

# Agenda for ICRPM-BM 2008

## Beijing

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● **Keynote Report & Company Report in Main Report Center**

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**AM of Nov. 7<sup>th</sup>, 2008** (Chairman: Renji Zhang and Terry T. Wohlers)

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**8: 00-8: 30** *Opening Ceremony*

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**Keynote Report**

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**8: 35-9: 20** **Terry T. Wohlers** : State of the Industry

GARPA Advisor, Principal Consultant & President, Wohlers Associates U. S. A

[tw@wohlersassociates.com](mailto:tw@wohlersassociates.com)

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**9: 20-9: 45** **Yongnian Yan** :

GARPA member (China), Professor, Department of Mechanical Engineering, Tsinghua Univ.

[dmeyyn@mail.tsinghua.edu.cn](mailto:dmeyyn@mail.tsinghua.edu.cn)

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**9: 45-10: 10** **Ian Gibson** : Towards a Medium/High Load-bearing Scaffold Fabrication System

Professor, Department of Mechanical Engineering, National University of Singapore, Singapore

[mpegi@nus.edu.sg](mailto:mpegi@nus.edu.sg)

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**10: 10-10: 30** *Coffee break (visiting the product exhibition)*

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**10: 30-10: 55** **Wei Sun** : Biomanufacturing for Tissue Science and Engineering

Professor of Drexel University

[sunwei@drexel.edu](mailto:sunwei@drexel.edu)

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**10: 55-11: 20** **Jukka Tuomi** : Incremental Sheet Forming as a Method for Sheet Metal Prototyping and Manufacturing

President Finnish Rapid Prototyping Association, Finland

[jukka.tuomi@hut.fi](mailto:jukka.tuomi@hut.fi)

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**11: 20-11: 45** **Yusheng shi** : Research progress of rapid manufacturing in HUST

Director of Rapid Manufacturing Center at HUST

[shiyusheng@263.net](mailto:shiyusheng@263.net)

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**11: 45-12: 10** **Fried Vancaen** : Additive Manufacturing – A 3rd Industrial Revolution

CEO of Materialise Inc.

[wilfried.vancaen@materialise.be](mailto:wilfried.vancaen@materialise.be)

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**12: 10-12: 35** **Feng Lin** : The study on scan strategy in electron beam selective melting

Professor, Department of Mechanical Engineering, Tsinghua Univ.

[linfeng@tsinghua.edu.cn](mailto:linfeng@tsinghua.edu.cn)

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**PM of Nov. 8<sup>th</sup>, 2008** (Chairman: Julian Evans and Ian Gibson)

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**Keynote Report**

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**14: 00-14: 25** **Julian Evans** : Solid Freeforming and Combinatorial Research at  
University of London  
Professor, Department of Chemistry, University College London  
[J.R.G.Evans@ucl.ac.uk](mailto:J.R.G.Evans@ucl.ac.uk)

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**14: 25-14: 50** **Chua chee kai** : State of the Art in Rapid Metallic Manufacturing  
Editor of Journal of JVPP  
[MCKCHUA@ntu.edu.sg](mailto:MCKCHUA@ntu.edu.sg)

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**14: 50-15: 15** **Zhongde Shan** :  
Director of Advanced Manufacture Technology Center, China Academy of Machinery Science &  
Technology  
[shanzd@cam.com.cn](mailto:shanzd@cam.com.cn)

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**15: 15-15: 40** **Mario Monzón** : Predictability of plastic parts behaviour, made from rapid  
manufacturing, working under real conditions  
Professor, Las Palmas de Gran Canaria University, Spain  
[mmonzon@dim.ulpgc.es](mailto:mmonzon@dim.ulpgc.es)

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**15: 40-16: 00** **Coffee break (visiting the product exhibition)**

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**Company Report**

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- 16: 00-16: 20** **Jian Chen** : Materialise RP/T&M total solutions  
Chief Representative of Materialise (China)  
[sales@materialise.com.cn](mailto:sales@materialise.com.cn)
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- 16: 20-16: 40** **Nikolas Chen** : e-Manufacturing applications: Any shape, anytime, anywhere  
China/Taiwan Area Sales Manager, EOS GmbH  
[nikolas.chen@eos.info](mailto:nikolas.chen@eos.info)
- 
- 16: 40-17: 00** **Hagiwara Tsuneo** : Current Status of CMET  
Yokohama Photo-Resin R&D Center, CMET Inc.  
[haqi@cmet.co.jp](mailto:haqi@cmet.co.jp)
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- 17: 00-17: 20** **Dingjun Zhang** : Melted and Extruded Manufacturing Process and Machine  
Application Engineer, Manager of Beijing Yinhua  
[zhangdj@rpyinhua.com](mailto:zhangdj@rpyinhua.com)
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- 17: 20-17: 40** **Louise Dai** : Rapidly build better quality surface with Geomagic Studio  
Senior Application Engineer, Deputy General Manager,  
[shzzh69@yahoo.com](mailto:shzzh69@yahoo.com)
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- 17: 40-18: 00** **Chris Chen** : The modern technology of RP&M  
Director of Sales, Asia Pacific Operation, 3D Systems  
[wzdesign@hotsales.com](mailto:wzdesign@hotsales.com)
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- 18: 00-18: 20** **Ending Ceremony**
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## Group Report in Division Report Center

### ● Part I - Bio-manufacturing

PM of Nov. 7<sup>th</sup>, 2008

#### Group Report

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- 14: 00-14: 20** PH.D **Xiang Li** : Shanghai Jiaotong University  
Fabrication and mechanical properties of porous titanium alloy implants using electron beam melting process
- 
- 14: 20-14: 40** Prof. **LIU Xiaolin / QI Jian** the First Affiliated Hospital of Sun Yat-sen University  
A preliminary research on three-dimensional reconstruction of functional fascicular groups inside a segment common peroneal nerve
- 
- 14: 40-15: 00** PH.D **HAN Jingyun** : Beijing University of Aeronautic and astronautics  
Digital design and forming technology for Complete Denture
- 
- 15: 00-15: 20** PH.D **Shanglong Xu / Yang Yue** : Univ. of Electronic Science and Technology  
The scaffold with a branched channel system fabricated by SFF to favor a novel device for timely cell observation
- 
- 15: 20-15: 40** Prof. **Mingen Xu** : Hang Zhou Dianzi University  
Control Adipose-derived stromal cells differentiation into adipose and endothelial cells in an 3-D structure established by cell-assembly technique
- 
- 15: 40-16: 00** PH.D **Shengjie Li** : Tsinghua University  
To fabricate gradient hydrogel scaffold based on an improved cell assembling system
- 
- 16: 00-16: 20** *Coffee break (visiting the product exhibition)*

#### Group Report

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- 16: 20-16: 40** PH.D **WANG Tianshi** : Tsinghua University  
Research on Preparation of Bioactive Hydroxyapatite on Pure Titanium
- 
- 16: 40-17: 00** Prof. **Renji Zhang** : Tsinghua University  
A novel osteochondral scaffold with a compact layer fabricated via multi-nozzle low-temperature deposition manufacturing
- 
- 17: 00-17: 20** Prof. **Ian Gibson** : National University of Singapore  
Towards a Medium/High Load-bearing Scaffold Fabrication System
- 
- 17: 20-17: 40** PH.D **Michel Janssens** : Materialise  
Rapid Technologies in medicine: What can, can't be done and why.
- 
- 17: 40-18: 00** Prof. **Xiaohong Wang** : Tsinghua University  
Rapid prototyping a double layer polyurethane-collagen conduit and its schwann cell compatibility
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AM of Nov. 8<sup>th</sup>, 2008

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Group Report

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8: 00-8: 20	Prof. <b>Antti A. Mäkitie</b> : Helsinki University of Technology In Vitro Evaluation of a 3D PLGA-TCP Composite Scaffold in an Ex-perimental Bioreactor
8: 20-8: 40	PH.D <b>Qin Lian</b> : Xi'an Jiaotong University Fabrication and in vitro evaluation of calcium phosphate cement combined with controlled chitosan-fiber structure
8: 40-9: 00	Prof. <b>Da-jun Ying / Hai Lu</b> : Third Military Medical University Design and Preparation of a Surgical Biomaterial Patch
9: 00-9: 20	Prof. <b>Hualong Xie</b> : Northeastern University The Design and Modeling of Multi-axis Knee Artificial Leg
9: 20-9: 40	Prof. <b>Tingfei Xi / Yanmei Chen</b> : National Institute for the Control of Pharmaceutical and Biological Products In vitro Cytotoxicity of Bacterial Cellulose Scaffold for Tissue Engineered Bone
9: 40-10: 00	PH.D <b>Wu-Wenzheng</b> : Northeastern University Fabrication of Repairing Skull Bone Defects based on the Rapid Prototyping
10: 00-10: 20	<b>Coffee break (visiting the product exhibition)</b>

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Group Report

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10: 20-10: 40	Prof. <b>Xing Ma</b> : The Fourth Military Medical University Experimental Intervertebral Spinal Fusion in Goats with a RP-based PLGA/TCP/bBMP Biomimetic Grafting Material
10: 40-11: 00	Prof. <b>Zhuo Xiong</b> : Tsinghua University Tissue Engineering Applications of Rapid Prototyping
11: 00-11: 20	PH.D <b>Rui Yao</b> : Tsinghua University Design and study of cell encapsulator for cell assembly technology
11: 20-11: 40	PH.D <b>YANG Lincoln</b> : Shanghai Gaitech Scientific Instruments Co. On Modeling Bio-Scaffolds: structural and fluid transport characteri-zation based on 3D imaging data
11: 40-12: 00	Prof. <b>YAN Yongnian</b> : Tsinghua University Rapid Prototyping and Manufacturing technology: principle, repre-sentative technics, applications and developmental trends

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● Part II - Virtual Prototyping

PM of Nov. 7<sup>th</sup>, 2008

Group Report

- 14: 00-14: 20** PH.D **Z.W. Li** : Huazhong University of Science and Technology  
Complex Object 3D Measurement Based on Neural Network and Digital Fringe Projection
- 
- 14: 20-14: 40** PH.D **Kui Huang** : Huazhong University of Science and Technology  
A novel matching algorithm for a Hand-Held 3D Laser Scanning Sensor
- 
- 14: 40-15: 00** Prof. **Gaiyun HE** : Tianjin University  
Research on Surface Forming and Virtual Model of Simulation Based on IGES
- 
- 15: 00-15: 20** Prof. **CHENG Jun-ting** : Heilongjiang University of Science & Technology  
Research and Realization of Auto-Calibration Technique Based On Stereovision
- 
- 15: 20-15: 40** Prof. **ZHONG Shan** : Wuzhou University  
An Approximating Algorithm Research on Reconstruction of Complicated Curved Surface
- 
- 15: 40-16: 00** PH.D **Dahui Qin** : Huazhong University of Science and Technology  
New approach for 3D shape measurement of complex objects by combining color-coded fringe and neural networks
- 
- 16: 00-16: 20** *Coffee break (visiting the product exhibition)*

Group Report

- 16: 20-16: 40** PH.D **LIU Yu-zhang** : Shanghai University  
Application Research of Iterative Minor Adjustment in Reverse Engineering
- 
- 16: 40-17: 00** Prof. **Yang Xiaodong** : Harbin Institute of Technology  
The Optimization of Triangulation based upon Serial Fault Data
- 
- 17: 00-17: 20** PH.D **MENG Xianglin** : Heilongjiang University of Science & Technology  
Research on Data Processing in Reverse Engineering
- 
- 17: 20-17: 40** Prof. **Sadegh Rahmati** : Imam Husain university  
Experimental Study of Implementation of Octagonal Internal Structure for Investment casting SL Patterns

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AM of Nov. 8<sup>th</sup>, 2008

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Group Report

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|----------------------|--|
| <b>8: 00-8: 20</b>   | Prof. <b>Zhu Yongjian</b> : Hunan University<br>Discussions on Phase-Reconstructing Algorithms for 3D Digitizing Structure-Light Profilometry                          |
| <b>8: 20-8: 40</b>   | Prof. <b>Meifa Huang</b> : Guilin University of Electronic Technology<br>3D Symmetric Components Retrieve Based on Local Features Comparison in Mechanical Engineering |
| <b>8: 40-9: 00</b>   | Prof. <b>Siyuan Cheng</b> : Guangdong University of Technology<br>A hybrid surfacing methodology for reverse engineering   |
| <b>9: 00-9: 20</b>   | PH.D <b>Fu Hongsheng</b> : Shanghai University<br>Study on the Personalized Cranium Defects Restoration Technique  |
| <b>9: 20-9: 40</b>   | Prof. <b>B Liu</b> : Huaqiao University<br>Triangular mesh model reconstruction from scan point clouds based on template   |
| <b>9: 40-10: 00</b>  | Prof. <b>ZHOU Tianrui / ZHU Gensong</b> : Nanchang University<br>A New Algorithm for Feature Matching in Reverse Engineering   |
| <b>10: 00-10: 20</b> | <i>Coffee break (visiting the product exhibition)</i>  |
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Group Report

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|----------------------|---|
| <b>10: 20-10: 40</b> | PH.D <b>CHEN Tian</b> : GE Global Research<br>Point-based Data Analysis and Cutting Tool Parameter Extraction   |
| <b>10: 40-11: 00</b> | Prof. <b>Gang Zhou</b> : Huazhong University of Science and Technology<br>A Novel method for Human Expression Rapid Reconstruction  |
| <b>11: 00-11: 20</b> | PH.D <b>SHANGGUAN Jingchang</b> : Beijing Institute of Technology<br>Role Assignment and Cooperation of Ontology and Object-Oriented Principle in Construction of Digital Product Model |
| <b>11: 20-11: 40</b> | Prof. <b>Syed Masood</b> : Swinburne University of Technology<br>Error Analysis of FDM Fabricated Medical Replica   |
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● Part III - Rapid Tooling

PM of Nov. 7<sup>th</sup>, 2008

Group Report

- 14: 00-14: 20 Prof. **L. Jinhui** : Huazhong University of Science and Technology  
Characteristic of microstructure of 316L stainless steel parts formed via selective laser melting
- 14: 20-14: 40 Prof. **Jiang Yinfang** : Jiangsu University  
Investigation on Fracture Criterion of Sheet-Metal based on Laser Shock Forming
- 14: 40-15: 00 PH.D **FAN Hui** : Nanjing University of Aeronautics and Astronautics  
Experimental Research and Simulation of Laminated Templates  
Electro-deposition in Manufacturing Metal Part
- 15: 00-15: 20 PH.D **Anhu Li**: Tongji University  
Collaborative Design of Large-scale Optical Instrument Structure
- 15: 20-15: 40 Prof. **Zhongde Shan** : Advanced Manufacture Technology Center China  
Academy of Machinery Science & Technology  
NC Milling Technology of Patternless Sand Mold
- 15: 40-16: 00 PH.D **Peng Zhang** : Harbin Institute of Technology  
Deformation behaviors of laser forming of ring sheet metals
- 16: 00-16: 20 *Coffee break (visiting the product exhibition)*

Group Report

- 16: 20-16: 40 PH.D **Qian Bo** : Huazhong University of Science and Technology  
New Voronoi Diagrams Computation Algorithm Of Multiply-Connected Planar Areas In The Selective Laser Melting Application
- 16: 40-17: 00 Prof. **Wei Zheng** : Xiamen University  
Process and Technology of Rapid Prototyping of A -Micro Motor
- 17: 00-17: 20 Prof. **Mario Monzón** : Universidad de Las Palmas de Gran Canaria  
PREDICTABILITY OF PLASTIC PARTS BEHAVIOUR MADE FROM RAPID MANUFACTURING
- 17: 20-17: 40 Prof. **J.R.G.Evans** : University College London  
Solid Freeforming and Combinatorial Research at University of London
- 17: 40-18: 00 Prof. **F Lin** : Tsinghua University  
The study on scan strategy in electron beam selective melting
- 18: 00-18: 20 Prof. **Ir. Wim Michiels** : Materialise  
e-RP: Concurrent engineering revisited

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AM of Nov. 8<sup>th</sup>, 2008

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Group Report

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|---------------|--|
| 8: 00-8: 20   | Prof. <b>K. Y. Jiang</b> : Huaqiao University<br>Part Decomposing Algorithm Based on STL Solid Model Used in Shape Deposition Manufacturing Process  |
| 8: 20-8: 40   | PH.D <b>Lu Gang</b> : Huazhong University of Science and Technology<br>Developments of three new drip emitters with mini-scale and complex inner channels by using rapid prototyping and manufacturing |
| 8: 40-9: 00   | PH.D <b>Haoping Zeng</b> : Zhejiang Industry Polytechnic College<br>Layer deposition model with pores in the temperature simulation of plasma spray forming  |
| 9: 00-9: 20   | Prof. <b>Zhiming QU</b> : Hebei Engineering University<br>Investigation on Crack of Mg-Li alloy during Laser Rapid prototyping   |
| 9: 20-9: 40   | PH.D <b>Liang Yuanyuan</b> : National Key Laboratory for Remanufacturing<br>RESEARCH ON WELDING PATH PLANNING OF ROBOT MIG MANUFACTURING   |
| 9: 40-10: 00  | Prof. <b>ZHANG Yu</b> : Kunming University of Science and Technology<br>THE APPLICATION OF RAPID PROTOTYPING TECHNOLOGY IN DIE MAKING OF DIESEL ENGINE   |
| 10: 00-10: 20 | <i>Coffee break (visiting the product exhibition)</i>  |
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Group Report

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|---------------|---|
| 10: 20-10: 40 | PH.D <b>H. Y. Li</b> : Xiamen University<br>Research on bipolar pulse current electroforming in precise molds and dies  |
| 10: 40-11: 00 | PH.D <b>HU Weiwei</b> : Tsinghua University<br>Effect of processing parameters on thermal phenomena indirect laser metallic powder deposition                                   |
| 11: 00-11: 20 | Prof. <b>Sadegh Rahmati</b> : Department of Mechanical Engineering<br>Design and Manufacture of a Wax Injection Tool for Investment Casting using Rapid Tooling                 |
| 11: 20-11: 40 | Prof. <b>HAGIWARA Tsuneo</b> : Yokohama Photo-Resin R&D Center<br>Current Status of Stereolithography Resin in Japan  |
| 11: 40-12: 00 | PH.D <b>Feng Liu</b> : Advanced Manufacture Technology Center China Academy of Machinery Science & Technology<br>The study on aerodynamically assisted Tip - Pen Direct Writing |
| 12: 00-12: 20 | Prof. <b>A Bernard</b> : AFPR<br>EVOLUTION OF RAPID PRODUCT DEVELOPMENT: CONCEPTS AND APPLICATIONS  |
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● Part IV - Rapid Manufacturing

PM of Nov. 7<sup>th</sup>, 2008

Group Report

- 14: 00-14: 20** Prof. **GUO. H** : NUAA  
Study of Modeling and Virtual Machining for predicting distortion of multi-frame components
- 
- 14: 20-14: 40** Prof. **Liu Jie** : Huazhong University of Science and Technology  
The effect of technical parameters on characteristics of selective laser sintering dental glass-ceramics powder
- 
- 14: 40-15: 00** Prof. **Jibin Zhao** : Chinese Academy of Sciences  
A computing method of accurate slice contours based on STL model
- 
- 15: 00-15: 20** PH.D **Fei Wang**: Huaqiao University  
Study on Gel Casting of 316L Stainless Steel Powder through Mold DIS Process
- 
- 15: 20-15: 40** PH.D **Liu Bing** : Huazhong University of Science & Technology Academy of Machinery Science & Technology  
An algorithm for the Boolean operation of STL models based on spacial decomposition
- 
- 15: 40-16: 00** *Coffee break (visiting the product exhibition)*

Group Report

- 16: 00-16: 20** Prof. **Wang Zhijian** : Shenyang Institute of Aeronautical Engineering  
The 3D Design and Numerical Simulation of Two-phase Flow in the Laser Rapid Prototyping Coaxial Powder Delivery System
- 
- 16: 20-16: 40** Prof. **Weidong YANG** : Hebei University of Technology  
Research of effective factors on forming precision in patternless casting manufacturing technique
- 
- 16: 40-17: 00** Prof. **Sadegh Rahmati** : Imam Hussain University  
Piezo-electric Head Application in a New 3D Printing Design
- 
- 17: 00-17: 20** Prof. **Syed Masood** : Swinburne University of Technology  
A Study of Melt Flow Analysis of a ABS-Iron composite in Fused Deposition Modelling Process
- 
- 17: 20-17: 40** Prof. **Xuesong Lu** : University College London  
Extrusion Freeforming of Millimeter-Wave Electromagnetic Bandgap (EBG) Photonic Crystals

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AM of Nov. 8<sup>th</sup>, 2008

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Group Report

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|---------------------|---|
| <b>8: 00-8: 20</b>  | PH.D <b>C. Z. Yan</b> : Huazhong University of Science and Technology<br>Preparation and selective laser sintering of nylon coated metal powders for the indirect SLS process |
| <b>8: 20-8: 40</b>  | Prof. <b>Xie Le</b> : Shanghai Jiaotong Univ .<br>The development of training system for virtual micro-otosurgery   |
| <b>8: 40-9: 00</b>  | PH.D <b>Xiaoli Dong</b> : Advanced Manufacture Technology Center of China Academy of Machinery Science & Technology<br>Rapid Manufacturing of Sand Mold by Direct Milling     |
| <b>9: 00-9: 20</b>  | PH.D <b>Xiaomao Huang</b> : Huazhong University of Science & Technology<br>Slice data based support generation algorithm for fused deposition modeling                        |
| <b>9: 20-9: 40</b>  | Prof. <b>Wang Wei/Shang Xiaofeng</b> : Shenyang Institute of Aeronautical Engineering<br>The Research on Functionally gradient Material Laser Rapid Prototyping Technique     |
| <b>9: 40-10: 00</b> | <b>Coffee break (visiting the product exhibition)</b>   |
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Group Report

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|----------------------|---|
| <b>10: 00-10: 20</b> | Prof. <b>Li xiaoyan</b> : University of Shanghai for Science and Technology<br>Multi-object Optimal Design of Rapid Prototyping Based on Uniform Experiment   |
| <b>10: 20-10: 40</b> | Prof. <b>JIN Xiao-shu</b> : Tianjin Polytechnic University<br>Study and Development on Off-line Programming of a Robot for Laser Re-manufacturing   |
| <b>10: 40-11: 00</b> | Prof. <b>Soshu Kiriara</b> : Smart Processing Research Center<br>Smart Processing in Materials Tectonics:Fabrication of Photonic Crystals for Terahertz Wave Control by Using Micor-stereolithography |
| <b>11: 00-11: 20</b> | Prof. <b>Hongyi Yang</b> : University of Nottingham<br>Rapid Manufacturing of Non-assembly Complex Micro Devices by Microstereolithography  |
| <b>11: 20-11: 40</b> | PH.D <b>Ir. Wim Michiels</b> : Materialise<br>e-Stage: Design Automation with Digital CAD in practice   |
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