

# CADANS Seminar 2015

Advanced digital technologies for the improvement  
and customization of wearable products

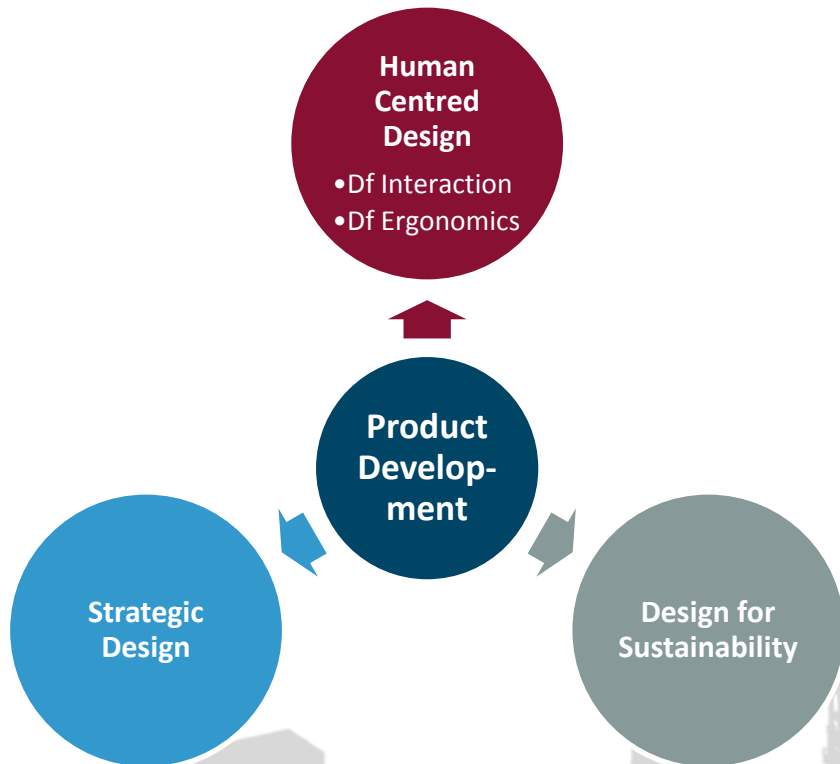


<http://cadans.uantwerpen.be>



June 2<sup>nd</sup>, 2015

# Research groups @ UAntwerp



Shape modeling



Tomography



Magnetic resonance imaging



Remote sensing

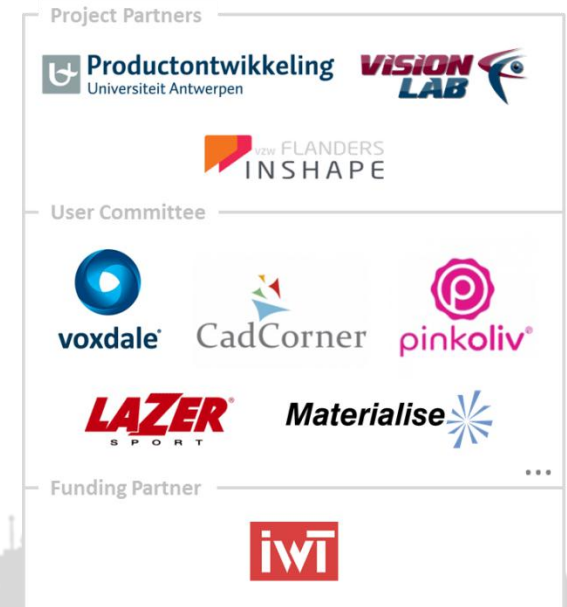
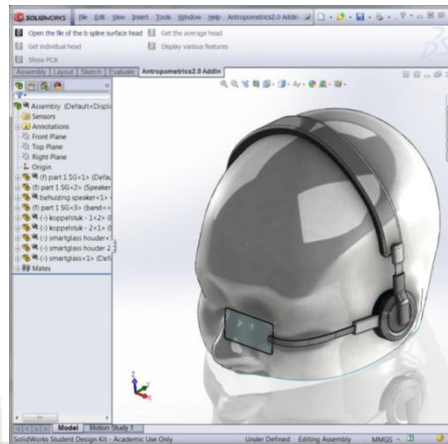
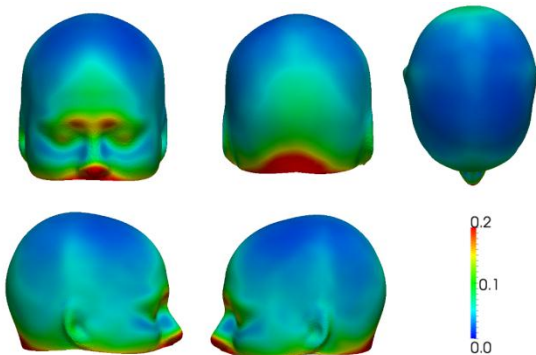
# Cadans TETRA project '14-'16

Context: rise of **3D technology** delivers a **wealth of information** via 3D scanning and provides opportunities for **improvement and customization** of products, e.g via 3D printing.

Goal: translate the wealth of 3D information to **statistical shape models** and integrate them in a standard **CAD-workflow** to reduce **design time** and improve product **fit and function** of wearable products and implants.

Focus on head product **sizing systems** and **personalisation**

- **CAD Plugin** for exploring shape variability and easy mass-customization
- **Realistic 3D head models**



# CADANS seminar topics

CAD  
design

sizing  
systems

mass-  
customization

body  
scanning

footwear

protective  
gear

ergonomics

motion  
tracking

Leverage **digital measurements and techniques** to add value to **wearable products**

digital  
fabrication

pressure  
sensing

sports  
equipment

textile &  
fashion

orthotics &  
orthopedics

ISO-norms

3D  
printing

CFD/FEA

3D  
anthropometry

# Morning program @ A.2.03

**09:00**    **Welcome & introduction**

Toon Huysmans - research manager iMinds-Vision Lab, UAntwerp

**09:15**    **Exploitation of 3D based resources (keynote)**

Alfredo Ballester - Instituto de Biomecánica de Valencia

**10:15**    Coffee break

**10:35**    **Bivolino's patented biometric sizing technology**

Gaby Ratajczak – ICT manager, Bivolino

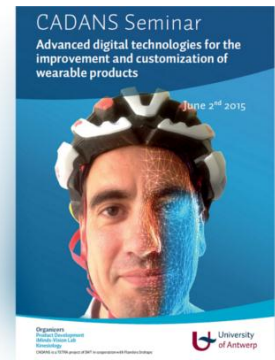
**11:05**    **Customization and fitting and how it affects the production process**

Tom Peeters – marketing specialist, RS Print

**11:35**    **CADANS methodology**

Jochen Vleugels – doctoral fellow, UAntwerp

**12:00**    Networking lunch



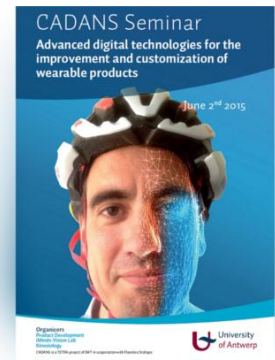
# Networking Lunch @ Central Hall

**12:00 – 13:00**      **Lunch**

**12:00 – 16:00**      **CADANS demo during lunch and coffee break @ A.2.07**

Jochen Vleugels – doctoral fellow, University of Antwerp

Rob Linders – assistant, University of Antwerp



# Afternoon program @ A.2.03

**13:00 Deriving design specifications from shape models**

Daniel Lacko – doctoral fellow, University of Antwerp

**13:30 From motion to M2OCEAN: Motion capturing and motor control**

Ann Hallemans – project coordinator M2OCEAN lab / professor, University of Antwerp

**14:00 Smartfit measurement campaign 2012 – 2013:  
results and implementation**

Joris Cools – research fellow, University College Gent

14:30 Coffee break

**15:00 Thermal comfort and fit**

Guido De Bruyne – professor, University of Antwerp

**15:30 Human body modeling**

Femke Danckaers – doctoral fellow, University of Antwerp

**16:00 Closing remarks**

Stijn Verwulgen – professor, University of Antwerp

