

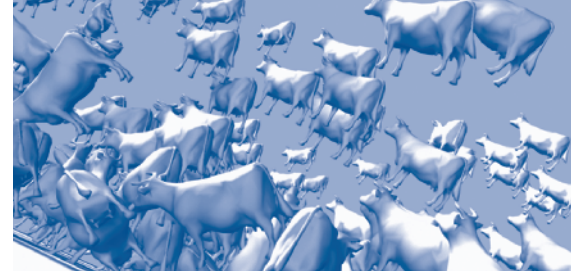
**COGAIN Conference**  
Tuesday 26 May



**MEDICAL**  
Wednesday 27 May



**INDUSTRIAL**  
Thursday 28 May



**GRAPHICAL**  
Friday 29 May

# VISIONDAY

**26 - 29 MAY 2009**



DTU Informatics invites companies, organizations and institutions interested in image analysis, vision systems, and computer graphics to four days of presentations and demonstrations.

**REGISTRATION**  
On or before 14 May 2009



08.00 Registration, exhibition, demonstrations, coffee, and rolls

**SESSION I**

- 09.00 Welcome and introduction  
Rector, Lars Pallesen, DTU
- 09.10 Eye guidance in natural behaviour  
B. W. Tatler, School of Psychology, University of Dundee, UK
- 09.50 Achievements and experiences in the course of COGAIN  
K. Raiha, Dept. of Computer Sciences, University of Tampere
- 10.30 Coffee, exhibition, demonstrations

**SESSION II**

- 11.00 Joys and sorrows in communicating with gaze  
A. Lykke-Larsen, Dept. of Physics and Chemistry, University of Southern Denmark
- 11.30 An introduction to the 17 papers presented in the afternoon
- 12.00 Lunch, exhibition, demonstrations, posters

**SESSION III Track 1**

- 13.30 Eye gaze assessment with a person having complex needs  
M. Buchholz & E. Holmqvist
- 13.50 Performance Evaluation of a Low-Cost Gaze Tracker for Eye Typing  
M. Barrett, H. Skovsgaard & J. S. Agustin
- 14.10 Text Editing by Gaze: Static vs. Dynamic Menus  
P. Majoranta, N. Majoranta, G. Daunys & O. Spakov
- 14.30 Selecting with pie menus  
M. H. Urbina, M. Lorenz & A. Huckauf

**Track 2**

- Environmental Control Application compliant with Cogain Guidelines  
R. Faisal, E. Castellina & F. Corno
- Home and environment control  
P. Novák, P. Moc, O. Štěpánková & L. Nováková
- A gaze- and cortex-contingent mouse cursor  
M. Dorr, C. Rasche & E. Bart
- Optimizing the interoperability between a VOG and a EMG system  
M. Ariz, J. Navallas, A. Villanueva, J. S. Agustin, R. Cabeza & M. Tall

14.50 Coffee, exhibition, demonstrations, posters

**SESSION IV Track 1**

- 15.30 Gameplay experience in a gaze interaction game  
L. Nacke, S. Stellmach, D. Sasse & C. A. Lindley
- 15.50 Select commands in 3D game environments by gaze gestures  
S. Vickers, H. Istance & A. Hyrskykari
- 16.10 GazeTrain: A case study of an action oriented gaze-controlled game  
L. F. Laursen & B. Ersbøll
- 16.30 Detecting Search and Rescue Targets in Moving Aerial Images using Eye-gaze  
J. Mardell, M. Witkowski & R. Spence
- 16.50 Feasibility Study for the use of Eye-Movements in Estimation of Answer Correctness  
M. Nakayama & Y. Hayashi

**Track 2**

- Eye Tracker Connectivity  
G. Daunys & V. Vysniauskas
- SW tool supporting customization of eye tracking algorithms  
P. Novák & O. Štěpánková
- Multimodal Gaze-Based Interaction  
S. Trösterer & J. Dzaack
- Gaze Visualization Trends and Techniques  
S. Stellmach, L. Nacke, R. Dachsel & C. A. Lindley

19.00 COGAIN2009 dinner at Brede Spisehus



08.00 Registration, exhibition, demonstrations, coffee, and rolls

**SESSION I**

- 09.00 Welcome and introduction  
Professor, Ph.D. Rasmus Larsen, DTU Informatics
- 09.05 Keynote address: Quantitative Image-Based Biomarkers in Clinical Trials  
Professor, Ph.D. Mads Nielsen, Dept. of Computer Science, University of Copenhagen
- 09.50 Validation of medical image analysis methods illustrated by the case of automated determination of bone age  
Director Hans Henrik Thodberg, Visiana
- 10.20 Student poster teasers
- 10.40 Coffee, exhibition, demonstrations

**SESSION II**

- 11.10 3D imaging in the cardiac interventional catheter lab  
Dr. Reinmar Killmann, Imaging & IT Division, Healthcare Sector, Siemens AG
- 11.40 Scanning, manipulation, and use of 3D surface models of the human head  
Assis. Professor, Ph.D. Rasmus R. Paulsen, DTU Informatics
- 12.10 Lunch, exhibition, demonstrations

**SESSION III**

- 13.30 Generative Models for Automated Brain MRI Segmentation  
Assis. Professor, Ph.D. Koen Van Leemput, Harvard Medical School (Massachusetts General Hospital) and MIT (Computer Science and Artificial Intelligence Laboratory), USA
- 14.00 The computerized radiologist – 4D MRI cardiac reconstruction, segmentation, and analysis  
Postdoc, Ph.d. Hildur Olafsdottir, DTU Informatics
- 14.30 Respiratory correction in 4D CT scanning for radio therapy planning  
Assistant Head of Laboratory of Radiation Physics, Ph.D. Carsten Brink, Odense University Hospital
- 15.00 Coffee, exhibition, demonstrations

**SESSION IV**

- 15.30 The application of singularities for tracking the dynamics in biological objects  
Professor, Ph.D. Steen G. Hanson, DTU Fotonik
- 15.55 Learning COPD sensitive filters in pulmonary CT  
Ph.D.-student Lauge Sørensen, Dept. of Computer Science, University of Copenhagen
- 16.20 Adaptive radiotherapy based on anatomical and functional imaging  
Assoc. professor Ludvig Paul Muren, Århus University Hospital
- 16.45 Poster prize, discussion and closing remarks  
Professor, Ph.D. Rasmus Larsen, DTU Informatics
- 17.00 Refreshments, exhibition, demonstrations
- 19.00 Visionday dinner at Hotel Fortunen



08.00 Registration, exhibition, demonstrations, coffee, and rolls

**SESSION I**

- 09.00 Welcome and introduction  
Managing director Jørgen Læssøe, JLI Vision A/S
- 09.10 Using photogrammetry to represent the human habitat in the internet  
Professor Franz Leberl, University of Graz
- 09.50 Robotic computer vision  
Associate professor Henrik Aanæs, DTU Informatics
- 10.20 Poster teasers
- 10.40 Coffee, exhibition, demonstrations

**SESSION II**

- Endoscopes in industrial vision
- 11.10 Endoscope vision systems  
Post doc. Sune Darkner, DTU Informatics
- 11.40 Modelling realistic point spread functions using optics design software  
Post doc. Phanindra Narayan Gundu, Senior researcher Thomas Martini Jørgensen
- 12.00 Lunch, exhibition, demonstrations

**SESSION III**

- 13.30 Fish and visions  
Senior researcher Michael Engelbrecht Nielsen, DTU Aqua
- 14.00 Quality assessment of salmon  
Stina Frosch
- 14.30 Hyperspectral imaging - broadening your vision  
Research scientist Ivar Baarstad, Norsk Elektro Optikk A/S
- 15.00 Coffee, exhibition, demonstrations

**SESSION IV**

- Future trends
- 15.30 Future trends in silicon imaging  
Stephane Claus, Sony Europe
- 16.00 Terahertz imaging  
Professor Peter Uhd Jepsen, DTU Fotonik
- 16.30 Poster prize, discussion, and closing remarks  
Jens Michael Carstensen, DTU Informatics
- 16.45 Refreshments, exhibition, demonstrations
- 17.15 The Industrial Visionday ends



08.00 Registration, exhibition, demonstrations, coffee, and rolls

**SESSION I**

- 09.00 Welcome and introduction  
Provost, Professor Knut Conradsen, DTU
- 09.05 Perception-Based, Efficient Real-Time Graphics: (GPU)-Rendering of Lights and Shadows You Really See  
Tobias Ritschel, MPI Informatik
- 10.00 Coffee, exhibition, demonstrations

**SESSION II**

- 10.20 Simulating Human Motion in Real-Time  
Morten Engell-Nørregård, Computer Science, Copenhagen University
- 10.50 Virtual Textures: Dealing with Enormous Texture-Based Resources  
Anders Scheel, Dalux
- 11.20 Fast Learners Accelerated (Survival) Guide to Graphics on the iPhone  
Daniel Povlsen, Aptocore
- 11.50 Student posters
- 12.15 Lunch, exhibition, demonstrations

**SESSION III**

- 13.30 The World with Two Triangles  
Iñigo Quilez, rgba demogroup
- 14.15 Coffee, exhibition, demonstrations

**SESSION IV**

- 14.35 Shape Understanding Using the Laplace Beltrami Operator  
Katarzyna Gebal, DTU Informatics
- 15.05 Geometry Processing Using Markov Random Fields  
Vedrana Andersen, DTU Informatics
- 15.35 Coffee, exhibition, demonstrations

**SESSION V**

- 15.55 Anisotropic Density Estimation in Global Illumination  
Lars Schjøth, Computer Science, Copenhagen University
- 16.20 Virtual Exploration of the Built and the Unbuilt  
Jacob Østergaard, Utopian City Scapes
- 16.45 Awards and closing ceremony followed by beer ceremony



**SPONSORS**

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## REGISTRATION

Register online at [www.visionday.dk](http://www.visionday.dk) before 14 May

Participation fee per day 1.200 DKK

Participation fee per day for members<sup>1</sup> 1.000 DKK

Participation fee per day for university employees 600 DKK

Participation fee per day for students<sup>2</sup> 150 DKK

Dinner at Hotel Fortunen 27 May 19.00 250 DKK

The participation fee covers the scientific program, exhibition, refreshments, and lunch.

All participants are welcome to exhibit equipment or posters.

<sup>1)</sup> For members of DAu, DIRA, DMTS, DOPS, DSAGM, DSTM, EMVA, IGDA and Øresund IT Academy and The COGAIN Association

<sup>2)</sup> Students should bring a poster for the exhibition.

## PAYMENT

Payment for participation should be settled by 20 May to Danish postal account (girokonto) 1-03-05-74 or to Danske Bank, reg. No. 4180 account No. 4263972007

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SWIFT: DABADKKK, IBAN: DK 57 3000 4263972007.

Clearly mark your payment "VISIONDAY" and NAMES of participants

## VENUE

DTU Informatics  
Building 308  
DK-2800 Kgs. Lyngby

## INFORMATION

Latest news, abstracts,  
practical information etc.  
[www.visionday.dk](http://www.visionday.dk)

## QUESTIONS AND FURTHER INFORMATION

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