



# IMPT CONGRESS

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50 YEAR ANNIVERSARY

**THE IMPT 25<sup>th</sup> SCIENTIFIC CONGRESS  
BIRMINGHAM – UK  
7<sup>th</sup> – 9<sup>th</sup> SEPTEMBER 2011**

The 25<sup>th</sup> Scientific Congress will be held in Birmingham at the Austin Court Conference Centre. This event will commence at midday on Wednesday 7<sup>th</sup> September 2011 with a series of professional seminars and plenary sessions will commence on 8<sup>th</sup> September. The lecture programme will comprise of 'Keynote' Lectures by peer respected colleagues and open short free papers. The plenary will also include an exhibition of scientific posters and be complimented by commercial exhibitors specifically chosen for the event.

You are invited to submit abstracts for the plenary free papers and you are also invited to submit abstracts for the scientific poster exhibition. Topics can be chosen on any area of Maxillofacial Prosthetics and Technology. The organising committee are looking for innovative and new work.

CPD points will apply to the Congress, these will be awarded after the sessions have been completed. You will need to sign the register of attendance at the Registration (Austin Court) desk to receive the final awarded certificate..

# THE IMPT CHAIRMANS WELCOME

Dear Delegates,

It gives me great pleasure and honour to welcome our members and guests to this the 25<sup>th</sup> Scientific Congress on Maxillofacial Prosthetics and Technology. I would also like to take this opportunity to extend a warm welcome to many of our friends and colleagues from overseas.

This year we will be following on from the programme format from our successful congress in Belfast 2009, with some changes following feedback from our membership. We have planned stimulating “hands on” workshops for all delegates, followed by two full days of lectures and poster presentations that are sure to initiate plenty of discussion amongst the conference guests.

I am in no doubt that this years programme will be both enlightening and educational for all the delegates, from the trainee to the most experienced Maxillofacial Prosthetist amongst us.

I would like to give special thanks to the Congress organising committee for their tireless help and support in organising this event.

I hope you all enjoy the conference and the delightful midland's entertainment we have scheduled.

**Sarah Parkinson BSc (Hons) MIMPT**

Chairman of the Institute of Maxillofacial Prosthetists and Technologists.

## **Learning Objectives**

To provide an opportunity for all Maxillofacial Prosthetists and colleagues to meet, discuss, evaluate and determine the best available clinical, scientific and technological treatment options for patients.

## **Learning Outcomes**

Every delegate will have seen and been able to question a comprehensive range of current, "state of the art" clinical, scientific and technological options for the treatment of patients.

Assessment of the Learning Outcomes will be undertaken using a questionnaire, "Feedback Form". This form will be supplied to every delegate in their Congress folder and should be returned completed to the Congress Organisers. Continuing Professional Development, (CPD) certificates will only be issued to delegates who register and sign attendance for this event and submit their completed feedback form.

## **2009 Congress Organising Committee**

Mr Steve Worrollo  
Mr Jason Watson  
Mr Richard Eggleton  
Miss Barbara Anne Thomson  
Mrs Paramjit Kaur Sandhu  
Mrs Liz Gill

## **Message from Organising Committee**

**To assist all the presenters, all delegates are respectfully reminded that mobile phones and radio pagers should be set on silent running or switched off in the workshop rooms and lecture theatre. Thank you.**

## **The Institute of Maxillofacial Prosthetists and Technologists**

President  
Mr Peter Ramsay-Baggs FDS FFD FRCS

President Elect:  
Mr Steve Dover **BDS, FDSRCS (Eng) MBChB, FRCS (Eng)**

Immediate Past President:  
Mrs Sheila Fisher MSc FDSRCS FFDRCSI FRCS

**Chairman:**

Miss Sarah Parkinson BSc (Hons) MIMPT

**Honorary Secretary:**

Mr Fraser Walker MSc FIMPT

**Honorary Treasurer:**

Mr Richard Eggleton MIMPT

**Honorary Registrar:**

Mr Adrian Kearns MIMPT

**Education Officer**

Carol Winter MIMPT

**AIB Chairman**

Stephen Edmondson BSc (Hons) MIMPT

**Members of Council:**

Mr David Allen FIMPT

Dr M Anwar Bamber PhD FIMPT

Mr Mark Cutler FIMPT

Mrs Liz Gill BSc (Hons) MIMPT

Mrs Paramjit Kaur Sandhu BSc (Hons) MIMPT

Mr Charles V Fraser-MacNamara MIMPT (Hon)

Mr David Thompson MIMPT

Miss Barbara Anne Thomson MIMPT

Mr Jason Watson BMedSci (Hons) MIMPT

Karen Glen-Boyd MIMPT

Mr Barry Edwards MSc MIMPT

# Congress Awards

## Assessed Awards

### **The Wim de Ruiter Delft Plate**

Awarded for the most outstanding scientific technical display or workshop. Mr Wim de Ruiter a commercial laboratory owner from Ridderkirk near Rotterdam provided a maxillofacial prosthetic service for the Rotterdam area and donated this award in 1985.

### **The Mount Vernon Award**

Awarded for the most outstanding lecture. Designed and fabricated by Chief Maxillofacial Prosthetist Mr John Hayward at Mount Vernon Hospital, this award was first presented at the 1981 IMPT Congress held at Brunel University, London.

### **The Presidents Award**

Awarded for the most outstanding innovative contribution to maxillofacial prosthetics. This award was inaugurated in 1983 at the IMPT Congress held at the Royal College of Surgeons, London.

### **The Kidd Award**

Awarded for the most outstanding contribution to implant technology. This award was donated by Mr Norman Kidd, who began making sub-periosteal implants in 1956 and upon his retirement, instigated the Kidd Award plaque in 1997.

## **Technovent Award for the best first time lecturer**

### **2011 Congress Awards Assessors**

Mr Chris Maryan  
Mr Adrian Kearns  
Mrs Paramjit Kaur Sandhu

## **Presented Award**

### **Brian S. Conroy Award**

Awarded for outstanding services to maxillofacial prosthetics. Donated by Mr Brian Conroy in 1969, the award was commissioned- *“For those who have given significant service for advancement in technology, prosthetics, surgery and other activities that relate to maxillofacial prosthetics and technology”*.

## **Peer Assessed Award**

### **The IMPT Travel Fellowship**

To provide the means for study and research.

# **The IMPT 25<sup>th</sup> Scientific Congress Birmingham 7<sup>th</sup> – 9<sup>th</sup> September 2011**

Plans are now finalised for this event and The IMPT is very grateful to Steve Worrollo and his colleagues in Birmingham for hosting the Congress.

The workshop and plenary sessions will be held in the Austin Court Conference Centre and accommodation has been secured in the Copthorne Hotel with a city centre location and in walking distance to the Congress venue.

The programme is presented below and we hope that the altered format will provide delegates with a very interesting and informative event. We also trust that the Congress and programme will allow for the presentation of the very varied and innovative work being carried out within the profession.

Welcome to Birmingham.

## **Congress Information**

### **Venues**

**1. Registration – Workshops - Plenary –**

Austin Court Conference Centre,  
80 Cambridge Street, Birmingham, B1 2NP, Tel: 0121 600  
7500

**2. Congress Hotel – Accommodation – Reunion**

Copthorne Hotel, Paradise Circus Queensway, Birmingham,  
B3 3HJ

**3. Congress Prize Giving Event and Dinner**

The Birmingham Botanical Gardens, Westbourne Road, Edgbaston,  
Birmingham, B15 3TR

Pick up will be available from the Copthorne for those on the  
Congress packages (time see program)

Delegates arriving in Birmingham on the morning of Wednesday 7<sup>th</sup> September may check into the Copthorne Congress Hotel to receive their rooms or secure bag storage before proceeding to the Congress Venue for the Workshop's.

**On Wednesday 7<sup>th</sup> September 2011 no evening dinner will be provided but delegates may obtain this at the Congress Hotel at their own expense or take advantage of the many restaurants near this central location.** A free evening to explore this unique city centre location.

Delegates who wish to stay at the Congress Hotel before the Congress starts or after the 9<sup>th</sup> September can arrange this at their own expense by booking personally with the Copthorne Hotel, Paradise Circus Queensway, Birmingham, B3 3HJ.

Please Contact the Sales Manager at the Copthorne Birmingham  
Tel: +44 (0) 12 1200 2727

When booking please quote The IMPT to obtain consistent rates.

## **Travel**

Birmingham is served by two International airports:

**1) Birmingham International Airport** - Approximately 25 minutes by taxi or bus to the Congress Venues. The Airport has an very good train service to the City centre that takes 10 minutes and Birmingham New Street Station is only 10 minutes walk from the Copthorne Hotel and 15 minutes to the Congress venue.

**2) East Midlands Airport** – Approximately 30 miles away. 40 minutes by car from the Venue.

## **Parking**

There is no parking available at Austin Court Conference Centre but ample parking is available in the Birmingham city centre. The International Conference Centre (ICC) is very close and so is the Sea Life Centre. 24hr parking is available close to these venues. There is also a very good NCP at Brindley Place off Broad Street, about 10 minutes from the Hotel and Congress Centre.

The Copthorne Hotel does have limited on-site parking.

Austin Court Conference Centre and Copthorne Hotel are within an easy 8 minute walk of each other.



## **Congress Programme**

### **Wednesday 7<sup>th</sup> September 2011**

The President and Council of The IMPT would like to express their thanks to all the presenters of the Workshops for their support and time and sharing their experiences with Delegates.

**12:00**      **Austin Court, Birmingham**  
**Light Lunch Tea and Coffee**  
**Registration**  
**Scientific Poster Set Up**  
**Exhibition Set Up, Lecture Theatre Gallery**

Continuing Professional Development, (CPD) – Would all Delegates please ensure that they print their name and sign the Attendance Register for each Workshop, CPD Certificates will only be issued on this basis (at the end of the Congress).

**13:00 - 14:30**      **Workshops:** 2 Groups split between two rooms

Workshop LODGE ROOM 1 and 2, 1<sup>st</sup> Floor

A) PDR

B) Objet

Workshop THE TELFORD ROOM 1<sup>st</sup> Floor

C) 3DMD

**14:00 – 14:30**      Tea and Coffee and Trade Stands

**14:30 – 16:00**      Repeat Workshops ; Groups swap over rooms A, B, to Room Telford Room, Group C to Lodge 1 and 2 Rooms

**16:00 - 16.30**              End of session; Networking and Trade Exhibition

### **Check in Copthorne Hotel**

2727 Paradise Circus Queensway, Birmingham, GB B3 3HJ, Tel: 0121 600 7500

**FREE EVENING TO EXPLORE THE CITY**

## **Thursday 8<sup>th</sup> September 2011**

Austin Court Conference Centre

08:30 – 09:00    Registration  
                      Scientific Poster Set Up  
                      Trade Stands  
                      Tea and Coffee

### **Opening Ceremony – Main Lecture Theatre**

09.00            Delegates to be seated

09:05            Welcome and opening address from the IMPT and the  
                      Congress Host  
                      The Chairman The IMPT Miss Sarah Parkinson  
                      Mr Steve Worrollo, Queen Elizabeth Hospital, Birmingham

                      Official Opening of the 25<sup>th</sup> Scientific Congress 2011

### **Session1: ‘Free paper session.’**

#### **Main Theatre; Chairman Miss Sarah Parkinson**

09.25            ‘President’s Lecture’  
                      Dentists and Mechanics how times have changed  
                      Mr Steve Dover BDS, FDSRCS (Eng) MBChB, FRCS (Eng)  
                      Consultant Maxillofacial Surgeon; Queen Elizabeth’s Hospital,  
                      Birmingham

09.55            10 Years Experience with Zygomatic Implants for Extra Oral  
                      Prosthetics  
                      Peter Ll. Evans MIMPT Consultant in Maxillofacial Prosthetics

10:05            TBC  
                      Phillippe Federspil            Consultant Ear Nose and Throat  
                      Surgeon; Vice President of The IASPE  
                      Heidelberg, Germany

10:20            3D Modelling and Surgical Planning in Free Tissue Transfer; a  
                      short case series and review  
                      Andrew Richmond MIMPT Principal Maxillofacial Prosthetist

10:30            The Validation of an Improved Articulator System for  
                      Orthognathic Model Surgery  
                      Pauline Paul MSc MIMPT ; Principal Maxillofacial Prosthetist

10.45 Questions: 10minutes

10.55 Tea and Coffee and Trade Stands: 30 minutes

**Session 2: 'Keynote Speaker and Free paper session.'**  
**Main Theatre; Chairman Mr Steve Worrollo**

- 11:25 Keynote Lecture  
Military trauma "Working outside the comfort zone"  
Group Captain Andrew Monaghan, BDS FDSRCS(Eng)  
FRCS(Eng) FRCS  
Queen Elizabeth Hospital, Birmingham
- 11.55 The Effectiveness of Pressure Splints on Keloid Scars  
Graham Marshall MIMPT
- 12:05 Evolution Not Revolution: Integrating Advanced Digital  
Technology into Maxillofacial Prosthetics  
James Dimond MIMPT; Principal Maxillofacial Prosthetist
- 12:15 A New Watusi Collar used in the Treatment of NeckBurn  
Hypertrophic Scarring.  
Yvonne Moore: MIMPT; : Practicing Maxillofacial Prosthetist
- 12.25 Prosthetic Rehabilitation following Meningococcal Septicaemia  
Caroline Reed; BSc (Hons) DPS; Maxillofacial Prosthetist
- 12.35 Extrinsic Sealants, is it all in the Timing?  
Heidi Silk BSc (Hons) MIMPT Principal Maxillofacial Prosthetist
- 12:45 Questions: 10 minutes
- 12.55 LUNCH: 45 minutes**

**Session 3: Panel Discussion session.**  
**Main Theatre; Chairman Mr Philippe Federspil**

- 13:40 IMPT Chairman Sarah Parkinson  
Induction of the New IMPT President
- 13.50 **Panel Discussion 1:**  
Expert panel of Prosthetists and Surgeons to examine  
actual patient cases and give insight into the various  
rehabilitation possibilities for each case
- Chair to present each case history

- Expert discussion and opinion on the cases (panel)
- Questions and input 'from the floor'

14:50 Chair; Discussion Summary

15.00 Tea and Coffee, Trade Stands

Poster Presentation Session; 60 minutes

- Each presenter to defend their work
- Examination by assessment committee

#### **Session 4: 'Free paper session.'**

##### **Main Theatre; Chairman Mr Matt Pilley**

16.00 A New Patient Consultation for a Patient with a Maxillary Defect  
Steve Bailey MSc MIMPT Dip CDT RCSEng; Maxillofacial Prosthetist

16.25 Obturator versus Surgical Reconstruction of the Maxillectomy Patient  
Barbara Anne Thomson: BSc Dip (Eng) MIMPT

16.35 Spectacles Adaption for Pressure Point Responsive Blepharospasm  
Dave Allen FIMPT

16.45 Evaluation of Cranioplasty Plate Design and Fabrication in the UK  
Dr Richard Bibb PhD BSc (hons)

17.00 Cranioplasty Defects; a review of cases and the development of a classification for referral, identification and audit purposes  
Dr Muhanad Hatamleh PHd Mphil BSc (Hons) Dip MaxFac AIMPT

17.10 Questions 10 minutes

**17.20 Close of Day**

19:30 The IMPT Reunion Dinner  
Cophthorne Hotel

2727 Paradise Circus Queensway, Birmingham, GB B3 3HJ  
Invited guest: Professor Sue Hill Chief Scientific  
Officer

**Friday 9<sup>th</sup> September 2011**

Austin Court Conference Centre

08:30 – 09:15     Registration  
                         Scientific Poster Set Up  
                         Trade Stands  
                         Tea and Coffee

09.15            Lecture Theatre - Delegates to be seated

**Session 5: Free paper session.'**

**Main Theatre; Chairman Mr Fraser Walker**

- 09:20            Facial Transplant  
                         The BOAMS Lecture  
                         **Professor Peter Butler** MD, FRCSI, FRCS, FRCS(Plast)  
                         The UK Lead Clinician on Facial Transplantation
- 09:50            The Future of Retention: CAD/CAM Custom made Retentive  
                         Components in Facial Prosthetic Applications  
                         Jason Watson BSc (Hons) MIMPT; Consultant Maxillofacial  
                         Prosthetist
- 10.00            A Rapid Prototype (RP) Jigsaw Technique in the Manufacture  
                         of a Titanium Orbital Floor Implant  
                         Gareth Robinson Dip Maxfac MIMPT; Principal Maxillofacial  
                         Prosthetist
- 10.10            The Optimum Site for Implant Placement in the Orbital Region:  
                         A Birmingham Review  
                         Hitesh Korla BSc (Hons) MIMPT; Maxillofacial Prosthetist
- 10.20            A Critical Comparison of Digital Technologies in Nasal  
                         Prosthesis Production  
                         Dr. Dominic Eggbeer PhD BSc (Hons)
- 10.35            Rehabilitation in Head and Neck Oncology. Advantages of  
                         implants and digital technology (or not?)

Dr. Harry Reitsema DDS PhD AIMPT

10:50 Questions: 10 minutes

**11:00 Tea and coffee and Trade stands; 30 minutes**

**Session 6: 'Keynote speaker and Free paper session.'**

**Main Theatre; Chairman Miss Barbara Thomson**

11:30 Keynote Lecture:  
Head and neck reconstructions what are the options  
Mr Sat Parmar BChD BMBS BMedSci FDSRCS FRCS FRCS  
Consultant Maxillofacial Surgeon, QE, Birmingham UK.

12:00 New Trends Utilising old Methods  
Matthew Pilley MIMPT, Specialist in Clinical Prosthetics,

12:10 "3-part-mould-technique"  
Joern Brom AIMPT Accredited Anaplastologist of the IASPE.

12:20 The Development of Measuring Tools for Artificial Eye  
Research  
Keith Pine BSc MBA MIMPT

12:35 Using the Spectromatch Reality Colouring System  
Lawrence Dovalski BSc MIMPT

**12.45 Questions : 10 minutes**

**12.55 LUNCH 50 minutes**

**Session 7: 'Current Issues Affecting our Profession; 'Challenging Environment'**

Main Theatre; Chairman Mr Chris Maryan

13:45 Chair: Introduction to Key Issues to be discussed 5 minutes

**13.50 Panel; Key Speakers on areas affecting membership:**

Education- Carol Winter  
Registration- Dave Allen 30 minutes combined

Questions 20 minutes

14.40 Funding- Sarah Parkinson 15 minutes  
Future Challenges- Steve Worrollo 15 minutes

Questions 20 minutes

15.30 Submitted Questions: Chairman delivers questions from delegates to Council Officers 20 minutes

15:50 Chairman Summary ; 5 mins

**IMPT Business meeting, non-members to leave the hall**

16:00 IMPT General Meeting ; 25 mins

- Accounts
- Subscriptions
- Journal
- Website

MEMBERS ONLY

16.30 Close of Plenary sessions and Congress Chairman

18.30 Coaches depart from the Copthorne Hotel

**19.30 Prize Giving Ceremony and Dinner**

After Dinner Speaker

“Mr Andrew Parker Consultant ENT Surgeon”.

Botanical Gardens

Westbourne Road, Birmingham B15 3

0121 454 1860

**Saturday 10<sup>th</sup> September - Check out of your Hotel by 12.00 am**

## **Abstracts for Lecture Presentations**

### **Lecture 1: 10 Years Experience with Zygomatic Implants for Extra Oral Prosthetics**

Peter Ll. Evans MIMPT Consultant in Maxillofacial Prosthetics  
Maxillofacial Laboratory, Welsh Centre for Burns Plastics and Maxillofacial Surgery,  
Morriston Hospital, Swansea SA6 6NL UK; [peter.evans2@wales.nhs.uk](mailto:peter.evans2@wales.nhs.uk)  
Implants for the retention of nasal and mid third facial prostheses have a relatively poor survival rate, especially in those patients who undergo an oncological radiotherapy regime. We report on an improved survival rate using Zygomatic Implants (Nobelbiocare AG) placed across the maxillary sinus in 24 patients from 1999 to 2011 with survival and failure rates over this period. The presentation describes the computer planning necessary to place the implants, the guide led surgical technique and also the retentive mechanisms that are best suited to these fixtures.

### **Lecture 2: TBC**

Phillippe Federspil Consultant Ear Nose and Throat Surgeon;  
Heidelberg, Germany; Vice President of the IASPE

### **Lecture 3: 3D Modelling and Surgical Planning in Free Tissue Transfer; a short case series and review**

Andrew Richmond MIMPT Principal Maxillofacial Prosthetist  
Maxillofacial Laboratory, Nottingham University Hospitals Trust, Derby Road,  
Nottingham [andrew.richmond@nuh.nhs.uk](mailto:andrew.richmond@nuh.nhs.uk)  
3D modelling and rapid manufacturing is now an everyday part of a full maxillofacial prosthetic service. This paper describes the use of this technology in respect of complex reconstruction and free tissue transfer. In 19 cases utilising this method the authors have found that the technique is very useful for providing predictable outcomes in surgery, reduces theatre time, improves accuracy of the plating, reduces donor site harvesting and importantly an improved and informed patient consent to this complex and sometimes problematic treatment option.

### **Lecture 4 : The validation of an improved articulator system for orthognathic model surgery**

Pauline Paul MSc MIMPT ; Principal Maxillofacial Prosthetist  
Maxillofacial Laboratory, Regional Maxillofacial Unit, Neurology Building Ground Floor,  
Southern General Hospital, Govan Road, Glasgow, G51 4TF, Scotland  
Awaiting shortened abstract

### **Lecture 5: The Effectiveness of Pressure Splints on Keloid Scars**

Graham Marshall MIMPT  
Maxillofacial Lab, University Hospitals of Leicester NHS Trust; [graham.marshall@uhl-tr.nhs.uk](mailto:graham.marshall@uhl-tr.nhs.uk)  
A two year retrospective audit to evaluate effectiveness of pressure therapy in Keloid scars



## **Lecture 6: Evolution Not Revolution: Integrating advanced digital Technology into maxillofacial prosthetics**

James Dimond MIMPT; Principal Maxillofacial Prosthetist

Maxillofacial Prosthetics, 2nd Floor, Old Queen Elizabeth Hospital, Edgbaston, Birmingham, B15 2TH; [james.dimond@uhb.nhs.uk](mailto:james.dimond@uhb.nhs.uk)

The combination of Medical Imaging, Computer Aided Design Software and Rapid Prototyping is a rapidly expanding field with a large application potential in maxillofacial prosthetics. Digital technology is used routinely across the globe in a vast range of industries and professions. It can be implemented into the daily maxillofacial procedures associated with post-traumatic reconstruction, orthognathic planning, cranioplasty manufacture, pressure therapy and facial prosthetics. Manipulation of data using specialised software in the 3D environment can improve efficiency by eliminating traditional labour intensive techniques and produces predictable results that can be utilised in a number of ways. This brief presentation gives an overview of acquisition and manipulation of data, current and potential uses of digital technology along with its limitations, and the benefits that can be gained for the maxillofacial prosthetist, surgical team, and ultimately the patient.

## **Lecture 7: A new Watusi collar used in the treatment of neck burn hypertrophic scarring.**

Yvonne Moore: MIMPT; : Practicing Maxillofacial Prosthetist

Glasgow Royal Infirmary, Prosthetics Laboratory, 2nd Floor Walton Building, Castle Street, Glasgow, G31 2ER; [yvonne.moore@ggc.scot.nhs.uk](mailto:yvonne.moore@ggc.scot.nhs.uk)

This lecture outlines a new design of watusi collar for the treatment of post neck burn hypertrophic scarring/contracture, first reported by Hurlin Foley et al. Changes to the design are discussed. These have improved hygiene, functional mobility, comfort, cost effectiveness, and negates the need to remake the collar as tissue changes occur. 3 early stage case studies are also discussed.

## **Lecture 8: Prosthetic Rehabilitation following Meningococcal Septicaemia**

Caroline Reed; BSc (Hons) DPS; Maxillofacial Prosthetist

Queen Victoria Hospital, Holtye Road, East Grinstead, West Sussex, RH19 3DZ; [caroline.reed@qvh.nhs.uk#](mailto:caroline.reed@qvh.nhs.uk#)

Case study describing the fabrication of bi-lateral glove prostheses for a 12 year old girl who had 9 toes amputated due to meningococcal septicaemia. The lecture outlines the construction process, problems encountered and offers tips for Maxillofacial Prosthetists undertaking similar cases.

## **Lecture 9: Extrinsic Sealants, is it all in the timing?**

Heidi Silk BSc (Hons) MIMPT Principle Maxillofacial Prosthetist

Maxillofacial Prosthetics Service, Poole Hospital NHS Foundation Trust, Longfleet Road, Poole, Dorset, BH15 2JB

Extrinsic sealants are needed to prevent the delamination of colours added to enhance the aesthetics of silicone prosthesis. This project looks at three different types of sealants used to create this seal and the times at which they are applied. Results show that the time of sealant application has an influence on the success of the bond.

## **Lecture 10: A new patient consultation for a patient with a maxillary defect**

Steve Bailey MSc MIMPT Dip CDT RCSEng; Maxillofacial Prosthetist  
Maxillofacial Unit Pilgrim Hospital, Sibsey Rd, Boston, Lincolnshire,  
[Steve.Bailey@ulh.nhs.uk](mailto:Steve.Bailey@ulh.nhs.uk)

To include 1. Examining the patient intra oral examination – tongue, lips, cheeks, floor of mouth, extra oral examination facial symmetry, neck nodes, tmj; 2. Examining the patients existing prosthesis; 3. Medical and social history; 4. Diagnosing the problem; 5. Discussing the treatment options; 6. Formalising the treatment plan

## **Lecture 11: Obturator versus surgical reconstruction of the maxillectomy patient**

Barbara Anne Thomson, Practising Maxillofacial Prosthetist

A literature review on obturation versus surgical reconstruction appears to be controversial. This presentation will discuss and elaborate on the treatment available and examine how they affect the quality of life for patients.

Multiple published evidence base articles state different advantages and disadvantages for maxillectomy patients, although limited research has recommended more clarity on techniques and options available. Published studies on changes with prosthetic rehabilitation versus surgical options are limited.

In reviewing the available literature it is apparent that there is insufficient evidence in relation to maxillectomy patients however the bulk of the evidence all acknowledge that more research in to obturation and patients quality of life (QOL) need to undertaken.

## **Lecture 12: Spectacles Adaption for Pressure Point Responsive Blepharospasm**

Dave Allen FIMPT

Queen Victoria Hospital, Holtye Road, East Grinstead, West Sussex, RH19 3DZ;  
[dave.allan@qvh.nhs.uk](mailto:dave.allan@qvh.nhs.uk)

The paper will seek to give an introduction into the condition of blepharospasm along with the traditional treatment and therapies used in its management. The paper will then concentrate on pressure point responsive blepharospasm where the adaption of spectacles to provide pressure point therapy can improve the condition.

## **Lecture 13: Evaluation of cranioplasty plate design and fabrication in the UK**

Dr Richard Bibb PhD BSC (hons)

Loughborough Design School, Bridgeman Centre, Loughborough University, Ashby Road, Loughborough, Leicestershire, LE11 3TU; [r.j.bibb@lboro.ac.uk](mailto:r.j.bibb@lboro.ac.uk)

With many methods of cranioplasty production available and the application of Computer-Aided Design (CAD) technologies creating further options, there is a need to measure the cost effectiveness of existing techniques in order to compare new techniques accurately. This research investigated the cost implications of common methods of cranioplasty construction in the UK. A questionnaire was sent to major UK maxillofacial/neurological units. The same questions were asked to each respondent but answers and discussions were open ended. Records were kept of lab technician time, material costs, equipment used and equipment lead-time. A hemi-craniotomy case was chosen as an example and the results were compared to theoretical Additive Manufacture (AM) of a plate for this example. The study found there is wide variation

in production costs but that more efficient CAD and AM methods are required to ensure economic competitiveness against lab-based techniques.

### **Lecture 14: Cranioplasty defects; a review of cases and the development of a classification for referral, identification and audit purposes**

Dr Muhanad Hatamleh PhD Mphil BSc (Hons) Dip MaxFac AIMPT  
Manchester Dental School and Nottingham University Hospitals Trust, UK;  
[Muhanad.Hatamleh@manchester.ac.uk](mailto:Muhanad.Hatamleh@manchester.ac.uk)

Nottingham University Hospitals Trust is a large regional trauma unit that provides Neurosurgical services to the whole East Midlands. Cranioplasty implants have been provided since 2002 and in-house manipulation of the data and subsequent rapid prototyping has proved a useful adjunct to this service. A review was undertaken utilising the in-house processing of the DICOM data stored on the hospital servers. The last 30 cases were chosen as an investigative sample to look at average size and position of the defects. This data was then used to classify the defects in terms of position and size. This interim classification is being used to identify the defect on initial referral, to provide an estimate of build time and as part of an ongoing audit project.

### **Lecture 15: The Future of Retention: CAD/CAM Custom made Retentive Components in Facial Prosthetic Applications**

Jason Watson BSc (Hons) MIMPT; Consultant Maxillofacial Prosthetist  
Maxillofacial Laboratory, Nottingham University Hospitals Trust, Derby Road,  
Nottingham; NG7 2UH; [jason.watson@nuh.nhs.uk](mailto:jason.watson@nuh.nhs.uk)

Rapid prototyping of 3D models is an everyday part of a maxillofacial prosthetic service. Since 2008 we have used in-house 3D models routinely in complex trauma, craniofacial surgical planning, reconstruction, implant planning, oncology resection and deep buried implant fabrication. Understanding this technology has allowed us to look at the use of Rapid Manufacture (RM) in other areas of our work. We previously presented the use of this technology in the field of cranioplasty manufacture to the IMPT (2009). We are now applying this technology specifically in terms of the retention of facial prostheses. We have for too long relied on the basic retaining forms of bars, clips and magnets. The next steps for custom made bars and individual retention will be described and its first case. Cost implications will also be addressed.

### **Lecture 16: A Rapid Prototype (RP) jigsaw technique in the manufacture of a titanium orbital floor implant**

Gareth Robinson Dip Maxfac MIMPT; Principal Maxillofacial Prosthetist  
Worcestershire Royal Hospital, UK ;[Gareth.Robinson@worcsacute.nhs.uk](mailto:Gareth.Robinson@worcsacute.nhs.uk)

The presentation explores the use of CAD to mirror and sculpt an orbital floor onlay jigsaw piece to be used in conjunction with an anatomical model built using Additive Manufacture (AM). The improvements in accuracy, production time and costs are discussed in the context of downstream use in producing a wrought titanium orbital floor implant.

### **Lecture 17: The optimum site for implant placement in the orbital region: A Birmingham Review**

Hitesh Korla BSc (Hons) MIMPT; Maxillofacial Prosthetist  
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Since the start of the implant programme in 1988 there have been significant changes in practice. The 'ideal' location for implant placement is of great importance when considering facial prosthetic rehabilitation whether it is for an orbital prosthesis, nasal, auricular or midface. The focus of this evaluation is to determine the optimum location for implant placement within the orbital region to achieve a lower rate of implant failure without compromising the aesthetics. Many factors such as lifestyle habits, tumour type/size and surgical skill all contribute to implant failure. The records of 20 retrospective patients are examined to identify the number of implants inserted, the length and type of implant used and their placement within the orbital cavity. The outcome will show which location within the orbital rim will give best results for osseointegration with a particular type of implant without compromising the clinical result for patients.

## **Lecture 18: A critical comparison of digital technologies in nasal prosthesis production**

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This research helps to identify clinically viable methods of using digital technologies in extra-oral prosthesis production. A magnet retained nasal prosthesis case was chosen as a single case study to illustrate three processes. Three dimensional surface capture, computer aided design and additive manufacture methods were used to produce a prostheses via a mould tool and directly. These were compared to lab based methods used to create a prosthetic for the same patient. Pictures of the final prostheses were taken and were subject to rated qualitative analysis by a panel of observers. Consideration was also given to the efficiency of the workflow and clinical viability of the final prosthesis. Critical comparisons of shape, colour, margins and position were in favour of a digital version. The results highlight the most effective method of utilising digital technologies in facial prosthesis production as well as the limitations. Future research directions are identified.

## **Lecture 19: Rehabilitation in Head and Neck Oncology. Advantages of implants and digital technology (or not?)**

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Rehabilitation in Head and Neck Oncology is very challenging for patient and clinicians. Maxillofacial Prosthetics plays an important role in the planning and execution of this process as part of a team approach. New techniques have become available over the last decades, but have to be put in place appropriately. Implantology has deserved its place to improve retention of prostheses especially in compromised cases, both intra- and extra-orally. However risks have to be taken into account as well. For planning, guiding and construction of (implant retained) prostheses digital technology can be of great help, although 'conventional' thinking and craftsmanship still will be needed. Strategies and results from the Groningen UMC Head and Neck Oncology Team will be presented.

## **Lecture 20: New Trends Utilising old Methods**

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This paper describes the use of a non-contact structured light scanning technique, computer aided design (CAD) and Additive Manufacturing (AM) to produce selected

laser sintered (SLS) models for producing bespoke prostheses. Non-contact structured light scanning was used to capture accurate data from lifecasts. This data was then post processed to produce SLS models of the required anatomy for the production of bespoke prostheses. The results illustrate the benefits and effectiveness in terms of accuracy of adopting an integrated surface scanning, CAD and AM approach to produce lifelike, anatomically accurate and labour saving prostheses. Keywords: Additive Manufacturing, Structured light scanning, bespoke prostheses.

### **Lecture 21: “3-part-mould-technique”**

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The lecture presents how to construct a three piece sectional mould in plaster and PMMA with locking devices to enable the production of a large nasal prosthesis, producing a large hollow silicone prosthesis with reduce weight while maintaining the extensive fitting surface. The technique developed by myself can be modified and utilised in the construction of many prosthetic devices that require reduced weight because of the simple construction and nature of application. I am confident that the technique produces excellent results and would be a useful application for others to employ.

### **Lecture 22: The Development of Measuring Tools for Artificial Eye Research**

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Hurst et al have created a photographic grading system for contact lens deposits but in order to investigate artificial eyes, an alternative method for displaying and measuring deposits needs to be developed. The nature and dynamics of deposition on artificial eyes is very different from deposition on contact lenses. Deposits revealed by the staining solution used in this presentation form over all artificial eye surfaces except perhaps for the inter-palpebral zone. Because the body of an artificial eye is opaque, only very thick deposits are visible unless they are stained. Contact lens deposits on the other hand exist in the inter-palpebral zone and can easily be seen because the material on which they form is transparent. This presentation describes a technique for displaying and grading deposits on artificial eyes and for grading conjunctival inflammation in anophthalmic sockets. The development of the grading scales included consultation with experienced ophthalmologists and optometrists using perceptual and physical attributes.

### **Lecture 23: Using the Spectromatch Reality Colouring System**

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The Spectromatch Reality colour system is a new facial and body prosthetic colour system available in the UK. The improvements in colour stability have been researched and documented, we present our practical analysis of the system including working practice, costs and time savings. The presentation will include direct comparison to one of the more traditional colouring systems.