

**3rd Conference on Rapid
Prototyping, Rapid Tooling and
Rapid Manufacturing**

20th - 21st June 2002, Chalfont Campus,
Buckinghamshire Chilterns University College



Provisional Conference Programme

Thursday 20th June

8.00 – 10.30 Registration - Coffee and biscuits

10.30 Welcoming Speech and Keynote Speaker – To be announced

SESSION 1. Applications & Techniques,
Chairman – Dr S S Dimov, Cardiff University

11.00 Rpblox - A Novel Approach Towards Rapid Prototyping .
T. Lim, J.R. Corney, J.M. Ritchie & J.B.C. Davies
Heriot-Watt University, UK

**11.30 Development Of Saddle Component Using CAD, Rapid
Prototyping, Rapid Tooling And Reverse Engineering .**
S.G. Dhande & A. Chatterjee
Indian Institute of Technology, India

**12.00 Preliminary Investigation Of Surface Roughness And
Dimensional Accuracy Of Thermojet And SLA Parts .**
I.M. Mulyadi, S.O. Onuh & N.G. Bennett
University of Portsmouth, UK

**12.30 The Development Of 3D Printing Techniques For "Concept
Modellers" To Competitive Rapid Prototyping Systems.**
P.M. Hackney
University of Northumbria at Newcastle, UK

13.00 Lunch – Served in the Old Library

SESSION 2 High Speed Machining
Chairman – Dr I T Chang, University of Birmingham

**14.30 Optimising Tapping Operations On Hardened Steels In A
Prototyping Environment.**
J.F. Antunes Simões*, E. Matos da Rocha* & R.M. Oliveira
Baptista**
Instituto Politécnico de Setúbal, Portugal & Universidade Técnica
de Lisboa, Portugal***

- 15.00 **Multi-Axis Machining Using A 6-Axis Anthropomorphic Robot.**
J.F. Antunes Simões*, T.J. Coole**, D.G. Cheshire*** & A.R. Pires*
Instituto Politécnico de Setúbal, Portugal, Buckinghamshire Chilterns University College, UK** & Staffordshire University, UK***.*
- 15.30 **Tea/Coffee and cakes**
- SESSION 3** **Medical & Materials**
Chairman - Dr Alf Linney, University College, London
- 15.30 **A Review Of The Manufacture Of Below-Knee Prosthetic Sockets Using Rapid Prototyping Technologies.**
N.S. Herbert
University of Strathclyde, UK
- 16.00 **Fabrication Of Customised Bioceramic Implants Using Selective Laser Sintering.**
F. Cruz*, T. Coole**, C. Bocking** & J. Simões*
Instituto Politécnico de Setúbal, Portugal & Buckinghamshire Chilterns University College, UK***
- 16.30 **The Microstructure Of Laser Fabricated Ti6Al4V.**
J. Liang, J. Mei, M.H. Loretto & X. Wu
University of Birmingham, UK
- 17.00 **End of Sessions**
- 19.00 **Conference Dinner** BBQ on the terrace of the Old Library. Bar open from 18.45. After dinner speaker in the Old Library – **Trevor Bayliss**, Inventor and TV personality. The bar will remain open until 01.00.
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Friday 21st June

08.00 – 09.00 **Breakfast for those staying on campus** - Campus Refectory

SESSION 4 - **Methodologies**
Chairman – Mr P Hackney, University of Northumbria

09.30 **Lean Rapid Production Concept Realisation In The Compact Manufacturing System.**
D.N. Svirsky
Vitebsk State Technological University, Republic of Belarus

10.00 **Reducing The Uncertainty Of The Prototyping Decision**
K.A.M. Steele, G.J. Ryder, W.J. Ion & A.I. Thomson
University of Strathclyde, UK

10.30 **Benchmarking The Rapid Design And Manufacture Process.**
G.J. Ryder*, D.K. Harrison**, G. Green***, W.J. Ion* & B.M.
Wood****
University of Strathclyde, UK, Glasgow Caledonian University,*
*UK**, University of Glasgow, UK***, Glasgow School of Art*****

11.00 **Coffee**

SESSION 5 **Sintering and Related Technologies.**
Chairman – Dr Chris Bocking, Buckinghamshire Chilterns
University College

11.30 **Fabrication Of Functional Metal Parts Using Laser Sintering: A
Case Study.**
D.E. Dimla, H. Singh & M. Day*
*De Montfort University, UK & Pall Europe Ltd, UK**

12.00 **Influence Of The Heat Treatment Cycles On The Properties Of
Selective Laser Sintered (SLS) Rapidsteel^{2.0}.**
D. Uzunsoy & I.T.H. Chang
University of Birmingham, UK

12.30 **Experimental Investigation Of The Direct Metal Laser Re-
Melting Of Dissimilar Metals .**
S. Pogson, P. Fox & W. O'Neill
University of Liverpool, UK

13.00 **Lunch Served in the Old Library**

SESSION 6 **Laser Processing and Microfabrication**
Chairman – Prof. D Wimpenny, De Montford University

14.00 **Rapid Manufacture Of Burn Resistant Ti Components Using
Direct Laser Fabrication.**
R. Sharman, X. Wu, M.H. Loretto & W. Voice*
*University of Birmingham, UK & Rolls-Royce plc., UK**

14.30 **Laser Engineered Net ShapingTM: Technology And Applications .**
M. Hedges & D. Kiecher
Neotech Services MTP, Germany & Optomec Inc, USA

15.00 **Ceramic microcomponents by rapid prototyping process chains.**
R. Knitter, W. Bauer, D. Göhring & P. Risthaus
Forschungszentrum Karlsruhe GmbH, Germany

15.30 **Coffee/tea and cakes**

SESSION 7

Electrochemical Machining For Rapid Manufacturing

Chairman - Dr W O'Neill, University of Liverpool

16.00

Rapid Manufacture Of Complex Shapes By ECM.

R. Temur, T Coole

Buckinghamshire Chilterns University College, UK

16.30

Tool Electrode Design For ECM.

R. Temur, C Bocking

Buckinghamshire Chilterns University College, UK

17.00

Final discussion and conference closure