Accuracy in garment simulation
Sandra Kuijpers

Van de Heijden confectie
Guru Amsterdam
Du Pon & De Bruin
A-rticles
Hugo Boss
Willem de Kooning Acedemy

AMFI-Amsterdam Fashion Institute:
Senior Lecturer CAD, patterns and 3D Garment Virtualization.

University of Manchester, School of Materials:
MPhil, Evaluation of Physical and Virtual Fabric Drape Created from Objective Fabric Properties
Garment Simulation

Key requirements

- 3D Virtual Human
- Virtual Cloth
- 2D CAD Pattern

ACCURACY in and SEAMLESS interaction between

Cristobal Balenciaga
Fitting, mannequin Nina
Paris, 1968
Garment Simulation

Key requirements

- Prototyping
- Fitting, mannequin Nina
- Online
- Sales samples
- Catalogs

ACCURACY in every phase?

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Cristobal Balenciaga
Fitting, mannequin Nina
Paris, 1968
Cristobal Balenciaga

Fitting, mannequin Nina

Paris, 1968

Bending properties

Weight

Shear properties

Compression

Tensile properties

Friction

Drape

Handle

Comfort

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Objective Fabric Properties

Pierce (1930)

Established Instruments

The Kawabata Evaluation System

Handle; ‘Fabric Hand’
Kawabata, 1980

Drape meter
Cusick, 1962

Drape

KKES

Fabric Analysis by Simple Testing
Performance during cutting and making
De Boos and Tester, 1994

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Virtual fabric

Created based on fabric mechanical and physical properties

- Time costly
- How to organize?
- How to verify?
Time reduction

Organize

Share Knowledge

Fabric Data Base

Fabric Suppliers

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Time reduction

Verify

Properties

Drape Coefficient

Amplitude

Gain Drape data

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KES-FAST Similarity:
- Measurements are validated by in-depth research worldwide.

KES-FAST Differences:
- Measurement principle
- Measured area
- Applied forces, however for both systems in the low forces.
- Output, data, units

KES:
- Non Linear; more data is obtained
- Highly skilled employees are necessary for operating.
- University based and in Japanese industry.

FAST:
- Lower price range
- Robust and easy in use
- Used more often in the industry
THANK YOU!

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References

