

Curriculum Vitae – Joakim Holmberg

Professional Experience

Guest Researcher/Engineer

INRETS (Institut national de recherche sur les transports et leur sécurité,
Laboratoire de Biomécanique et Mécanique des Chocs
- unité mixte avec l'université Lyon) Bron, France Aug 2009 – Dec 2009

- Modeling and Simulation for Musculoskeletal Biomechanics & Ergonomics

Research Assistant/PhD Student

Linköping University Linköping, Sweden Feb 2009 –

Technical Consultant and Specialist (private enterprise)

Sockertoppen Labs Frösön, Sweden Dec 2007 –

- Product Development, Finite Element Analysis, Biomechanics & Ergonomics

Assistant Lecturer /Teaching Assistant

Mid Sweden University Östersund, Sweden Okt 1998 – Dec 2007

- Course development, teaching and examination within the subjects of: Biomechanics, Design Optimization, Finite Element Analysis, Product Development & Solid Modeling
- Master and Bachelor Thesis Supervision
- Program Development, Marketing and Web Editor – Sports Technology Program

Technician (mechanical drawings)/Steel Worker

Erasteel Kloster AB Söderfors, Sweden Summers of 88 – 90, 94 – 96

Electronics Technician

Tierps Kretsteknik AB Tierp, Sweden Summer of 1992

Education

Degree of Licentiate of Engineering – Engineering Mechanics

Linköping University Linköping, Sweden Feb 2008

- Thesis: Computational Biomechanics in Cross-country Skiing
- Examiner: Prof. Anders Klarbring

Master of Science – Mechanical Engineering

Blekinge Institute of Technology Karlskrona, Sweden Jan 1999

- Thesis: Static and Dynamic Behaviour of Bolt-channel Joints in Aluminium Structures
- Examiner: Prof. Göran Broman

Exchange Student

Sheridan College Sheridan, WY Sep 1992 – May 1993

Selected Publications, Conference Proceedings and Talks

- Holmberg, L. J. ; Lund Ohlsson, M.: Biomekaniska simuleringar adderar insikt om längdskidåkning. *Svensk Idrottsforskning*, 2010, 19, 38-40 (in swedish)
- Holmberg, L. J. ; Lund, A. M.: A musculoskeletal full-body simulation of cross-country skiing. *Proc. IMechE Vol. 222 Part P: J. Sports Engineering and Technology*, 2008, 11-22 (<http://dx.doi.org/10.1243/17543371JSET10>)
- Holmberg, L. J.: Cross-country skiing biomechanics using measurement driven full-body simulations. *Public webcast via AnyBody Technology A/S, Aalborg, Denmark, Feb 18, 2008* (<http://www.anybodytech.com/196.0.html>)

- Holmberg, L. J.: Computational Biomechanics in Cross-country Skiing. *Linköping Studies in Science and Technology. Thesis 1346, LIU-TEK-LIC-2008:4, ISBN 978-91-7393-986-7, Linköping University, Linköping, Sweden, 2008* (<http://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-10671>)
- Holmberg, L. J. ; Holmberg H-C: The role of triceps in double-poling biomechanics, an introductory study. In *Proceedings of the 4th International Congress on Science and Skiing, St. Christoph am Aarlberg, Austria, Dec 14-20, 2007*
- Holmberg, L. J.: Cross-country Skiing Biomechanics using the AnyBody Modeling System. In *Conference Proceedings, ANSYS Conference & 25. CADFEM Users' Meeting. CADFEM GmbH, ISBN 3-937523-04-9, Dresden, Germany, Nov 21-23, 2007*
- Holmberg, L. J. ; Lund, A. M.: Using double-poling simulations to study the load distribution between teres major and latissimus dorsi. In *Science and Nordic Skiing, Linnamo, V., Komi, P.V. and Müller, E. (Eds.), Meyer and Meyer Sport, Oxford, UK, 2007, 81-89*
- Lund, A. M. ; Holmberg, L. J.: Which are the antagonists to the pectoralis major muscle in 4th gear free-style technique, cross-country skiing?. In *Science and Nordic Skiing, Linnamo, V., Komi, P.V. and Müller, E. (Eds.), Meyer and Meyer Sport, Oxford, UK, 2007, 112-118*
- Holmberg, J. ; Wagenius, P.: A biomechanical model of a double-poling skier. In *International Society of Biomechanics XIXth Congress on The human body in motion, CD Rom Abstracts and Proceedings, Milburn, P. (Ed.), University of Otago, Dunedin, New Zealand, 6-11 Jul, 2003*
- Holmberg, J. ; Rännar, L-E: Versatile Optimization. *Nordic MATLAB Conference Proceedings Oslo, Norway, Oct 17-18, 2001, 207-212*

Guest Researcher

Aalborg University

Aalborg, Denmark

May 2004

- The AnyBody Project (Leader: Prof. John Rasmussen)

Reviewer – Scientific Journals

- Computer Methods in Biomechanics and Biomedical Engineering
- Scandinavian Journal of Medicine and Science in Sports

Research Interests

- Computational Modeling and Simulation in Biomechanics
- Application of Advanced CAE Tools in Engineering

Professional/Research Affiliations and Networks

- International Society of Biomechanics, International Society of Biomechanics in Sports, The AnyBody Project Interest Group

Computing Skills

Proficiency in: The AnyBody Modeling System, MATLAB, SolidWorks, COSMOS

Working knowledge in: ALGOR, Rhinoceros

Laboratory Experience

- Experienced in designing and building test rigs for various purposes
- Proficient user of load cells, displacement measurement devices, the Spider8/Catman measurement system (HBM, Germany)
- Working knowledge of the VICON movement data acquisition and analysis system

References

- Professor Anders Klarbring, Linköping University, Sweden
 - E-mail: anders.klarbring@liu.se, Phone: +4613281117
- Professor John Rasmussen, Aalborg University, Denmark
 - E-mail: jr@ime.aau.dk, Phone: +4599409307