
**Boston, MA**

**CSMI Conference on Research and Isokinetics.** Title of presentation: *Integrating surface electromyography (SEMG) and isokinetics: Clinical and research applications*

**August 2004**  
**Ottawa, Canada**

**XXIInd International Symposium on Biomechanics in Sports.** Title of presentation: *Loading rate in self-initiated vertical jump landing: Developmental and gender considerations.*

**June 2004**  
**Boston, MA**

**15th Scientific Conference of The International Society of Electrophysiology and Kinesiology.** Title of presentations:  
(1) *Knee musculature response strategies during self-initiated vertical jump landing.*  
(2) *Lower body analysis of muscle recruitment in visually impaired and sighted matches.*

**June 2004**  
**Indianapolis, IN**

**American College of Sports Medicine 51st Annual Conference.** Title of presentation: *Gender comparison of vertical jump landing knee angles normalized by kinetic energy.*

**March 2003**  
**SanDiego, CA**

**National AAHPERD Conference.** Title of presentation: *Muscle activation and force production in Parkinson's patients during sit-to-stand transfers.*

**March 2001**  
**Cincinnati, OH.**

**National AAHPERD Conference.** Title of presentation: *Distribution of fractionated response times and EMG recordings of individuals with mental retardation.*

**March 2000**  
**Orlando, FL**

**National AAHPERD Conference.** Title of presentation: *Isokinetic muscle strength and median frequency of EMG subsequent to a 10-week progressive resistance exercise program.*

**September, 1999**  
**Manchester, NH**

**New Hampshire Musculoskeletal Institute 6th Annual Symposium: Lower Extremity Injuries & Rehabilitation.** Title of presentation: *Comparison of isokinetic and EMG evaluation of functional knee activities in ACL-reconstructed knee.*

**April 1999**  
**Boston, MA**

**National AAHPERD Conference.** Title of presentation: *Reliability and concurrent validity of the Movement Assessment Battery for children: A pilot study.*

**September, 1998**  
**Manchester, NH**

**New Hampshire Musculoskeletal Institute 5th Annual Symposium: Upper Extremity Injuries & Rehabilitation.** Title of presentation: *EMG analysis of quadriceps/hamstring co-contraction during common lower extremity exercises.*

**April 1998**  
**Reno, NV**

**National AAHPERD Conference.** Title of presentation: *A comparison of isokinetic peak force and work parameters in youth with and without mental retardation.*

**February 1998**  
**Boston, MA**

**American Physical Therapy Association Annual Conference.** Title of presentation: *Backward versus forward walking: Clinical applications in the treatment of lumbar disc patients.*

**May 1997**  
**Denver, CO**

**National ACSM Conference.** Title of presentation:  
(1) *Comparison of leg muscle torque measurements in youths with mental retardation.*  
(2) *EMG analysis of isokinetic force output relative to ankle position.*

**May 1997**  
**Durham, NH**

**23rd IEEE Northeast Bioengineering Conference.** Title of presentation: *Minimum strength criteria as a predictor of predisposition to upper quadrant cumulative trauma disorders.*

**April 1997**  
**Durham, NH**

**Ergonomics: Meeting Workplace Needs.** Title of presentation: *Ergonomics of manual handling and lifting.*

**April 1996**  
**Durham, NH**

**Northeast AEE Conference.** Title of presentation: *Evaluating clinical change using of single-subject research designs.*

**April 1966**  
**Atlanta, GA**

**National AAHPERD Conference.** Title of presentation: *Physical fitness and individuals with disabilities: Strength testing.*

**June 1995**  
**Minneapolis, MN**

**National ACSM Conference.** Title of presentations:  
(1) *Isokinetic characteristics of knee flexors and extensors in nondisabled adults and adults with mental retardation.*



- (2) *Comparison of isokinetic arm strength in individuals with and without mental retardation.*
- (3) *Isometric strength of adolescents with mental retardation: A comparative study.*
- (4) *EMG analysis of closed chain exercises for vastus medialis oblique recruitment: Effect of knee and hip position.*

**April 1995**  
**Portland, OR**

**National AAHPERD Conference.** Title of presentation: *Coincidence-anticipation timing behavior of nondisabled, mentally retarded, and traumatic brain injured individuals under varying target exposure conditions.*

**April 1994**  
**Denver, CO**

**National AAHPERD Conference.** Titles of presentations:

- (1) *Utilization of a single trial versus maximal or mean values for evaluating strength in an atypical population.*
- (2) *The effect of a collaborative peer-tutor teaching program on the self-concept and school-based attitudes of urban students.*
- (3) *Measuring strength in special populations.*

**September 1993**  
**Ontario, Canada**

**North American Society of Pediatric Exercise Medicine: From Theory to Practice.** Title of presentations:

- (1) *Effects of exercise on speed and accuracy of problem solving in adolescents with mental retardation.*
- (2) *Reliability of hand-held dynamometry in children.*

**March 1993**  
**Washington, DC**

**National AAHPERD Conference.** Title of presentations:

- (1) *Effect of exercise duration and fitness level on speed and accuracy of problem solving in individuals with mental retardation.*
- (2) *Reliability of the Nicholas manual muscle tester with individuals who are mentally retarded.*

**October 1992**  
**Montreal, Canada**

**North American Federation of Adapted Physical Activity Symposium 92: Research Strategies in Adapted Physical Activity.** Title of presentations:

- (1) *Speed and accuracy in individuals with mental retardation.*
- (2) *Elbow extensor and flexor strength in individuals with mental retardation.*

**March 1992**  
**Durham, NH**

**Human Machine Interface. Ergonomics: Human Factors in the Workplace.** Title of presentation:  
*Human Capacity and Measurement.*

**March 1992**  
**Baltimore, MD**

**Eastern District AAHPERD.** Title of presentations:  
(1) *Single-Subject Designs: Clinical Applications and Research.*

- (2) *Effects of Exercise Duration on Speed and Accuracy of Simple Addition and Subtraction Tasks in Fit and Less-Fit Adult Females.*
- (3) *Effects of Exercise Programming Variables on Adherence Motivation.*

**November 1991**  
**Miami, FL**

**8th International Symposium on Adapted Physical Activity.** Title of presentations:

- (1) *Selected Fitness and Motor Behavior Parameters of Children and Adolescents with Insulin-Dependent Diabetes.*
- (2) *Effects of Exercise on Selected Fitness Parameters and Work Productivity in Individuals with Mental Retardation.*
- (3) *The Psychological Skills Inventory for Sport: An Examination of Nordic Able-Bodied and Disabled Skiers.*

**July 1991**  
**Washington, DC**

**National Consortium on Physical Education and Recreation for the Handicapped.** Title of presentations:

(1) *Impact of Exercise Programs on Individuals with Mental retardation.*

(2) *Current Status of Adapted Physical Education Master's Degree Programs.*

**April 1991**  
**San Francisco, CA**

**National AAHPERD Conference.** Title of presentations:

(1) *Effects of a Reinforcement-Based Exercise Program on Selected Fitness Parameters and Work Productivity in Adults with Mental Retardation.*

(2) *Competencies for Adapted Physical Educators.*

**March 1991**  
**Newport, RI**

**Eastern District AAHPERD Conference.** Title of presentation: *The Psychological Skills Inventory for Sport: An Examination of Nordic Skiers.*

**March, 1991**  
**Durham, NH**

**Human Machine Interface. Ergonomics: Human Factors in the Workplace.** Title of presentation: *Assessment of Human Capacity.*

**July, 1990**  
**Vancouver, Canada**

**International Conference on Sport, Recreation, Fitness, and Health for Mentally Handicapped People.** Title of presentations:

(1) *Effect of Four Modes of Reinforcement on Motor Skill Acquisition of Mentally Retarded Adults.*

(2) *Developing Physical Fitness Programs for Persons with Mental Retardation.*

(3) *Motor Performance as a Function of Social Context and IQ in Mentally Retarded Adults.*

**May 1990**  
**Washington, DC**

**RESNA 13th Annual International Conference on Rehabilitation Technology.** Title of presentation: *A University-Based Rehabilitation Technology Project.*

**April 1990**  
**New Orleans, LA**

**National AAHPERD Conference.** Title of presentations:

(1) *Effects of Diet and Exercise on Body Composition and Cardiovascular Fitness in Mentally Retarded Adults.*

*(2) Therapeutic Use of Outdoor Adventure Activities.*

**March 1990**  
**Durham, NH**

**Man-Machine Interface. Ergonomics: Human Factors in the Workplace.** Title of presentation: *Human Capacity and Measurement.*

**March 1990**  
**Lancaster, PA.**

**Eastern District AAHPERD Conference.** Title of presentation: *Sport Psychology: Implications for Special Populations. Effect of the Social Context on the Fine-Motor Performance of Adults who are Mentally Retarded.*

**June, 1989**  
**Berlin, West Germany**

**7th International Symposium on Adapted Physical Activity.** Title of Presentations:  
*(1) Exercise in Disability.*  
*(2) Social Facilitation and Fine Motor Performance in Mentally Retarded Adult Males.*  
*(3) Balance Acquisition of Preschool Learning Disordered Children.*

**May 1989**  
**Chapel Hill, NC**

**MCH Conference: Concepts in Motor Control, Motor Learning and Exercise Physiology - Implications For Assessment and Treatment of the Child With Motor Dysfunction.** Title of Presentation: *Concepts in Exercise Physiology and the Child with Motor Dysfunction. [Invited Speaker]*

**April 1989**  
**Durham, NH**

**Symposium on Human Factors & Ergonomics in the Workplace.** Title of Presentation: *Human Capacities and Job Demands.*

**April 1989**  
**Boston, MA**

**National AAHPERD.** Title of Presentation: *Fitness Development of Elementary School Physically Disabled Children. [Invited Speaker]*

**October, 1988**  
**Oakland, CA**

**17th National Conference on Physical Activity for the Exceptional Child.** Title of Presentation: *Exercise as a Modality for Children with Pediatric Disease.*

**September 1988**  
**Durham, NH**

**NH Public Radio.** Title of Presentation: *1984 Olympic Games: Television Commentator & Analyst.*

**April 1988**  
**Kansas City, MO**

**National AAHPERD.** Title of Presentation: *The Effects of Varying Types of Reinforcement on the Fine-Motor Skill Acquisition of Mentally Retarded Adults.*

**March, 1988**  
**Orono, ME**

**Third Maine Symposium on Adapted Physical Education.** Title of Presentation: *Physical Conditioning for Special Needs People.*

**March 1988**  
**Little Rock, AR**

**Southern District AAHPERD.** Title of Presentation: *Activity and Exercise in a Clinical Context. [Invited Speaker]*

**October 1987**  
**Bangor, ME**

**Third Northeast International Symposium on Exceptional Children and Youth.** Title of presentation: *SPECTRA: Special Physical Education Consulting Teacher in Rural America.*

**February, 1987**  
**Tampa, FL**

**CIVITIN - I'M SPECIAL International Conference on Physical Education and Sport for Disabled Persons.** Title of Presentation: *Neurobehavioral Intervention Based on Pediatric Exercise and Motor Behavior.*

**November 1986**  
**Laconia, NH**

**NH State AAHPERD.** Title of Presentation: *An Analysis of New England's Need for Special Physical Education.*

**February 1986**  
**Winston Salem, NC**

**Southern District AAHPERD.** Title of Presentation: *Affective Interfacing of Related Services Through a Transdisciplinary Approach.*

**October 1986**  
**Toronto, Canada**

**5th International Symposium on Adapted Physical Activity.** Title of Presentation: *Motor Skill Training: A Neurobehavioral Approach.*

**October 1986**  
**Newport Beach, CA**

**14th National Conference on Physical Activity for the Exceptional Child.** Title of Presentation: *A Neurobehavioral Approach to Motor Rehabilitation.*

**April 1985**  
**Atlanta, GA**

**AAHPERD National Convention.** Title of Presentation: *Controversy: Corrective Activities Should be the Responsibility of Adapted Physical Education. [Invited Speaker]*

**February 1985**  
**Albuquerque, NM**

**Southwestern AAHPERD National Convention.** Title of Presentation: *Adapted Physical Education and PL 94-142.*

**April 1985**  
**Little Rock, AR**

**Arkansas Association for the Visually Impaired 3rd Annual Workshop.** Title of Presentation: *Adapted Physical Education for the Visually Impaired.*

**March 1985**  
**Little Rock, AR**

**NRPA Southwest Professional Training Institute.** Title of Presentation: *Professional Training in Therapeutic Recreation: Innovative Planning [Invited Speaker]*

**November 1984**  
**Little Rock AR**

**Arkansas Orientation and Mobility Instructors Workshop.** Title of Presentation: *Application of Motor Learning Theory to the Teaching of Orientation-Mobility Skills.*

**October 1984**  
**Hot Springs, AR**

**Arkansas Council for Exceptional Children.** Title of Presentation: *A Neurobehavioral Approach to Motor Skill Acquisition.*

**February 1984**  
**Biloxi, MS**

**Southern District AAHPERD.** Title of Presentation: *Implications of Neurodevelopment and Motor Learning in Motor Rehabilitation.*

**January 1984**  
**Little Rock, AR**

**Easter Seals Society of America.** Title of Presentation: *Methodology for Teaching the Severely and Profoundly Handicapped in Physical Education.*

### MANUSCRIPTS/ SUBMITTED/IN-PREPARATION

Bruton, M, Miller, J, & **Croce, R.** Quadriceps and hamstrings responses during closed- and open-chained movements at varying velocities: implications for ACL injuries in females. *Data being analyzed.*

**Croce, R.**, Miller, J. Smith, W., et al. Velocity- and fatigue-dependent EMG changes in internal and external shoulder rotators. *Data being analyzed/manuscript preparation.*

Horvat, M., **Croce, R.**, Fallaize, A., Roswal, G, & Love, K. The use of the trail making test to assess motor and cognitive functioning in individuals with intellectual disabilities. *Submitted to perceptual & Motor Skills (5/1/2019).*

Hyson, K., Croce, R., Ross, R., & Smith, W. Sleep quality's effect on oscillatory activity underlying information processing during motor control. *Data being analyzed/manuscript written.*

Miller, N., **Croce, R.**, Ross, R., Hyson, K., & Smith, W. Effect of aging on sensorimotor processing: an ERP and response-time investigation. *Manuscript being prepared for submission to Biology of Aging.*

Teagan, F.N., LaCourse, J., Smith, W., & **Croce, R.** (THESIS). EEG and EMG sensorimotor measurements to assess proprioception following ACL reconstruction. *Manuscript being prepared for submission to Transactions of EEE.*

Yan, L., **Croce, R.**, Horvat, M., Love, K. Determination of cardiovascular functioning in Chinese adults with intellectual disabilities using the 3-minute step test. *Submitted to Clinical Kinesiology (5/1/2019).*

### ONGOING RESEARCH PROJECTS

Ross, R., **Croce, R.**, & Smith, W. Sensorimotor slowing in Parkinson's disease is mediated by a functional dysregulation of the motor generation process which predicts executive function ability. Data collection started during Fall 2018 and will continue through Fall 2019.

Dollin, A., **Croce, R.**, Smith W., & Ross, R. EEG Patterns of motor memory consolidation depend on practice structure: A comparison between variable and repetitive practice schedules. Summer undergraduate research recipient. Data collection during summer/fall 2019.

Williams, K., Ross, R., & **Croce, R.** The effect of acute exercise on recognition memory: An EEG oscillatory analysis. McNair Scholar recipient. Data will be collected during summer-fall, 2019.

**PUBLISHED MANUSCRIPTS/CHAPTERS IN BOOKS (Listed by author/year)**

Aufsesser, P., Horvat, M., & **Croce, R.** (1996). A critical examination of selected hand-held dynamometers to assess isometric muscle strength. *Adapted Physical Activity Quarterly*, 13, 153-165.

Craft, A., **Croce, R.**, Miller, J., Chamberlin, K., & Filipovic, D. (2015). Shifts in spectral power detected by Fourier and wavelet transforms during muscular contractions to volitional exhaustion. *Clinical Kinesiology*, 69(2), 1-10.

**Croce, R.** (1993). A review of the neural basis of apractic disorders with implications for remediation. *Adapted Physical Activity Quarterly*, 10, 173-215.

**Croce, R.** (1990). The effects of exercise and diet on body composition and cardiovascular fitness in mentally retarded adults. *Education and Training in Mental Retardation*, 25(2), 176-187.

**Croce, R.** (1988). Normal and abnormal motor functioning: A review of contrasting roles of cortical and subcortical motor centers (part I). *Clinical Kinesiology*, 42(2), 42-50.

**Croce, R.** (1988). Normal and abnormal motor functioning: A review of contrasting roles of cortical and subcortical motor centers (part II). *Clinical Kinesiology*, 42(3), 62-73.

**Croce, R.** (1988). Increasing motor skill acquisition in mentally retarded adults. *PALESTRA: The Forum of Sport, Physical Education and Recreation for the Disabled*, 4(2), 12-13. [research synopsis]

**Croce, R.** (1987). Exercise and physical activity in the management of progressive muscular dystrophy: A review for practitioners. *PALESTRA: The Forum of Sport, Physical Education, and Recreation for the Disabled*, 3(3), 9-15.

**Croce, R.** (1987). Motor Skill training: A neurobehavioral approach. In M.E. Berridge & G.A. Graham (Eds.), *International Perspectives on Adapted Physical Activity* (pp. 35-41). Champaign, IL: Human Kinetics.

**Croce, R.** (1986). The effects of EMG biofeedback on strength acquisition. *Biofeedback and Self-Regulation*, 11(4), 299-310.



- Croce, R.** (1985). Fine versus gross motor skills: A new look. *Arkansas Journal of Health, Physical Education, and Recreation*, 20(1), 17-18.
- Croce, R.** (1983). Adapted physical education for impaired, disabled, or handicapped children. *The Coalition Lawline*, 1(3), 5-7.
- Croce, R.,** Craft, A., Miller, J., Chamberlin, K. & Filipovic, D. (2015). Quadriceps' mechano- and electro-myographic time-frequency responses during muscular contractions to volitional exhaustion. *Muscle & Nerve*, 53(3), 452-463.
- Croce, R.,** Davis, R., Barber, H., & Vroman, N. (1998). Motor skill acquisition as a function of scheduling and frequency of knowledge of results in children ages 8-10. *Clinical Kinesiology*, 52, 58-63.
- Croce, R.,** & DePaepe, J. (1989). A critique of therapeutic intervention programming with an alternative approach based on motor learning theory. *Physical and Occupational Therapy in Pediatrics*, 9(3), 5-33.
- Croce, R.,** DePaepe, J. & Lange, E. (1989). The social transformation of corrective physical education, *Clinical Kinesiology*, 43, 11-15.
- Croce, R.,** & Horvat, M. (1995). Exercise-induced activation and cognitive processing in individuals with mental retardation. In A. Vermeer & W Davis (Eds.), *Medicine and sport science: Physical and motor development in mental retardation*. Basel, Switzerland: Karger AG. (pp. 144-151).
- Croce, R.,** & Horvat, M. (1992). Effects of reinforcement-based exercise on fitness and work productivity in adults with mental retardation. *Adapted Physical Activity Quarterly*, 9, 148-178.
- Croce, R.,** Horvat, M, & McCarthy, E. (2001). Reliability and concurrent validity of the movement assessment battery for children. *Perceptual and Motor Skills*, 93, 275-280.
- Croce, R.,** Horvat, M., & McCubbin, J. (1990). Exercise in Disability. In G. Doll-Tepper, C. Dahms, B. Doll, & H. V. Selzam (Eds.). *Adapted Physical Activity: An interdisciplinary approach*. Berlin: Springer-Verlag (pp. 275-279).
- Croce, R.,** Horvat, M., & Pitetti, K. (1998). Predication of dynamic strength in individuals with mental retardation. *Clinical Kinesiology*, 52, 7986.

- Croce, R.,** Horvat, M., & Roswal, G. (1996). Augmented feedback for enhanced skill acquisition in individuals with traumatic brain injury. *Perceptual and Motor Skills*, 82, 507-514.
- Croce, R.,** Horvat, M., & Roswal, G. (1995). Coincidence-anticipation timing behavior of nondisabled, mentally retarded, and traumatic brain injured individuals under varying target exposure conditions. *Perceptual and Motor Skills*, 80, 487-496.
- Croce, R.,** Horvat, M., & Roswal, G. (1994). A preliminary investigation into the effects of exercise duration and fitness level on problem solving in individuals with mental retardation. *Clinical Kinesiology*, 48(3), 48-54.
- Croce, R.,** & Jacobson, W. (1986). The application of two-point touch cane technique to theories of motor control and learning: Implications for orientation and mobility training. *Journal of Visual Impairment and Blindness*, 80(6), 790-793.
- Croce, R.,** & Lavay, B. (1985). Now more than ever: Physical Education for the school-age child. *The Physical Educator*, 45(2), 52-58.
- Croce, R.,** & Lavay, B. (1984). Physical education for the school aged child: Scope and implications. *Arkansas Journal of Health, Physical Education, and Recreation*, 19(1), 11-13.
- Croce, R.,** Miller, J., & Horvat, M. (2008). Alterations in torque and hamstrings agonist and antagonist activity over repeated maximum effort, reciprocal isokinetic flexion-extension movements. *Isokinetics and Exercise Science*, 16, 139-149.
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- Croce, R. (1994).** *UNH Discretionary Research Funds. Enhancing motion analysis biomechanics research capability. [\$9,765] (Research)*
- Croce, R. (1990-1993).** *U.S. Office of Special Education Rehabilitation Services/Division of Personnel Preparation (OSERS/DPP). Project SPECTRA: Special physical education consulting teacher in rural America. [4-year, \$245,933] (Professional preparation)*
- Croce, R. (1993).** *Competition for Undesignated Gifts Fund. An electroencephalography amplifier and signal conditioner to enhance kinesiology-biomedical engineering research and teaching capabilities. [\$4,800] (Research)*
- Croce, R. (1993).** *College of Health and Human Services. Research Center Fellowship [\$3,000] (Research)*
- Croce, R. (1992).** *Competition for Undesignated Gifts Fund. Proposal for an electromyography amplifier and signal conditioner. [\$4,000] (Research)*
- Croce, R. (1990).** *UNH University Faculty Development Award. Enhancing the knowledge base for biomechanics research. [\$1,500] (Research)*
- Croce, R., & DePaepe, J. (1987-1990).** *U.S. Office of Special Education Rehabilitation Services/Division of Personnel Preparation (OSERS/DPP). Project SPECTRA: Special physical education consulting teacher in rural America. [4-year, \$225,933] (Professional preparation and research)*
- Croce, R. & Gass, M. (1987-1990).** *US. Office of Special Education Rehabilitation Services/Research Projects for Initiating Special Programs for Individuals with Handicaps. Project Impact Outdoor/Adventure Education for initiating behavior changes in severely emotionally disturbed (SED) adolescents. [\$245,510] (Model programs and research)*



DePaepe, J. & Croce, R. (1987). *New Hampshire State Department of Education. Retraining of physical educators to provide appropriate physical education services to special needs children in New Hampshire. [\$65,000] (Professional preparation retraining)*

Croce, R., & DePaepe, J. (1987). *UNH Research Development Council/Research Initiation Funds. Funds for Kinesiology and exercise science research in special populations. [\$10,000] (Research)*

Croce, R. (1986). *University of Arkansas at Little Rock Faculty Research Grant: A comparison of simple and choice reaction times among mentally retarded, learning disabled, and normal children. [\$1,450] (Research)*

Croce, R. (1985). *University of Arkansas at Little Rock Faculty Research Grant: Social facilitation and fine motor performance in mentally retarded adults. [\$920.00] (Research)*

Croce, R. (1985) *Federal Law Enforcement Block Grant. A pilot program for physical fitness/wellness program for the Little Rock Police Department. [\$63,000] (Research)*

Croce, R. (1984-1986). *OSERS/DPP Grant. Masters level training of adapted physical educators. [\$110,000] (Professional preparation)*

Vroman, N., Croce, R., La Course, J. (1989-1991). *University of New Hampshire-New Hampshire Department of Education-Division of Vocational Rehabilitation. The vocational rehabilitation engineering cooperative. [\$50,000/year] (Service and research)*

Vroman, N., Croce, R., La Course, J. (1988). *University of New Hampshire/New Hampshire Department of Education-Division of Vocational Rehabilitation. The vocational rehabilitation engineering cooperative (year one). [\$90,693] (Service and research)*

### **RECENT THESES COMMITTEES**

- EEG and EMG sensorimotor measurements to assess proprioception following ACL reconstruction. [Committee Member]
- The effect of ankle position on peak torque and electromyographic activity of the knee flexors and extensors during isokinetic exercise. [Chair]

- A comparison of knowledge of results scheduling: Effects on acquisition and retention of a motor skill task in children. [Chair]
- Use of laser irradiation to facilitate action potential firing in cray fish motoneurons. [Chair]
- Reliability of a hand-held dynamometer in assessing isometric strength in children ages. [Chair]
- The effect of intensity and duration on exercise adherence. [Chair]
- Validity and reliability of hand-held dynamometry with cybex isokinetic measurements. [Chair]
- The effects of an adventure education program on the perceived self-efficacy of individuals who are developmentally challenged. [Chair]
- Neuromuscular rates of activation and relaxation in the muscles of the knee and ankle in elderly female fallers and non-fallers. [Committee member]
- A comparison of motor treatment programs based on sensory integration theory and motor learning theory on dynamic and static balance of learning disabled children. [Chair]
- The relationship between gonadotropin releasing hormone (GnRH) and gamma amino butyric acid (GABA) in the brain of the sea lamprey, *Petromyzon Mainus*. [Committee member]
- Backwards versus forward walking: Clinical applications in the treatment of lumbar disk patients. [Committee member]
- An examination of three facilitation styles used in adventure education with resident assistants. [Committee member]
- The effect of aerobic training on anaerobic performance. [Committee member]