

Louis L. Flynn

lflynn@vub.ac.be

Pleinlaan 2, Building Z - Room ZT001c
B-1050 Brussels. BELGIUM

Education: **PhD Student, Mechanical Engineering, Vrije Universiteit Brussel, April 2012 – Present (Expected Graduation: Fall 2016)**

PhD Student, Mechanical Engineering, Michigan State University, December 2009 – Spring 2012

MS Mechanical Engineering, Michigan State University, December 2009
Published thesis: Active Synthetic Wheel Prismatic Joint Biped.

BS in Mechanical Engineering, emphasis: Mechatronics, December 2002
University of Southern California, Los Angeles, CA

Experience: **University of Groningen, Groningen, Netherlands**
September 2006 – June 2007

Fulbright fellowship to study bird wing dynamics and the possible applications in science and engineering.

University of Pennsylvania, Philadelphia, PA
June 2004 – August 2006

Research Engineer, University of Pennsylvania Biology, with Dr. Lawrence Rome

Alfred E. Mann Institute for Biomedical Engineering, Los Angeles, CA
September 1999 – July 2003 Sr. Lab Technician <http://ami.usc.edu/>

Publications: Louis Flynn, Francesco Giovacchini, Luka Ambrozic, Maja Gorsic, Marko Munih, Virginia Ruiz-Garate, J.f. Collard, Renaud Ronsse, Raffaele Molino-Lova, Federica Vannetti, Joost Geeroms, Rene Enrique Jimenez Fabian, Bram Vanderborght, Dirk Lefeber, Nicola Vitiello. Introduction to CYBERLEGS: Hardware and Control, International Workshop on Wearable Robotics (WeRob) , 2014.

Joost Geeroms, Louis Flynn, Rene Enrique Jimenez Fabian, Bram Vanderborght, Dirk Lefeber. Overview of the design and operating principles of the CYBERLEGS alpha and beta prostheses. International Workshop on Wearable Robotics (WeRob), 2014.

Joost Geeroms, Louis Flynn, Rene Enrique Jimenez Fabian, Bram Vanderborght, Nicola Vitiello, Dirk Lefeber. Design, Development and Testing of a Lightweight and Compact Locking Mechanism for a Passive Knee Prosthesis. Proceedings of the 5th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics, 2014.

Louis Flynn, Joost Geeroms, Rene Enrique Jimenez Fabian, Bram Vanderborght, Nicola Vitiello, Dirk Lefeber. Ankle-Knee Prosthesis with Powered Ankle and Energy Transfer - Development of the CYBERLEGS Alpha-Prototype, Proceedings of the International Congress on Neurotechnology, Electronics and Informatics (Neurotechnix 2013), 2013

Joost Geeroms, Louis Flynn, Rene Enrique Jimenez Fabian, Bram Vanderborght, Dirk Lefeber . Ankle-Knee Prosthesis with Powered Ankle and Energy Transfer for CYBERLEGS α -Prototype., 13th IEEE International Conference on Rehabilitation Robotics (ICORR), Seattle, Washington USA, Issue: 2013, ISBN-ISSN: 978-1-4673-6023-4, 2013.

Tomik, P. Nudehi, S. Flynn, L.L. Mukherjee, R. Design, Fabrication and Control of Spherobot: A Spherical Mobile Robot. Journal of Intelligent & Robotic Systems: 1-15. JAN 18 2012.

Flynn, L.L. Jafari, R. Mukherjee R. An Energy Optimal Gait for the MSU Active Synthetic Wheel Biped. ASME Conf. Proc. DSCC2010(3). Paper MoBT6.2. 2010.

Flynn, L.L. Jafari, R. Mukherjee R. Active Synthetic Wheel Biped With Torso. IEEE Transactions on Robotics. 26(5): 816-826 2010.

Flynn, L.L. Jafari, R. Mukherjee R. Design and Control of an Underactuated Three-Link Rolling Biped. IEEE ICRA: 3392-3397. 2010.

Flynn, L.L. Jafari, R. Mukherjee R. Synthetic Wheel Prismatic Joint Biped With Torso. ASME Conf. Proc. DSCC2009(2):747-755 2009

Rome LC, Flynn L, Yoo TD. Biomechanics - Rubber bands reduce the cost of carrying loads NATURE 444 (7122): 1023-1024 DEC 21 2006

Rome LC, Flynn L, Goldman EM, Yoo TD. Generating electricity while walking with loads SCIENCE 309 (5741): 1725-1728 SEP 9 2005

Communications: Louis Flynn, Joost Geeroms, Rene Enrique Jimenez Fabian, Bram Vanderborght, Dirk Lefeber. Ankle-Knee Prosthesis with Powered Ankle and Energy Transfer for CYBERLEGS α -Prototype, Towards Active Lower Limb Prosthetic Systems: Design Issues and Solutions Workshop: Berlin, Germany , 2013.

Joost Geeroms, Louis Flynn, Rene Enrique Jimenez Fabian, Bram Vanderborght, Dirk Lefeber . The CYBERLEGS α -Prosthesis: Active Transfemoral Prosthesis with Knee to Ankle Energy Transfer - Energy Transfer System Design, SYMPOSIUM: Rehabilitation Robotics – Clinical Evidence and Technical Developments, 2013,.

Louis Flynn, Joost Geeroms, Rene Enrique Jimenez Fabian, Bram Vanderborght, Dirk Lefeber. The CYBERLEGS α -Prosthesis: Active Transfemoral Prosthesis with Knee to Ankle Energy Transfer - Ankle Development, SYMPOSIUM: Rehabilitation Robotics – Clinical Evidence and Technical Developments, Issue: 2013, , 2013,

Louis Flynn, Joost Geeroms, Rene Enrique Jimenez Fabian, Dirk Lefeber. Development of a powered knee-ankle prosthesis for transfemoral amputees, Human Friendly Robotics, 2012,

Teaching: Spring Semester, 2013 and 2014. Robotics Exercises.

Awards: 2008 NSF Graduate Research Fellowship
2006 Fulbright Scholarship