



Agnes Psikuta, PhD

Laboratory for Protection and Physiology
Swiss Federal Laboratories for Material Science and Technology (Empa)
Lerchenfeldstrasse 5
CH-9014 St. Gallen
Phone: +41 58 765 76 73
e-mail: agnes.psikuta@empa.ch

PROFESSIONAL EXPERIENCE

Apr 2008 - up to date (8.5 years)

Scientist at Laboratory for Protection and Physiology at Empa, St. Gallen, Switzerland

Main research activities:

- Maintaining leading position of Empa in manikin research field, such as evaluation, further improvement and new concepts for advanced measuring equipment and methodologies for clothing research, coupling full and body part manikins with a physiological model.
- Clothing modelling including heat and mass transfer in textiles and new knowledge on large-scale effects occurring in clothing such as the contact area and the air gap thickness between the clothing and the human body, modelling of adjacent air layer in clothing.
- Human thermoregulation and thermal sensation and comfort modelling including systematic model comparisons, advanced validation and improvement of models.

Feb 2005 – Feb 2008 (3 years)

PhD student at Laboratory for Protection and Physiology at Empa, St. Gallen, Switzerland and De Montfort University in Leicester, UK

Leading and executing PhD project entitled: *Development of an 'artificial human' for clothing research*

Jan 2002 – Jul 2004 (2 years)

Architect - Self employment

Architectural and technical designing and supervision of construction work in dwelling houses;
Renovation and adaptation project of XIX mansion to rehabilitation unit for children

EDUCATION

Aug 2003 – Sept 2004

European MSc in Environmental Technology with honours at Aalborg University in Esbjerg, Denmark, University of Applied Sciences in Emden, Germany and De Montfort University in Leicester, UK (joined title)

Oct 2000 – Sept 2004

MSc in Environmental Engineering with honours, specialization: air-conditioning, heating & sanitary installations at University of Technology in Wroclaw, Poland

Oct 1997 – Sept 2001

MSc in Urban Planning & Architecture with honours at University of Technology in Wroclaw, Poland

HEAT-SHIELD specific information

Within the HEAT-SHIELD project, Empa mainly works on screening and optimization of technical and biophysical solutions to reduce workers' heat stress. For this reason, we are developing and validating a generic tool to simulate the human surrounding in the transportation sector to be coupled with a cascade of related models, i.e. clothing model, physiological model, thermal sensation model. This tool is going to be used to generate virtual testing environments representing extreme and moderate scenarios to conduct systematic analysis of the influence of various factors on the human heat balance and to reduce heat impact based on optimized solutions.