



ANNUAL CONFERENCE

THE BRITISH SOCIETY FOR COMPUTER AIDED ORTHOPAEDIC SURGERY

8TH - 10TH MARCH, 2007

## CAOSUK 2007 CAOSUK 2007

VENUE: OLYMPIA CONFERENCE CENTRE, LONDON UK

[WWW.CAOSUK.COM](http://WWW.CAOSUK.COM)

### FINAL PROGRAMME



Dear Colleague,

As president of the executive board I would like to welcome you to the annual conference of The British Society for Computer Aided Orthopaedic Surgery (CAOS UK).

CAOS UK is an independent charity organisation allied with CAOS International. Its aim is to provide a forum for surgeons, scientists and industry participants who have an interest in computer aided orthopaedic surgery.

The conference will consist of keynote lectures, educational symposia, free paper sessions and practical workshops. It will address all aspects of orthopaedics to which computers and navigation techniques can be applied.

The faculty consists of international and national experts who have been invited to contribute from surgical, scientific and industrial backgrounds.

We believe this conference will be ideal for individuals to learn about current management in orthopaedics using computers and navigation as well as providing a platform for the discussion of original research.

With best regards,

Marci Maheson  
MBChB FRCS Eng FRCS Ed FRCS Orth  
President CAOS UK

## ***CONFERENCE ORGANISING COMMITTEE***

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# ***FACULTY***

## ***INTERNATIONAL***

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J Y JENNY, *FRANCE*  
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UWE SCHWARZ *WORMS, GERMANY*  
ERIC STINDEL *BREST, FRANCE*  
DAVID STULBERG *CHICAGO, USA*  
J WAHRBURG *SIEGEN, GERMANY*

## ***NATIONAL***

AJEYA ADHIKARI *ST HELIERS*  
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KIRTI MOHOLKAR, *BIRMINGHAM*  
FRED PICARD *GLASGOW*  
FERDINANDO RODRIGUEZ Y BAENA  
*LONDON*

# Scientific Programme

- **Total knee and total hip arthroplasty courses**
- **Key note lectures by experts**
- **Symposia**
- **Debates**
- **Scientific paper presentations**
- **Video Presentations**
- **Scientific poster exhibition**
- **Workshops for different available systems**
- **Industry exhibition and hands on demonstrations**

## **Programme at a Glance**

### **8<sup>th</sup> March**

- 13.00: Welcome & registration
- 13.55: Introduction and welcome
- 14.00: Lectures on basics of knee arthroplasty
- 14.35: Workshops on knee arthroplasty
- 16.00: Tea/Coffee break
- 16.20: Lectures on basics of hip arthroplasty
- 17.00: Workshops on hip arthroplasty
- 18.45: Close

## **9<sup>th</sup> March**

08.00: Basic Science

09.40: Osteotomy with CAS

10.20: Tea/Coffee

10.50: Total Knee Arthroplasty with CAS – Part 1

12.20: Inaugural and Miscellaneous Session

13.20: Lunch

14.20: Debate

15.00: Hip Resurfacing Arthroplasty with CAS

15.40: Tea/Coffee

16.00: Total Hip Arthroplasty with CAS

17.40: Poster Presentations

18.30: Closure

19.15: Proceed for Dinner

## **10<sup>th</sup> March**

- 08.00: Trauma with CAS
- 09.00: Spine with CAS
- 10.00: Tea/Coffee
- 10.30: ACL Reconstruction with CAS
- 11.20: Uni Compartmental Knee arthroplasty with CAS
- 12.00: Robotics
- 13.00: Lunch
- 13.40: CAOS UK AGM
- 14.00: Debate Roboteers Vs Navigators
- 14.30: Patello femoral Joint Arthroplasty with CAS
- 15.10: Tea/Coffee
- 15.30: Total Knee Arthroplasty with CAS – Part2
- 17.10: Poster Presentation session
- 17.40: Closing Session

## **Total knee and total hip arthroplasty navigation courses**

**8th march 2007**

13.00: Welcome & registration

13.55: Introduction

14.00: Lectures on basics of knee arthroplasty

### **Total knee arthroplasty** (Chair – D Stulberg, E Stindel)

14.00: Basic software assumptions, rationale and technical points in knee arthroplasty – Fred Picard

14.10: The technique of operative computer assisted total knee arthroplasty – Ajay Adhikari

14.20: Pitfalls and solutions in computer assisted total knee arthroplasty – Eric Stindel

14.30: Discussion – F Picard, W J Donnelly, A Adhikari, E Stindel, K Deep, D Stulberg, J Cobb

14.40: Workshops on knee arthroplasty

16.00: Tea/Coffee

### **Total hip arthroplasty** (Chair – W J Donnelly, F Picard)

16.20: Basic software assumptions and rationale technical points in computer assisted total hip arthroplasty – Kamal Deep

16.30: The operative technique of computer assisted total hip arthroplasty – William Donnelly



- 16.40: The operative technique of computer assisted total hip resurfacing arthroplasty – Marci Maheson
- 16.50: Pitfalls and solutions in computer assisted total hip arthroplasty – David Stulberg
- 17.00: Discussion – W J Donnelly, M Maheson, K Deep, D Stulberg, J Cobb
- 17.10: Workshops on hip arthroplasty
- 18.40: Close

# 9th & 10th march 2007

## Lectures and Sessions

9<sup>th</sup> March 2007

**Basic Science** (Chair – B Jaramaz, Prof Lutz P Nolte )

- 08.00: Optical, infrared and electromagnetic methods of position recognition in the three dimensional space – which is better – J Wahrburg
- 08.10: Registration techniques – CT scan/image intensifier/ imageless/ultrasound guided – B Jaramaz
- 08.20: Bone morphing – surface painting vs point registration – E Stindel
- 08.30: How can we improve the present systems for registration: problems & solution – Lutz P Nolte
- 08.40: How can we improve the present systems for position recognition in the space : problems and solution – F Y Baena
- 08.50: Preoperative planning for hip and knee replacement on a PC as first step of computer assisted surgery – J Wahrburg
- 09.00: Reference marker pin placement in computer aided orthopaedic surgery: the importance of soft tissue dissection – T N Board, D Kendoff, C Krettek & T Hufner

- 09.10: Integrating the echography in computer assisted orthopaedic surgery: the calibration step  
- G Dardenne, J D Gilcano, Hamitouche, E Stindel & C Roux
- 09.20: Three - dimensional auto computer aided designing (auto - cad): a new tool for orthopaedic surgeons - S. V. Sonanis
- 09.30: Discussion

### **Osteotomy** (Chair – F Picard, R Ellis )

- 09.40: The basic assumptions and technical points in computer assisted osteotomy – Lutz p Nolte
- 09.50: Technique, rationale and literature review in computer assisted osteotomy – D Pichora
- 10.00: Open Wedge high tibial osteotomy with computer aided navigation – Radek Hart
- 10.10: Discussion
- 10.20: **Tea/Coffee**

### **Total Knee Arthroplasty – Part 1**

(Chair – D Stulberg, D Pichora )

- 10.50: Literature review and rationale in computer assisted total knee arthroplasty – M S Dhillon
- 11.00: Results of computer assisted total knee arthroplasty – an American experience – D Stulberg

- 11.10: Results of computer assisted total knee arthroplasty – an Italian experience – Prof N Confalonieri
- 11.20: Clinical experience from Germany after 2000 computer navigated total knee replacement: a prospective randomised trial with five year follow up – standard technique versus computer navigated TKR  
H-E Hoffart, N Vasak & E Langenstein
- 11.30: Computer assisted knee arthroplasty does not result in improved functional outcome at one year compared with conventional instrumentation – S A Sexton, Y Kamat, C Pearce & A Adhikari
- 11.40: Quality of implant alignment and early results in minimally invasive navigated total knee arthroplasty – K E Bohlen, F Lampe, S P M Dries & E Hille
- 11.50: Electromagnetic computer assisted navigation of total knee joint replacement versus the conventional technique - the early experience in a provincial hospital in New Zealand - J Robinson, I Peters, M Hirner & R Sewgolan
- 12.00: Computer navigated total knee replacement in obese patients - Y D Kamat, K Aurakzai, Y Kalairajah, J Riordan, R E Field & A R Adhikari
- 12.10: Discussion

## **Inaugural & miscellaneous**

- 12.20: Use of computer aided navigation in upper limb surgery – B Jaramaz
- 12.40: Outcome measures in CAOS – Justin Cobb
- 12.50: The role of computer in training total joint surgeons – D Stulberg
- 13.00: Chief Guest Lecture

Prizes and Fellowships

## **13.20 Lunch**

### **Debate:** *Challenge the faculty*

“Should the computers be used in orthopaedic surgery” Moderator: A Bauer

- 14.20: We should never use computers in orthopaedic surgery – U Schwarz
- 14.30: We should always use computers in orthopaedic surgery – J Cobb
- 14.40: Discussion – U Schwarz, J Cobb, W Donnelly, D Stulberg, M Maheson, K Deep, Lutz P Nolte, F Picard, E Stindel

## **Hip resurfacing arthroplasty**

(Chair – M Maheson, D McGowan)

- 15.00: The results of computer assisted navigation in hip resurfacing arthroplasty – Marci Maheson

- 15.10: CT based precision hip resurfacing arthroplasty  
– J Cobb
- 15.20: A comparison of mechanical jig and computer navigated total hip resurfacing – M J Chambers, J Roberts & M P Kelly
- 15.30: ASR Hip resurfacing using computer navigation  
– R Ellis
- 15.40: **Tea/Coffee**

**Total hip arthroplasty** (Chair – W Donnelly, A Bauer )

- 16.00: Pitfalls and solutions in computer assisted total hip arthroplasty – K Deep
- 16.10: Results of computer assisted total hip arthroplasty – an Australian experience – W Donnelly
- 16.20: Results of computer assisted total hip arthroplasty – an American experience – D Stulberg
- 16.30: Measuring the implant orientation after THR and potential pitfalls – B Jaramaz
- 16.40: The validation of THR with post op comparison between navigation and CT data – J Y Jenny
- 16.50: Modular necks: the next generation of stem navigation in total hip replacement – Bruno Gerber
- 17.00: Volumetric wear measurements in total hip replacement – a novel study – V Kannan, R Heaslip, R Richards, V Sauret & J P Cobb

- 17.10: Learning curve and influencing factors of navigated total hip arthroplasty – N Vasak, H-E Hoffart & C A Schmidt
- 17.20: The use of computerised range of motion simulations to demonstrate the need for improved accuracy in acetabular cup placement in total hip arthroplasty – R L Thornberry
- 17.30: Discussion

**Poster Presentations** (Chair – J Cobb, A Adhikari)

- 17.40: Poster Presentations( Poster Number 1-12 for 2-3 minutes each)
- 18.30: Close

**Conference Dinner**

**Venue : La Porte Des Indes, 32 Bryanston St, W1H 7EG**

Telephone 0207 224 0055

- 19.15: Bus leaves Conference Centre
- 19.20: Bus leaves Olympia Hotel
- 19.30: Bus leaves Marriott Hotel
- 19.45: Sit down

## 10<sup>th</sup> March

### **Trauma** (Chair – P A Gruetzner, R Ellis )

- 08.00: Operative technique and use of computer assisted navigation in pelvic reconstructions  
– Paul Alfred Gruetzner
- 08.10: Literature review and rationale of computer assisted navigation in trauma – M S Dhillon
- 08.20: Navigated reduction and fixation of acetabular fractures – A I Nakhla, A Turner, F Rodriguez, S Harris, A D Lewis & J Cobb
- 08.30: Using computer assistance to calculate column screw dimensions for acetabular fractures – A I Nakhla, R Richards, A Turner, F Rodriguez, A Barrett, A D Lewis, A Hart & J P Cobb
- 08.40: A new way of guiding leg lengthening by Ilizarov method – R Ellis
- 08.50: Discussion

### **Spine** (Chair – T Lund, A Hammer)

- 09.00: The role of computer assisted navigation in spinal surgery and operative technique of computer assisted pedicle screw fixation – T Lund
- 09.10: Rationale and literature review in computer assisted pedicle screw fixation, pitfalls and solutions  
– D McGowan



- 09.20: Does navigated pedicle screw fixation reduce future revision – T Lund
- 09.30: Role of kyphoplasty surgery in vertebral trauma – A Hammer
- 09.40: Temporal geometric changes in the injured segments following thoraco-lumbar fractures using a quality motion analysis software – J S Mehta, J Hipp, I B Paul, V Shanbhag, A Jones, J Howes, P R Davies & S Ahuja
- 09.50: Discussion
- 10.00: **Tea/Coffee**

### **Anterior cruciate ligament reconstruction**

(Chair – B Gerber, K Moholkar )

- 10.30: The role of computer assisted anterior cruciate ligament reconstruction – K Moholkar
- 10.40: The validation of ACL navigation with post op comparison between navigation and CT data – J Y Jenny
- 10.50: Update on navigated cruciate ligament reconstruction – Bruno Gerber
- 11.00: Effectiveness of a CT free navigation system in ACL reconstruction – Radek Hart
- 11.10: Discussion

## **Unicompartmental knee arthroplasty**

(Chair – F Picard, J Cobb )

- 11.20: The role of computer assistance in unicompartmental knee arthroplasty – J Y Jenny
- 11.30: Functional outcome of the robot assisted minimal invasive unicompartmental knee arthroplasty at 18 months - J Cobb, J Henckel, K U Brust, P Gomes, S Harris, M Jakopec, F Rodriguez y Baena, A Barrett & B Davies
- 11.40: A comparison of implantation quality between navigated and conventionally implanted mobile bearing unicompartmental knee replacements – E Oburu & A Gregori
- 11.50: Discussion

## **Robotics** (Chair – A Bauer, J Wahrbuerg )

- 12.00: Historical aspects and development of robotics in orthopaedic surgery– A Bauer
- 12.10: Where do we stand today in robotics – practical uses – J Wahrbuerg
- 12.20: The future of robotics – J Cobb
- 12.30: Robotic application in hip surgery – experiences and actual tasks in designing a navigated mechatronic assistance system – J Wahrbuerg

12.40: Robotic THA – dead man walking or phoenix from the ashes? - A P Schulz, A Faber, D Hollstein, J Meiners, M Kamal & C H Juergens

### **The Future: A President's View**

12.50: The future of computer assisted navigation – Paul Alfred Gruetzner, President CAOS International

13.00: **Lunch**

13.40: **CAOS UK AGM**

### **Debate: Challenge the faculty**

14.00: ***Navigators vs Roboteers***

Moderator: K Deep

Roboteers:

A Bauer, J Cobb, B Davies, F Rodriguez Y Baena, Juergen Wahrberg

Navigators:

Lutz P Nolte, David Stulberg, Paul Alfred Gruetzner, William Donnelly, Fred Picard, Marci Maheson, B Gerber & D Pichora

## **Patello femoral joint arthroplasty**

(Chair – N Confalonieri, J Y Jenny)

14.30: Use of computer aided navigation in patello femoral knee arthroplasty – K Deep, J P Fleetcroft, H Zourelidis & N Rehman

14.40: A frame of reference of the patella - F Iranpour Boroujeni, A A Amis & J Cobb

14.50: Patellofemoral joint navigation in total knee arthroplasty – F Iranpour Boroujeni, S L Chia, A M Merican, A A Amis & R K Strachan

15.00: Discussion

15.10: **Tea/Coffee**

## **Total Knee Arthroplasty - Part 2**

(Chair – Lutz P Nolte, K Deep )

15.30: Results of computer assisted total hip arthroplasty – medium term results – A Adhikari

15.40: Results of computer assisted total hip arthroplasty – a UK experience – F Picard

15.50: A quantitative method of effective soft tissue management for varus knees in total knee replacement surgery using navigational techniques – J V Clarke, J M Dillon, A H Deakin, A W G Kinninmonth & F Picard

- 16.00: In search of the epicondylar axis – interobserver variability in landmark identification during computer navigated total knee arthroplasty: a cadaveric study J S Mcconnell, J M Dillon, J V Clarke, F Picard & A Gregori
- 16.10: Dynamic navigated total knee replacement alignment using Whiteside's line – J M Dillon, A Gregori, A Mennessier & F Picard
- 16.20: Initial experience with Pi Galileo computer navigated system for total knee arthroplasty – J T Patko, I Markovic & A Dedat
- 16.30: Results of computer assisted total knee arthroplasty - a trauma surgeon experience – A P Schulz, S Maegerlein, S Fuchs, A Paech & M Faschingbauer
- 16.40: Initial experience and early results of AGC navigated total knee replacement. - Kirti Moholkar
- 16.50: Discussion

**Poster Presentations** (Chair – U Schwarz, E Stindel)

- 17.00: Poster Presentations ( Poster Number 13-18 for 2-3 minutes each)
- 17.30: Close

## **Video sessions:**

All day 9<sup>th</sup> & 10<sup>th</sup> March

MIS TKR with CAS

PFJ arthroplasty with CAS

Standard TKR with CAS

THR with CAS

Hip Resurfacing with CAS

***Industry exhibition and hands on workshops***

## Venue information

The conference will take place in the

### **London Olympia conference centre**

Hammersmith Road

London W14 8UX

+44 (0)20 7385 1200

[www.eco.co.uk](http://www.eco.co.uk)

Nearest underground train station is Kensington Olympia

For other facilities and directions please visit

<http://www.eco.co.uk/eco/main.nsf/webpages/contacts?opendocument>

Disabled visitor enquiries: +44(0)2073708078

Car parking: 08718719809

At Olympia there is a multi-storey car park, which is accessed from Maclise Road. Accessible parking is available at street level. The Olympia motorail car park (p4) has recently re-opened and can accommodate cars, vans and lorries up to and including 7.5 tonnes.

On site parking fee:

Cars and vans (up to 7.5 tonnes unladen): 6 - 10 hours = £24.00 and 10 - 24 hours = £34.00

Lorries and coaches: 6 - 10 hours = £47.50 and 10 - 24 hours = £55.00

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