

April 6, 2005, Wednesday

08:30	08:40	Welcome: Prof. Manfred Geiger (on behalf of the Chair of Manufacturing Technology)		
08:40	09:00	Welcome: Prof. Karl-Dieter Gröske (Rector, on behalf of the University of Erlangen)		
09:00	10:40	1.1 Plenary session		
09:00	09:30	T. Altan, H. Palaniswamy, Y. Aue-u-lan : TUBE AND SHEET HYDROFORMING-Advances in Material Modeling, Tooling and Process Simulation , Engineering Research Center for Net Shape Manufacturing, Columbus, Ohio, USA		
09:35	10:05	H.J. Haepf, M. Rohleder: FE Simulation of Sheet Metal Forming – State of the Art in Automotive Industry , DaimlerChrysler AG, Sindelfingen, D		
10:10	10:40	R. Kopp, C. Wiedner, A. Meyer: Flexibly Rolled Sheet Metal and its use in Sheet Metal Forming , Institute of Metal Forming, Aachen, D		
10:40	11:00	Coffee		
11:00	12:05	2.1 Plenary session		
11:00	11:30	K. Galanulis: Optical Measuring Technologies in Sheet Metal Processing , GOM GmbH, Braunschweig, D		
11:35	12:05	J. Jeswiet: Asymmetric Incremental Sheet Forming , Department of Mechanical Engineering, Kingston, CDN		
12:05	13:20	Lunch		
13:20	15:25	Sessions 3.1 / 3.2 / 3.3		
13:20	13:45	3.1 Joining 1	3.2 Intelligent Manufacturing 1	3.3 Deep Drawing
13:20	13:45	J. Wilden, J.P. Bergmann, M. Dolles, S. Reich: Use of zinc-alloys for low temperature soldering of zinc coated steels , Institute for Production Technologies, Ilmenau, D	M. Tisza, Z. Lukács, M. Tisza jr.: Rapid Parametric Process Design using FEM Analysis , University of Miskolc, Miskolc-Egyetemváros, H	M. Tolazzi, M. Merklein: Determination of Friction Coefficients for the FE-Analysis of Sheet Forming of Tailored Welded Blanks , Chair of Manufacturing Technology, Erlangen, D
13:45	14:10	F. Klocke, A. Castell-Codesal, D. Donst: Process characteristics of laser brazing aluminium alloys , Fraunhofer-Institut für Produktionstechnologie, Aachen, D	S.Kumar, R. Singh: Trends and Developments in Intelligent Computer Aided Design of Progressive Dies , Department of Mechanical Engineering, Haryana, IND	B.-A. Behrens, J.-W. Yun, M. Milch: Closed-Loop-Control of the Material Flow in the Deep Drawing Process , Institute for Metal Forming and Metal Forming Machine Tools, Garbsen, D
14:10	14:35	F.-W. Bach, A. Beniyash, K. Lau, R. Versemann: Joining of steel-aluminium hybrid structures with electron beam on atmosphere , Institute of Materials Science, Garbsen, D	R. Lustig, R. Hochmuth, H. Meerkamm: Tolerance Analysis of Sheet Metal Assemblies with Focus on Non-Rigid Geometry , Chair of Engineering Design, Erlangen, D	B. Barisic, T. Pelpinjak, K. Kuzman: Numerical-Stochastic Modeling And Simulation Of Deep Deep Drawing Tinplate Rings , Faculty of Engineering, Rijeka, CRO
14:35	15:00	U. Dilthey, A. Gumenyuk, H. Masny: Non-Vacuum Electron Beam Welding , ISF Welding and Joining Institute, Aachen, D	A. Albers, H. Weiler, D. Emmrich, B. Lauber: A new approach for optimization of sheet metal components , Institute of Product Design, Karlsruhe, D	C. W. Tai, H. C. Tsai, S. C. Tsai: The Development of Cold Forging Progressive Die Technology for the Case of Slim Type Spindle Motor , Metal Industries Research & Development Centre, Taiwan, CN
15:00	15:25	L. Han, K.Young, R. Hewitt, A. Chrysanthou, J.M.O'Sullivan: The effect of pre-straining on the mechanical behaviour of self-piercing riveted aluminium alloy sheets , International Automotive Research Centre, Manufacturing Group, Warwick, UK	H. Hagenah, T. Wurm: Problem specific design of actuators for micro adjustment , Chair of Manufacturing Technology, Erlangen, D	M. Kerausch, M. Merklein, D. Staud: Finite Element Analysis for Deep Drawing of Tailored Heat Treated Blanks , Chair of Manufacturing Technology, Erlangen, D
15:25	15:45	Coffee		
15:45	17:25	Sessions 4.1 / 4.2 / 4.3		
15:45	16:10	4.1 Joining 2	4.2 Hydroforming 1	4.3 Incremental Forming 1
15:45	16:10	H. Laukant, C. Wallmann, M. Korte, U. Glatzel: Flux-Less Joining Technique of Aluminium with Zinc-Coated Steel Sheets by a Dual-Spot-Laser Beam , Metals and Alloys, Bayreuth, D	E. Ceretti, C. Giardini, C. Contri, P. Bortot: Hydromechanical Deep Drawing Simulations: Model Development and Process Parameters Investigation , Department of Mechanical Engineering, Brescia, I	J. Jeswiet, D. Young, M. Ham: Non-traditional Forming Limit Diagrams for Incremental Forming , Department of Mechanical Engineering, Kingston, CDN
16:10	16:35	C. Thomy, T. Seefeld, F. Vollertsen: High-Power Fibre Lasers - Application Potentials for Welding of Steel and Aluminium Sheet Material , Institut für angewandte Strahltechnik, Bremen, D	H. K. Tönshoff, J. Bunte, O. Meier, L. Engelbrecht: Deformation Behaviour of Sheet Metals in Laser-assisted Hydroforming Processes , Laser Center Hanover e.V., Hanover, D	R. Göbel, M. Kleiner, N. Henkenjohann: New Approach for Process Planning and Optimisation in Sheet Metal Spinning , Institute of Forming Technology and Lightweight Construction, Dortmund, D
16:35	17:00	C. Thomy, F. Vollertsen: Influence of Magnetic Fields on Dilution during Laser Welding of Aluminium , Institut für angewandte Strahltechnik, Bremen, D	M. Geiger, P. Dal Bó, J. Hecht: Improvement of formability in tube hydroforming by reduction of friction with a high viscous fluid flow , Chair of Manufacturing Technology, Erlangen, D	J.R. Duflo, B. Callebaut, J.-P. Kruth: Laserforming of 3D features , Department of Mechanical Engineering, Leuven, B
17:00	17:25	A. Blankl, M.Geiger: Investigations on Seam Quality in Laser Beam Welding of Contaminated, Zinc Coated Sheets , Chair of Manufacturing Technology, Erlangen, D	P. Groche, Ch. Metz: Active Material Flow Control during High-Pressure Sheet Metal Froming , Institute for Production Engineering and Forming Machines, Darmstadt, D	H. Schulze Niehoff, F. Vollertsen: Non-thermal Laser Stretch-Forming , Institut für angewandte Strahltechnik, Bremen, D
17:30	18:00	Coffee and sandwiches prior to technical tours		
18:10	18:20	Technical tours, shuttle service to the location of the chosen field of activity		
18:30	19:15	Technical tours, presentation of the chosen field of activity		
19:30		Shuttle service to the hotels		

		April 7, 2005, Thursday	
08:30	10:10	5.1 Plenary session	
08:30	09:00	A.H. van den Boogaard, H.H. Wisselink, J. Huétink: Do advanced material models contribute to accuracy in industrial sheet forming simulations? , Faculty of Engineering Technology, Enschede, NL	
09:05	09:35	F. Vollertsen: Developments and Trends in Laser Welding of Sheet Metal , BIAS Bremer Institut für angewandte Strahltechnik GmbH, Bremen, D	
09:40	10:10	P. Groche, T. Callies: Tribology in Sheet Metal Forming with Regard to Challenges in Lightweight Construction , Institute for production engineering and forming machines, Darmstadt, D	
10:10	10:30	Coffee	
10:30	12:35	Sessions 6.1 / 6.2 / 6.3	
		6.1 Joining 3	6.2 Surface
10:30	10:55	D. Tikhomirov, B. Rietman, K. Kose, M. Makink: Computing Welding Distortion: Comparison of Different Industrially Applicable Methods , INPRO GmbH, Berlin, D	J. Duffou, A. Szekeres, P. Vanherck: Force Measurements for Single Point Incremental Forming: an Experimental Study , Department of Mechanical Engineering, Leuven, B
10:55	11:20	R. Neugebauer, R. Mauermann, S. Dietrich: Chances and challenges in joining by forming with a flat counter tool , Fraunhofer-Institut für Werkzeugmaschinen und Umformtechnik, Chemnitz, D	C.M. Wichern, W. Rasp: Measuring and Quantifying the Surface-Roughness Anisotropy of Modelled and Industrially Produced Surfaces , Max-Planck-Institut für Eisenforschung, Düsseldorf, D
11:20	10:45	M. F. Záh, L. Papadakis, S. Roeren, T. Hornfeck: Use of Shell Elements for the FEM-Simulation of the Welding Process of Sheet Metal Parts , Institute for Machine Tools and Industrial Management, Garching, D	B. Denkena, F. Berg, W. Acker: Surface Inspection System for Large Sheet Metal Parts , Institute of Production Engineering and Machine Tools, Hannover, D
11:45	12:10	C. Thomy, M. Schilf, T. Seefeld, G. Sepold, F. Vollertsen: Distortion Minimization in Remote Welding of Steel , Institut für angewandte Strahltechnik, Bremen, D	M. Tolazzi, M. Meiler, M. Merklein: Tribological Investigations on Coated Steel Sheets using the Dry Film Lubricant Drylube E1 , Chair of Manufacturing Technology, Erlangen, D
12:10	12:35	J. Wilden, J.P. Bergmann: Mechanised Plasma-Powder-Arc-Welding (PPAW) of aluminum sheets , Institute for Production Technologies, Ilmenau, D	M. Meiler, H. Jaschke: Lubrication of aluminium sheet metal within the automotive industry , BMW Group, München, D
12:35	14:05	Lunch	
14:05	15:45	Sessions 7.1 / 7.2 / 7.3	
		7.1 Friction Stir Welding	7.2 Simulation
14:05	14:30	S. Beccari, L. D'Acquisto2, L. Fratini, C. Salamone: Thermal Characterization of Friction Stir Welded Butt Joints , Department of Engineering Mechanics, Palermo, I	X. Liu, M. Daniels, B. Shirvani: The Significance of Experiment in the Finite Element Analysis of a Pulley Forming Process , Faculty of Engineering and Computer Technology, Birmingham, UK
14:30	14:55	A. Barcellona, G. Buffa, D. Contorno, L. Fratini, D. Palmeri: Microstructural Changes Determining Joint Strength in Friction Stir Welding of Aluminium Alloys , Department of Engineering Mechanics, Palermo, I	A.W. Behrens, J. Ellert: Buckling Texturing Technology for Increase in Stability of thin Sheet Metal Structures - Simulation and Application , Institute of Design and Production Engineering - Laboratory of Production Engineering, Hamburg, D
14:55	15:20	A. Giera, M. Merklein, M. Geiger: Statistical Investigations on Friction Stir Welded Aluminum Tailored Blanks for a Robust Process , A. Giera	M. Thome, G. Hirt, B. Rattay: Metal flow and die filling in coining of micro structures with and without flash , Lehrstuhl für Werkstofftechnologie und Präzisionsformgebung, Saarbrücken, D
15:20	15:45	S. Dörfler, A. Otto: Friction stir welding of light weight sandwich materials , Chair of Manufacturing Technology, Erlangen, D	C. Karch, K. Roll: Transient simulation of electromagnetic forming of aluminium tubes , DaimlerChrysler Research and Technology, Friedrichshafen, D
15:45	16:15	Coffee	
16:15	17:30	Sessions 8.1 / 8.2 / 8.3	
		8.1 Bending 1	8.2 Hydroforming 2
16:15	16:40	B. Kanber, O.Y. Bozkurt: Finite Element Analysis of Plate Bending Problems using Transition Plate Elements , Mechanical Engineering Department, Gaziantep, TR	R. Krux, W. Homberg, M. Kalveram, M. Trompeter, M. Kleiner, K. Weinert: Die Surface Structures and Hydrostatic Pressure System for the Material Flow Control in High-Pressure Sheet Metal Forming , Institute of Forming Technology and Lightweight Construction, Dortmund, D
16:40	17:05	M. Schikorra, R. Govindarajan, A. Brosius, M. Kleiner: Springback Analysis of Sheet Metals Regarding Material Hardening , Institute of Forming Technology and Lightweight Construction, Dortmund, D	Q. Kreis, M. Celegini, M. Merklein: Integrated manufacturing by hydroforming, laser welding and cutting , Chair of Manufacturing Technology, Erlangen, D
			8.3 Incremental Forming 3
			G. Ambrogio, L. Filice, F. Gagliardi, F. Micari: Sheet thinning prediction in Single Point Incremental Forming , Department of Mechanical Technology, Production and Management Engineering, Palermo, I
			J. Jeswiet, J. Duffou, A. Szekeres, P. Lefebvre: Custom Manufacture of a Solar Cooker – a case study , Department of Mechanical Engineering, Kingston, CDN

17:05	17:30	N. Ridane, <u>D. Jaksic</u> , M. Kleiner, B. Heller: Enhanced Semi-Analytical Process Simulation of Air Bending , Institute of Forming Technology and Lightweight Construction, Dortmund, D	H. Meier, H. Ermert, <u>P. Knoll</u> , O. Keitmann-Curdes : 3D Ultrasonic Imaging for Sheet Metal Hydroforming , Lehrstuhl für Produktionssysteme, Bochum, D	<u>L.W. Meyer</u> , C. Gahlert, F. Hahn: Influence of an incremental deformation on material behaviour and forming limit of Aluminium AI99,5 and QT-steel 42CrMo4 , Faculty of Mechanical Engineering, Chemnitz, D
17:45	18:15	Shuttle service to the hotels prior to conference dinner		
18:45	19:00	Shuttle service to the conference dinner		
19:00		Conference dinner		

April 8, 2005 Friday				
9.1 Plenary session				
08:30	09:35	R. Neugebauer, A. Göschel, A. Sterzing, P. Kurka, M. Seifert, <u>M. Putz</u> : Comparison of Material Behavior and Economic Effects of Cold and High Temperature Forming Technologies Applied to High-strength Steels , Fraunhofer-Institut für Machine Tools and Forming Technology IWU, Chemnitz		
08:30	09:00	M. Pfestor: Manufacturing of High Strength Steel and Aluminum for a mixed material body in white , BMW AG, Munich, D		
09:05	09:35			
09:35	10:00	Coffee		
10:00	12:05	Sessions 10.1 / 10.2 / 10.3		
		10.1 Warm forming	10.2 Intelligent Manufacturing 2	10.3 Incremental Forming 4
10:00	19:25	<u>P. Hein</u> : A Global Approach of the Finite Element Simulation of Hot Stamping , Arcelor Flat Carbon Steel, Automotive Research Center, Montataire, F	D. Cattrysse, <u>P. Collin</u> , J.R. Duflou, T.H.M. Nguyen, D. Van Oudheusden: The Integration of CAPP and Production Planning for Bent Sheet Metal Parts , Centre for Industrial Management, Leuven, B	<u>C. Giardini</u> , E. Ceretti, A. Attanasio: Further Experimental Investigations and FEM Model Development in Sheet Metal Incremental Forming , Department of Mechanical Engineering, Brescia, I
10:25	10:50	<u>M. Redecker</u> , K. Roll, S. Häußinger : Magnesium Sheet Metal Forming Considering Specific Yield Behavior , DaimlerChrysler AG, Sindelfingen, D	<u>S. Chatti</u> , U. Dirksen, M. Schikorra, M. Kleiner: System for Design and Computation of Lightweight Structures Made of Bent Profiles , Institute of Forming Technology and Lightweight Construction, Dortmund, D	<u>M. Bambach</u> , G. Hirt, J. Ames: Quantitative Validation of FEM Simulations for Incremental Sheet Forming Using Optical Deformation Measurement , Lehrstuhl für Werkstofftechnologie und Präzisionsformgebung, Saarbrücken, D
10:50	11:15	<u>J. Hecht</u> , S. Pinto, M. Geiger: Determination of Mechanical Properties for the Hydroforming of Magnesium Sheets at Elevated Temperature , Chair of Manufacturing Technology, Erlangen, D	<u>T. H. M. Nguyen</u> , J.R. Duflou, J.-P. Kruth: A Framework for Automatic Tool Selection in Integrated CAPP for Sheet Metal Bending , Department of Mechanical Engineering, Leuven, B	H. Hoffmann, <u>R. Hautmann</u> , R. Petry: Studies for the Development of a Simulation Basis for Numerically Controlled Driving of Sheet Metal , Institute of Metal Forming and Casting, Garching, D
11:15	11:40	<u>D. Lorenz</u> , K. Roll: Modelling and Analysis of Integrated Hotforming and Quenching Processes , DaimlerChrysler AG, Sindelfingen, D	H. Bley, <u>Ch. Zenner</u> , M. Bossmann: Intelligent manufacturing by enhanced product models , Institute for Production Engineering, Saarbruecken, D	<u>S. He</u> , A. Van Bael, P. Van Houtte, A. Szekeres, J. Duflou, C. Henrard, A.M. Habraken: Finite Element Modeling of Incremental Forming of Aluminium Sheets , Department of Metallurgy and Materials Engineering, Leuven, B
11:40	12:05	M. Geiger, M. Merklein, <u>C. Hoff</u> : Basic Investigations on the hot stamping steel 22MnB5 , Chair of Manufacturing Technology, Erlangen, D	<u>M. Prechtl</u> , A. Otto, M. Geiger: Rapid Tooling by Laminated Object Manufacturing of Metal Foil , Bavarian Laser Center (BLZ gGmbH), Erlangen, D	<u>C. Henrard</u> , A.M. Habraken, A. Szekeres, J. Duflou, S. He, A. Van Bael, P. Van Houtte: Comparison of FEM Simulations for the Incremental Forming Process , Department of Mechanics of Solids and Materials, Liège, B
12:05	13:20	Lunch		
13:20	15:00	Sessions 11.1 / 11.2 / 11.3		
		11.2 Bending 2	11.2 Cutting	11.3 Material 2
13:20	13:45	<u>R. Bahloul</u> , Ph. Dal Santo, A. Mkaddem, A. Potiron: Optimisation of springback predicted by experimental and numerical approach by using response surface methodology , ENSAM, Angers, F	<u>F. Sekine</u> : Effective Stripper-holding on High Speed Precision Blanking of Electronic Machine Parts , Kyoto University of Education, Kyoto, J	<u>B. Spellenberg</u> , J. Zettner, T. Hierl, M. Haller, T. Lenzi: Thermal Imaging Analysis of Stimulated Heat Diffusion in Sheet Metal for Non-Destructive Metrology and Testing , Thermosensorik GmbH, Erlangen, D
13:45	14:10	<u>M. Pitz</u> , M. Merklein: FE Simulation of Laser Assisted Bending , Chair of Manufacturing Technology, Erlangen, D	<u>J. De Keuster</u> , J.R. Duflou, J.-P. Kruth : Methods for monitoring of laser cutting by means of acoustic and photodiode sensors , Department of Mechanical Engineering, Leuven, B	<u>K. Lamprecht</u> , M. Geiger: Experimental and Numerical Investigation of the Formability of Laser Welded Patchwork Blanks , Chair of Manufacturing Technology, Erlangen, D
14:10	14:35	X. Duan, <u>M. Jain</u> , M. Bruhis, D.S. Wilkinson: Experimental and Numerical Study of Intense Shear Banding for Al-Alloys under Uniaxial Tension , Department of Materials Science and Engineering, Ontario, CDN	R. Neugebauer, <u>V. Kräusel</u> , H. Bräunlich: Advanced cutting technology in process chains for high strength steels , Fraunhofer-Institut für Machine Tools and Forming Technology, Chemnitz, D	<u>T. Pepelnjak</u> , A. Petek, K. Kuzman: Analysis of the Forming Limit Diagram in Digital Environment , Faculty of Mechanical Engineering, Ljubljana, SLO
14:35	15:00	<u>M. Masur</u> , F. Liébana, U. Stute: An automatic cost calculation system for 3-d laser cutting based on characteristic numbers , Laser Center Hanover e.V., Hanover, D		
		<u>M. C. Tsai</u> , Y. A. Chen, C. F. Wu, F. K. Chen: Size-Effects in Micro-Metal Sheet Forming of Unalloyed Copper and Brass , Metal Industries Research & Development Centre, Taiwan, CN		
15:10	15:25	Closing remarks		
		End of the conference		