

# THOMO 2011

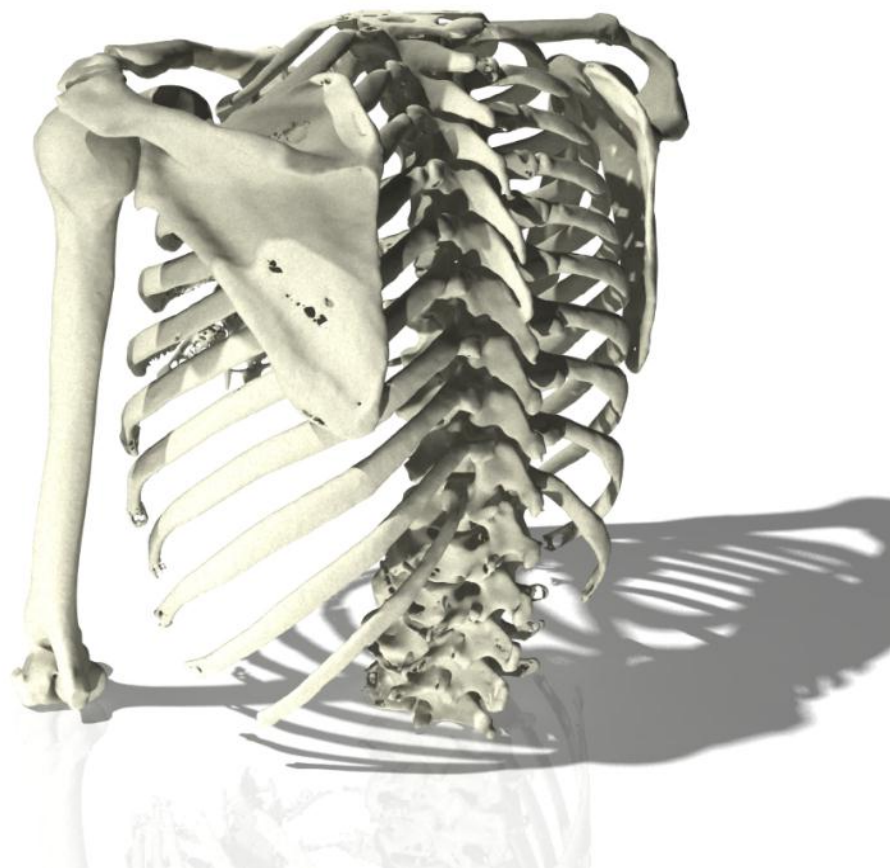
International Workshop

**From medical image reconstruction  
to human body models**  
*Valenciennes, France*  
*April 7<sup>th</sup>, 2011*

Université  
de Valenciennes  
et du Hainaut-Cambrésis



UNIVERSITY  
OF WEST BOHEMIA



[www.thomo.eu](http://www.thomo.eu)

## Topics Of interest

The workshop will focus on:

### Human mechanical and geometry properties

Acquisition of geometric data  
Mechanical properties  
Experiment and instrumentation on PMHS

### Modeling

Personalization and scaling techniques  
Numerical validation

### Presentation of THOMO results

## Workshop program

## Registration

No fee – Lunch included



8h30 – 9h00	Welcome, <i>Eric MARKIEWICZ, University of Valenciennes, France.</i>
9h00 – 10h00	<b>Invited conference</b> Acquisition on human subjects of data required for biomechanical human body modelling. <i>Jean Pierre VERRIEST, IFSTTAR-INRETS, France</i>
10h00 – 10h15	Coffee break
10h15 – 10h30	THOMO project presentation. <i>Pascal BAUDRIT, CEESAR, France.</i>
10h30 – 11h00	Study of the mechanical ribcage behaviour through the analysis of PMHS strain profiles in side and oblique impact. <i>Pascal BAUDRIT, Tiphaine LEPORT, CEESAR, France</i>
11h00 – 11h30	From medical imaging at different scales to thorax geometrical characterisation. <i>Fahmi CHAARI, Olivier MAYEUR, University of Valenciennes, France.</i>
11h30 – 12h00	Scaling modelling methodology used for thorax model. <i>Tomasz DZIEWONSKI, Michal PEDZISZ, University of Warsaw, Poland.</i>
12h00 – 12h30	Methodology for model validation. <i>Magdalena JANSOVA, University of West Bohemia, Czech Republic.</i>
12h30 – 13h30	Lunch

# Workshop program



- 13h30 – 14h30 Visit of UVHC team Facilities (*Driving simulator, Hopkinson bars, Horizontal rig, Pedestrian shock rig, X-ray  $\mu$ CT...*).
- 14h30 – 15h30 **Invited conference**  
Overview on biomechanical models of the human body for industrial and medical applications.  
*Eberhard HAUG, Muriel BEAUGONIN, ESI, France.*
- 15h30 – 15h45 Stabilisation process and robustness analyses of simplified/scaled GHBMC reference 50%tile male thorax model.  
*Jacek TOCZYSKI, University of Warsaw, Poland.*
- 15H45 – 16H00 Bone quality: experimentation to simulation.  
*Julien HALGRIN, University of Valenciennes, France.*
- 16H00 – 16H15 Coffee break
- 16H15 – 16H30 The 3D deformation of the human thorax under dynamic loading: Influence of geometrical parameters and analysis of injury mechanism through an experimental and modelling coupled approach.  
*Philippe VEZIN, Anne Laure DIDIER, INRETS, France.*
- 16H30 – 16H45 Rib strain measurement patterns as a function of thoracic crash type loadings in PMHS experiments.  
*Xavier TROSSEILLE, LAB, France*
- 16H45 – 17H00 Improved head model based head injury criteria: Towards a new head injury prediction tool.  
*Caroline DECK, Rémy WILLINGER, Strasbourg University, France.*
- 17H00 – 17H15 Reconditioning and instrumentation of PMHS.  
*Pascal POTIER, CEESAR, France.*
- 17H15 – 17H30 Medical imaging for geometrical modelling.  
*Sébastien LAPORTE, Arts et Métiers - PARISTECH, France*
- 17H15 – 17H30 **Workshop closure**  
*Cezary RZYMKOWSKI, University of Warsaw, Poland.*

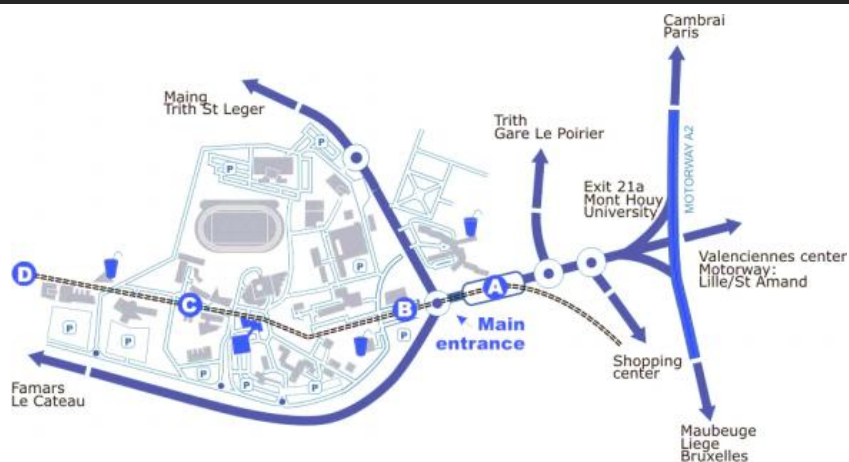


## Location

The workshop will take place at the University of Valenciennes, France.

It can be easily reached by public transportation from Lille, Paris or Brussels International Airport.

The tramway allows to access to the university from the center of Valenciennes and train station.



# Workshop Access



## From Paris

Take the A2 Paris/Brussels motorway  
Take the 21A exit to Mont Houy-University.

## From Lille

Take the A23 motorway.  
Leave at exit 21A to Mont Houy-University.



## Lille – Lesquin Airport

45km from Valenciennes  
Car hire available  
Shuttle service to the Lille TGV station

## Brussels Airport

115km from Valenciennes  
Car hire available

## Paris Charles de Gaulle Airport

181km from Valenciennes  
Car hire available



## Valenciennes train station

Take the train to Valenciennes from Paris or Lille.  
Take the tramway in the "University" direction  
to the station "Moriamez-Recherche"

## Hotels Accommodation



### LE GRAND HOTEL ★★★

8, place de la Gare 59300 Valenciennes  
Phone : +33.(0)3.27.46.32.01.

### LE CHAT BOTTE ★★★

25, rue Tholozé 59300 Valenciennes  
Phone : +33.(0)3.27.14.58.59.

### B&B HOTEL

Rue de Sologne 59770 Marly  
Phone : +33.(0)3.27.23.86.00.

[www.thomo.eu](http://www.thomo.eu)

## Registration

No fee - Lunch included

Please fill in the registration form and mail or email it to [Fahmi.chaari@univ-valenciennes.fr](mailto:Fahmi.chaari@univ-valenciennes.fr)

Before March 15th, 2011

Title: M  Ms  Dr  Pr

Name:

Institution:

Address:

City:

Country:

Phone:

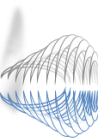
Mail:

Will attend lunch

Arriving in Valenciennes by car , train  or plane

On the \_\_\_<sup>th</sup> of April 2011.

Fahmi CHAARI  
LAMIH - UVHC  
Bâtiment Jonas  
Le Mont Houy  
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FRANCE



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