

# Publications

- Chrpová, E. (1996), "Optimisation of the sewing process", *Proceedings of 9th International Congress on Condition Monitoring and Diagnostic Engineering Management*, Sheffield Academic Press, ISBN 1-85075-635-X, pp. 509-19.
- Chrpová, E. and Němeček, P. (1993), "The advantage of the acoustic method for optimising needle punching process", *Proceedings of 5th International Congress on Condition Monitoring and Diagnostic Engineering Management - COMADEM '93*, UWE Bristol, July, ISBN 1-871056-71-2, pp. 229-34.
- Chrpová, E. and Němeček, P. (1994), "The analyses of needle punching process by using the gated multispectra", *Proceedings of 6th International Congress on Condition Monitoring and Diagnostic Engineering Management - COMADEM '94*, New Delhi, India, July, ISBN 0-07-462360-5, pp. 315-22.
- Chrpová, E. and Němeček, P. (1995), "Use of acoustic noise emission for optimisation of sewing process", *Proceedings of 8th International Congress on Condition Monitoring and Diagnostic Engineering Management - COMADEM '95*, Queen's University at Kingston, Canada, June, ISBN 0-88911-718-7, Vol. 1, pp. 227-31.

## Liberec, Czech Republic

Faculty of Textile Sciences, Technical University of Liberec,  
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Tel: 00420 48 25441/25462

Professor Jiří Militký and Vladimír Bajzík, Department of Textile  
Materials  
Research staff: Research students

### *Prediction of hand from measurable characteristics*

#### Other partners:

**Academic**

None

*Project started:* 1995

*Finance/support:* Kč50,000 yearly

*Source of support:* The Textile University of Liberec

*Keywords:* Clothing, Textiles

**Industrial**

None

*Project ended:* 1998

Hand represents the main organoleptic characteristics of clothes. Evaluation of this characteristic is based on the base of subjective meanings.

The subjective handle is closely connected with the objective measurable surface, mechanical, bulk and thermal properties of textiles.

The main aim of this project is specification, the objective characteristics for prediction of subjective hand and creation of predictive type model. The methodology of predictive model building is based on the application of graphically oriented techniques for regression modelling.

This methodology is used for evaluation of a predictive model for prediction of the subjective hand of PET/wool fabrics.

## Project aims and objectives

These are:

- specification of characteristics connected with subjective hand;
- creation of predictive model characterizing hand.

Research  
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## Publications

Witický, J. and Bajžík, V. (1996), "Prediction of subjective hand of woollen fabrics", *Proceedings of the International Seminar Metrology in Textile Engineering*, Lodz, September.

Witický, J. and Bajžík, V. (1997), "Objective hand evaluation of PET/wool fabric", *ATC '97*, Taipei, June.

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## Liberec, Czech Republic

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Professor Stanislav Nosek, Department of Weaving Technology (newly renamed Department of Mechanical Technologies in Textiles)

Research staff: Ingolf Brotz, Petr Tumajer, Aleš Cvrkal and Jaroslava Richterová

### ***Research of shocks (impacts) and vibrations excited by technological processes in weaving and other textile machines***

#### Other partners:

Academic

None

Project start date: 1998

Finance/support: Kč1,900,000 (estimated)

Source of support: Applied with the Grant Agency of the Czech Republic (GACR) (or will be worked out as an internal project of TU Liberec)

Keywords: Textiles, Weaving

Industrial

None

Project ends: –

Many textile technological processes, especially the weaving process, produce during each working cycle a row of force impulses which affect the processed textile material as well as the machine. The impact of these impulses causes the propagation of delayed deformation of both media – textile material and machine parts – so that the deformation can return to the source of impulse through several paths. The result is that the next impulse changes with respect to the previous one and the technological process may become unstable or steadied in a different regime to that originally set on the producing system, etc. That can affect the quality of the produced good. At the same time, the excited