

# Curriculum Vitae for Patrick Rider

## Patrick M. Rider, B.S., CSCS

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### I. Education

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M.A. East Carolina University, 2007, Department of Exercise and Sport Science

B.S. East Carolina University, Greenville, 2005, Department of Exercise Science

Attended North Carolina State University, College of Engineering, 2000-2003.

### II. Professional Experience

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#### A. Current Positions

05/2007 – present      Laboratory Scientist, Biomechanics Laboratory, Department of Exercise and Sport Science, East Carolina University, Greenville, North Carolina.

08/2005 – present      Biomechanical Research Scientist, L.T. Walker International Human Performance Center, East Carolina University, Greenville, North Carolina.

#### B. Previous Positions

08/2005 – 05/2007      Graduate Research Assistant, Biomechanics Laboratory, Department of Exercise and Sport Science, East Carolina University, Greenville, North Carolina.

11/2005 – 02/2006      Head Swimming Coach, J.H. Rose High School, Greenville, North Carolina.

01/2005 – 05/2005      Strength and Conditioning Intern, North Carolina State University, Raleigh, North Carolina.

## C. Teaching Experience

06/2006 – 05/2007 Teaching Assistant, Department of Exercise and Sport Science, East Carolina University, Greenville, North Carolina.

06/2006 – 05/2007 Math Remediation, D.H. Conley High School, Greenville, North Carolina

## III. Publications

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### A. Abstracts

**Rider, P.**, Gruber, A., Helseth, J., Hortobagyi, T. & DeVita, P. (2006). Age but not strength is associated with mechanical plasticity in gait. Proceedings of the 34rd Annual meeting of the American College of Sports Medicine, Southeast Regional Chapter, 34, 8.

**Rider, P.**, Gruber, A., Helseth, J., Hortobagyi, T. & DeVita, P. (2006). The effect of muscular strength on the development of mechanical plasticity in older adults. Proceedings of the 2006 Human Movement Science Research Symposium, 1, (no page number).

Gruber, A., **Rider, P.**, Helseth, J., Hortobagyi, T. & DeVita, P. (2006). Changes in inter-joint coordination during gait with age. Proceedings of the 34rd Annual meeting of the American College of Sports Medicine, Southeast Regional Chapter, 34, 8.

Zalewski, P., Gruber, A., **Rider, P.**, Bushey, E., & DeVita, P. (2006). Muscles generate more energy in ascent running than they dissipate in descent running. Proceedings ECU Graduate Student Research Day 15, 52.

DeVita, P., **Rider, P.**, Gruber, A., Helseth, J., Steinweg, K. & Hortobagyi, T. (2006). Mechanical plasticity in gait is associated with increased age but not decreased strength. Journal of Biomechanics, 39 (suppl), S113.

DeVita, P., Steinweg, K., **Rider, P.**, Gruber, A. & Hortobagyi, T. (2007). Reduced stride length in older adults is an energy saving mechanism. Medicine and Science in Sports and Exercise (suppl.) 39, s76.

DeVita, P., Janshen, L., Gruber, A., **Rider, P.**, Solnik, S., Zalewski, P., Moscicki, B. & Hortobagyi, T. (2007). Muscle function is biased towards positive over negative work in level human gait. Proceedings CD of the 30th Annual Meeting of the American Society of Biomechanics.

DeVita, P., **Rider, P.**, Gruber, A., Steinweg, K., Fisher, M., Mazzenga, A., Solnik, S. & Hortobagyi, T. (2007). Eccentric but not concentric muscle work is retained with age in level walking. Proceedings CD of the 30th Annual Meeting of the American Society of Biomechanics.

## IV. Presentations

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**Rider, P.**, Gruber, A., Helseth, J., Hortobagyi, T. & DeVita, P. Age but not strength is associated with mechanical plasticity in gait. American College of Sports Medicine, Southeast Regional Chapter, Charlotte, NC, February 9, 2006.

**Rider, P.**, Gruber, A., Helseth, J., Hortobagyi, T. & DeVita, P. The effect of muscular strength on the development of mechanical plasticity in older adults. 2006 Human Movement Science Research Symposium, University of North Carolina and Chapel Hill, Chapel Hill, NC, February, 2006.

Gruber, A., **Rider, P.**, Helseth, J., Hortobagyi, T. & DeVita, P. Changes in inter-joint coordination during gait with age. American College of Sports Medicine, Southeast Regional Chapter, Charlotte, NC, February 9, 2006.

Zalewski, P., Gruber, A., **Rider, P.**, Bushey, E., & DeVita, P. Muscles generate more energy in ascent running than they dissipate in descent running. ECU Graduate Student Research Day, Greenville, NC, March, 2006.

DeVita, P., Steinweg, K., Rider, P., Gruber, A. & Hortobagyi, T. Reduced stride length in older adults is an energy saving mechanism. American College of Sports Medicine, New Orleans, Louisiana, June, 2007.

DeVita, P., Bushey, E., **Rider, P.**, Gruber, A., Helseth, J. & Zalewski, P. Muscle Work is Larger While Running Up vs. Down an Inclined Surface. 5<sup>th</sup> World Congress of Biomechanics, Munich, Germany, August, 2006.

DeVita, P., **Rider, P.**, Gruber, A., Helseth, J., Steinweg, K. & Hortobagyi, T. Mechanical plasticity in gait is associated with increased age but not decreased strength. 5<sup>th</sup> World Congress of Biomechanics, Munich, Germany, August, 2006.

DeVita, P., Janshen, L., Gruber, A., **Rider, P.**, Solnik, S., Zalewski, P., Moscicki, B. & Hortobagyi, T. Muscle function is biased towards positive over negative work in level gait. American Society of Biomechanics, Stanford, California, August, 2007.

DeVita, P., **Rider, P.**, Gruber, A., Steinweg, K., Fisher, M., Mazzenga, A., Solnik, S. & Hortobagyi, T. Eccentric but not concentric muscle work is retained with age in level walking. American Society of Biomechanics, Stanford, California, August, 2007.

## V. Teaching

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### A. Courses Taught at East Carolina University

#### 1. Undergraduate

- a. EXSS 2850 Structural Kinesiology (Teaching Assistant)

## **VI. Professional Service**

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05/2004 – 10/2006 Volunteer Assistant Coach – A.G. Cox Middle School Football  
11/2000 – 02/2003 Volunteer Assistant Coach – D.H. Conley High School Swimming

## **VII. Memberships in Professional Societies**

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National Strength and Conditioning Association  
Southeast Region of the American College of Sports Medicine

## **IX. Science Skills**

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### **A. Equipment and Software**

1. Qualysis Track Manager software
2. Visual 3D software and instruments
3. KinCom Dynamometer
4. Noraxon Electromyography Devices
5. AMTI Force Platforms
6. Microsoft Word and Excel

### **B. Procedures**

1. Basic fitness assessment
2. Maximal exercise testing
3. Strength and conditioning program development
4. Biomechanical testing and evaluation
5. Motion analysis including EMG analysis
6. Isokinetic and isometric strength testing

## **IX. References**

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Dr. Paul DeVita  
Thesis Advisor and Biomechanics Professor

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Dr. Tibor Hortobagyi  
Director of Biomechanics Laboratory

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Mr. Mike McCammon  
Associate Director/Guest Lecturer East Carolina University

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