



Dr. David S. Fisher

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EDUCATION

- 2005 **Stanford University** **Stanford, CA**
Ph.D. in Mechanical Engineering - Biomechanical Engineering Division
Thesis: Methods to systematically change the patterns of gait associated with knee osteoarthritis
Advisor: Thomas Andriacchi
- 2001 **Stanford University** **Stanford, CA**
M.S., Mechanical Engineering
Advisor: Thomas Andriacchi
- 2000 **Rose-Hulman Institute of Technology** **Terre Haute, IN**
B.S., Mechanical Engineering
Minors: Computer Science and Mathematics

RELATED EXPERIENCE

- 2005 – **Professor of Mechanical Engineering** **Terre Haute, IN**
Rose-Hulman Institute of Technology
Courses taught in 2005-2006:
- ME430 – Mechatronics
 - ES204 - Mechanical Systems
 - EM104 – CAD Design
 - ME520 - Computer Aided Machining
 - ME311 - Mechanical Measurements Laboratory
- ME430 Mechatronics** - The Mechatronics course at Rose-Hulman is a combination of mechanical engineering, electrical engineering, controls, and computer science. The focus is to provide students with an understanding of how to interpret sensor inputs to control physical outputs. The course covers logic gates, BJT and FET transistors, IR sensors, ladder logic using PicoSoft, PLC controllers, H-bridges, stepper motors, assembly code for PICs, and programming a 68HC11 using C.
- CAD Design** – Proficient with SolidEdge and SolidWorks, experience with ProE, CadKey, AutoCad
- 2004 – 2005 **ME218 Smart Product Design Teaching Assistant** **Stanford, CA**
I volunteered as a teaching assistant in a mechatronics course at Stanford. I worked with Dr. Edward Carryer helping students with labs and projects. The course involves basic electronics, as well as, microprocessor programming and system integration. Experience programming in C for Motorola 68HC12, assembly for PIC microprocessors, MicroBug, Forth, CodeWarrior, MPLAB, Epic.
- 2001 – 2005 **Los Alto High School Robotics Club Instructor** **Los Altos, CA**
On a volunteer basis, I helped develop and lead weekly workshops for a high school robotics club. Fellow students at Stanford and I setup a series of lectures on engineering concepts applicable to robotics, concluding in a robotics competition. We also mentored the students with design and construction of their robot in the national FIRST robotics competition for 3 years.

PUBLICATIONS

Fisher DS, Alexander EJ, Dyrby CO, Andriacchi TP. Initial Gait Characteristics Influence The Effect Of Footwear Intervention To Modify Knee Loading. 48th Annual Orthopaedic Research Society 2001

Fisher DS, Williams M, Andriacchi TP. The Therapeutic Potential for Changing Patterns of Locomotion: An Application to the ACL Deficient Knee. ASME Bioengineering Conference 2003

Fisher DS, Mündermann A, Andriacchi TP. Gait Adaptations To Footwear Are Not Transient: Implication For The Treatment Of Knee Osteoarthritis. American Society of Biomechanics Conference 2003.

Fisher DS, Mündermann A, Andriacchi TP. Gait Adaptations To Recent Footwear History: Implication For The Treatment Of Knee Osteoarthritis. 50th Annual Orthopaedic Research Society 2004

Fisher DS, Mündermann A, Andriacchi TP. Speed Effects On Knee Adduction Moments Using Intervention Footwear: Implication For The Treatment Of Knee Osteoarthritis. American Society of Biomechanics Conference 2004.

Fisher DS, Akkani AO, Mündermann A, Andriacchi, TP. A Novel Method For Reducing The Knee Adduction Moment During Walking: A Potential Approach To Slow The Progression Of Knee Osteoarthritis. 51st Annual Orthopaedic Research Society 2005

Recent journal acceptance:

Fisher DS, Dyrby CO, Mündermann A, Morag E, Andriacchi TP. Initial gait characteristics influence the effect of footwear intervention to modify knee loading. Journal of Orthopaedic Research 2006

PATENTS

Inventor on US provisional patent application no. **60/296,949** filed June 8, 2001

Inventor on US patent application no. **60/315,873**. Sampling devices and methods utilizing a horizontal capillary test strip. Filed August 29, 2001

Inventor on International Patent **WO 02/100278 A1**. Sampling devices and methods utilizing a horizontal capillary test strip. International Publication date 19 December, 2002.

Patient rights are the property of Roche Diagnostics.

OTHER WORK EXPERIENCE

1999	Analytic Engineering Inc. Designed and constructed plastic injection mold for SCUBA communicator	Columbus, IN
1998	Cummins Engine Company Heat and Fluids Research Group – Developed oil cooling model	Columbus, IN
1997	Cummins Engine Company Product Environment Management Group – Developed EPA regulations model	Columbus, IN

NOTABLE AWARDS

2004	Veterans Administrative Pre-Doctoral Health Rehabilitation Fellowship One year stipend award from Sept 2004 – Sept 2005
2001	National Defense Science and Engineering Graduate Fellowship Three year tuition and stipend award from Sept 2001 – Sept 2004
2000	Stanford Graduate Fellowship One year tuition and stipend award from Sept 2000 – Sept 2001
1999	Rose-Hulman Bogart Award winner 4.0 GPA - #1 class rank, end of undergraduate Junior year at Rose-Hulman