FIRST WORLD CONFERENCE ON 3D FABRICS
Weston Conference Centre, University of Manchester, 10-11 April 2008
PROGRAMME

Thursday April 10: **8.30-9.0 REGISTRATION** **9.00-9.15 WELCOME** John Hearle, Conference Chair; Xiaogang Chen, Co-Chair Robert Young, Head of School of Materials, University of Manchester; Brian McCarthy, Director, TechniTex Faraday.		
SESSION (1) Chair: **OVERVIEW OF DEVELOPMENTS** **9.15 Keynote speaker: Alan Prichard, Boeing Compnay**, **Techno-economic significance of 3D fabrics for the aerospace industry.**		
9.45 John Hearle	TexEng Software Ltd & University of Manchester, UK	Innovation for 3D fabrics.
10.05 Mansour Mohamed	3TEX Inc, North Carolina, USA	Recent advances in 3D weaving.
10.25 Frank Ko	University of British Columbia, Canada	Recent advances in 3D braiding.
10.45 Discussion 11.00 Coffee break		
SESSION (2) Chair: **3D WOVEN FABRICS**		
11.30 Xiaogang Chen	TexEng Software Ltd & University of Manchester, UK	Computer-aided design and manufacture of 3D woven fabrics on conventional looms.
11.50 Nandan Khokar	Biteam AB, Sweden	Second-generation woven profiled 3D fabrics from 3D weaving
12.10 Alaginusamy Ramasamy	Indian Institute of Technology, Delhi, India	Multilayer interlocked 3D woven structures – fabric construction and properties.
12.30 Discussion 12.45 Lunch 13.30 Posters		
SESSION (3) Chair: **14-00 Keynote speaker: Xiaoming Tao, Hong Kong Polytechnic Unversity: Smart 3D fabrics.** **3D KNITTED FABRICS**		
14.30 Subhash Anand	University of Bolton, UK	Knitted 3D structures for technical textile applications.
14.50 Angela Davies	De Montfort University, Leicester, UK	Warp knitted spacer fabrics as absorbent materials.
15.10 Filipo Soutinho	University of Minho, Portugal	Design of 3D weft-knitted fibrous preforms for FRP tube connections.
15.30 Discussion 15.45 Tea break		
SESSION (4) Chair: **3D BRAIDED FABRICS**		
16.15 Alexander Bogdanovich	3TEX Inc, North Carolina, USA	New 3-D rotary braiding technology for high-speed manufacture of unitary, complex shape preforms and composites.
16.35 Janpeter Horn	August Herzog Maschminenfabrik GmbH, Germany	Advantages in braiding: industrial manufacturing of 3D braids.
16.55 Asami Nakai	Kyoto Institute of Technology, Japan	Fabrication of 3D braided fabric learning from historical Japanese braid.
17.15 Discussion 17.30-18.30 Posters 19.00 Conference dinner		

FRIDAY, APRIL 11 **SESSION (5) Chair: 3D FABRIC COMPOSITES** **9.00 Keynote speaker:** Byron Pipes: Purdue University, USA: Composites from the 20th to the 21st Century.		
9.30Richard Day	University of Manchester & NW Composites Centre, UK	Techno-economic evaluation of 3D fabrics for composites.
9.50Alexander Buesgen	Shape 3 Innovative textiltechnik, GmbH, Germany	Simulation and realisation of 3D woven shapes for automotive applications.
10.10 Yong Kim	University of Massachusetts, USA	Fracture toughness of 3D braided and Z-directional microfiber reinforced composite
10.30 Scott King	Univeresity of Ulster, UK	The influence of through-the thickness binder fibre count on fibre volume fraction, crimp and damage tolerance within 3D woven carbon fibre composites.
10.50 Discussion 11.10 Coffee break		
SESSION (6) Chair: **3D FABRIC COMPOSITES (continued)**		
11.40 Britta Kuckhoff	RWTH Aachen University, Germany	Development and industrial manufacturing of innovative reinforcement for textile reinforced concrete.
12.00 Francois Boussu	ENSAIT, France	Delamination behaviour of 3D warp interlock structures.
12.20 Carmen Loghin	Technical University, Iasi, Rumania	Conductive textile based composites.
12.40 Discussion 13.00 Lunch		
SESSION (7): Chair: **DESIGN AND MODELLING OF 3D FABRICS**		
14.000 Stepan Lomov	Katholieke Universiteit Leuven, Belgium	Modelling 3D fabrics and 3d reinforced composites: challenges and solutions.
14.20 Martin Sherburn	University of Nottingham, UK	Prediction of textile geometry using strain energy minimisation
14.40 Masaru Zako	Osaka University, Japan	A proposal of stress/strain analytical procedure of textile composites with stitch by M3 method.
15.00 Yordan Kyosev	Niederrhein University of Applied Science, Germany	Modelling of 3D double bed warp knitted fabrics
15.20 Sergei Grishanov	De Montfort University, Leicester, UK	A new design method for the 3D hollow structures
15.50 Discussion 16.05 Tea break		
SESSION (8): Chair: **THE WIDER FIELD**		
16.30 Rachel Philpott	Royal College of Art, Londo,n UK	Conceptual textiles: printing the fold for deployable structures.
16.50 Ryszard Kozlowski	Institute of Natural Fibres, Poznan, Poland	How does nature create 3D natural reinforcing fibrous materials.
17.10-17.30 Discussion & Closing Remarks		

POSTERS (submissions to date: more can be accepted)

Luminita Ciobanu	Technical university, Iasi, Rumania	3D surface controlled structures for fluid flow improvement.
Costsanta Comandar	Technical university, Iasi, Rumania	3D shaping of knitwear using decorative darts.
Simon Demeulemeester	Ghent University, Belgium	Computer algorithm for self regulating machine speed on airjet looms.
Jimmy Lam	Hong Kong Polytechnic University	Principle and development on 3D knitted fabrics, a knitter's perspective.
Afarin Navayazdan	Aminkabir University of Teheran, Iran	Evaluation of tensile behaviour of braided structures with different cross-sections.
Mohammed Nawafleh	Tafila Technical University, Jordan	Problems of formation od 3D composites by imposing 2Dbands and shells
Guillaume Perie	Katholieke Universiteit Leuven, Belgium	Meso-scale modelling of an interlock reinforced composite
Yuya Hidekuma	Kyoto Institute of Technology, Japan	Development of pultrusion mouldings with braiding technique.
Hugh Gong	University of Manchester, UK	Technology for 3D Nonwoven Products