



**44<sup>th</sup> Conference of the International  
Deep Drawing Research Group**

**1-5 June 2025**

# SCIENTIFIC PROGRAM

# PROGRAM AT A GLANCE

Sunday, <b>June 1</b> - Holiday Inn Hotel				
14:30 – 17:30	Registration			
15:30 – 17:30	IDDRG Executive Committee Meeting			
17:30 – 18:30	Welcome Reception			
Monday, <b>June 2</b>				
08:00	Registration			
09:00	Conference Opening Room MA			
09:30	KEYNOTE LECTURE I (Room MA) > Marion Merklein   Bart Carleer			
10:30	Coffee Break			
11:00	Tribology I Room MA	Sustainability Room 02.1	Materials Testing I Room 02.2	Incremental Forming Room 01.1
12:20	Lunch - Holiday Inn Hotel			
14:30	KEYNOTE LECTURE II (Room MA) > Jianguo Lin			
15:00	Ironing, Stamping and Spinning Room MA	Tribology II Room 02.1	Materials Testing II Room 02.2	Hybrid Processes Room 01.1
16:40	Coffee Break			
17:00	Processes I Room MA	Simulation I Room 02.1	Materials Testing III Room 02.2	Session in Honor of Professor Shihong Zhang Room 01.1
Tuesday, <b>June 3</b>				
09:00	KEYNOTE LECTURE III (Room MA) > Sandrine Thuillier   Carlos Saraiva			
10:00	Coffee Break			
10:30	Formability I Room MA	Simulation II Room 02.1	Joining I Room 02.2	Tubes Room 01.1
12:10	Lunch - Holiday Inn Hotel			
14:30	Hot and Warm Forming I Room MA	Formability II Room 02.1	Simulation III Room 02.2	Joining II Room 01.1
16:10	Coffee Break			
16:30	Simulation IV Room MA	Hot and Warm Forming II Room 02.1	Formability III Room 02.2	Processes II Room 01.1
20:00	Conference Dinner - Páteo da Galé			
Wednesday, <b>June 4</b>				
09:00	KEYNOTE LECTURE IV (Room MA) > Mathias Liewald   Vasco Burguete			
10:00	Coffee Break			
10:30	Sensors Room MA	Processes III Room 02.1	Artificial Intelligence I Room 02.2	Formability IV Room 01.1
12:10	Lunch - Holiday Inn Hotel			
14:30	KEYNOTE LECTURE V (Room MA) > Shihong Zhang			
14:30	Artificial Intelligence II Room MA	Treatments Room 02.1	- Room 02.2	Formability V Room 01.1
16:20	Coffee Break			
16:40	Closing Ceremony			
Thursday, <b>June 5</b> - Holiday Inn Hotel				
08:30	Bus Departure from Hotel Holiday Inn to MCG - Mind for Metal and JDEUS			
13:00	Bus Departure from MCG - Mind for Metal and JDEUS to Hotel Holiday Inn			
14:00	Arrival at Hotel Holiday Inn			

## SCIENTIFIC PROGRAM



### 44<sup>th</sup> Conference of the International Deep Drawing Research Group

## Sunday, June 1

Hotel Holiday Inn		June 1
14:30 - 17:30	Registration	
Hotel Holiday Inn		June 1
15:30 - 17:30	IDDRG Executive Committee Meeting	
Hotel Holiday Inn		June 1
17:30 - 18:30	Welcome Reception	

Monday, June 2

Conference Hall 01		June 2
08:00 - 09:00	Registration	

Main Auditorium		June 2
09:00 - 09:30	Conference Opening	

Main Auditorium		KEYNOTE LECTURES I
June 2 (09:30 - 10:30)		Chairman: <i>Nico Langerak</i>
TIME	PRESENTING AUTHOR	TITLE
09:30 - 10:00	<i>Marion Merklein</i>	<b>Hybridizing sheet forming with additive manufacturing</b> <i>Marion Merklein, Friedrich-Alexander University of Erlangen-Nürnberg, Germany</i>
10:00 - 10:30	<i>Bart Carleer</i>	<b>Digital continuity in the stamping and BiW assembly</b> <i>Bart Carleer, AutoForm, Switzerland</i>
10:30 - 11:00	Coffee Break	

Main Auditorium			Parallel Session: <b>Tribology I</b>
June 2 (11:00 - 12:00)			Chairman: <i>Matthias Weiss</i>
TIME	ID	PRESENTING AUTHOR	TITLE
11:00	01011	<i>Chris Valentin Nielsen</i>	<b>Flattening of asperities during biaxial in-plane deformation – Full mapping of the strain space by numerical simulations</b> <i>Maximilian Zwicker, Paulo A.F. Martins, Chris Valentin Nielsen</i>
11:20	01053	<i>Philipp Schumann</i>	<b>Cavity design for surface textured sheets in metal forming</b> <i>Philipp Schumann, Daniel Martin, Otavio M. Serra, Peter Groche</i>
11:40	02013	<i>Nagore Otegi</i>	<b>Enhancing contact pressure uniformity in strip drawing tests: a geometric approach to mitigate edge stress risers</b> <i>Iñigo Llavori, Eneko Saenz de Argandoña, Alaitz Zabala, Alex McClosky, Maitane Uribe, Nagore Otegi</i>

Room 02.1			Parallel Session: <b>Sustainability</b>
June 2 (11:00 - 12:00)			Chairman: <i>Leopold Wagner</i>
TIME	ID	PRESENTING AUTHOR	TITLE
11:00	02026	<i>Johannes Österreicher</i>	<b>Toward a circular economy in deep drawing: remanufacturing end-of-life automotive parts</b> <i>Johannes Österreicher, Florian Grabner, Paul Oberhauser, Sindre L. Hovden, Carina Schlögl</i>
11:20	01074	<i>Peter Frohn-Sørensen</i>	<b>Tools from trash: Recycling pathways and use cases for rapid tooling</b> <i>Peter Frohn-Sørensen, Michael Schiller, Tamara Reinicke, Bernd Engel</i>
11:40	02036	<i>Anna Payá</i>	<b>Effect of recycling on the mechanical properties and formability of sheet metal</b> <i>Anna Payá, David Frómeta, Jaume Pujante, Manel Da Silva</i>

Room 02.2			Parallel Session: <b>Materials Testing I</b>
June 2 (11:00 - 12:20)			Chairman: <i>Carpóforo Vallellano</i>
TIME	ID	PRESENTING AUTHOR	TITLE
11:00	01002	<i>David Naumann</i>	<b>Tensile testing of sheet metals at elevated temperatures with optical strain rate control</b> <i>David Naumann, Marion Merklein</i>
11:20	01075	<i>Lisa Germain</i>	<b>Material parameter identification based on heterogeneous testing: validation in case of a forming process</b> <i>Lisa Germain, Mafalda Gonçalves, Antonio Andrade-Campos, Sandrine Thuillier</i>
11:40	01010	<i>Rui F.V. Sampaio</i>	<b>A novel diagonal-cruciform test specimen to evaluate sheet formability</b> <i>Rui F.V. Sampaio, João P.M. Pragana, Ivo M.F. Bragança, Carlos M.A. Silva, Paulo A.F. Martins</i>
12:00	01080	<i>Eugen Wolf</i>	<b>Investigation failure behavior in the shear tensile test with variety of specimen stiffness</b> <i>Eugen Wolf, Alexander Brosius</i>

Room 01.1			Parallel Session: <b>Incremental Forming</b>
June 2 (11:00 - 12:20)			Chairman: <i>Ming Wang Fu</i>
TIME	ID	PRESENTING AUTHOR	TITLE
11:00	01039	<i>Hui Long</i>	<b>Surface quality improvement under low-frequency and high-amplitude vibration in rotational vibration-assisted incremental sheet forming</b> <i>Olivier Lewthwaite, Jamie Booth, Hui Long</i>
11:20	01038	<i>Elizabeth M. Mamros</i>	<b>Investigation using single point incremental forming (SPIF) to fabricate patient-specific, titanium orbital floor implants</b> <i>Elizabeth M. Mamros, Lauren E. Blaha, Christian A. Kauffman</i>
11:40	01079	<i>Angela Cusanno</i>	<b>Robot-assisted single point incremental forming: focus on shape accuracy of the final part</b> <i>Michele Cannillo, Angela Cusanno, Ángel Brisa i Álvarez, Martina Campanella, Antonio Piccininni, Ines Ferrer Real, María Luisa García-Romeu, Gianfranco Palumbo</i>
12:00	01051	<i>Kaushik Bandyopadhyay</i>	<b>Influence of tool geometry and tool material on the formability and formed part accuracy in single point incremental forming</b> <i>Suryakant Nagar, Kailash Sahu, Ritesh Banjare, Yogesh K. Dewangan, Kaushik Bandyopadhyay</i>

12:20 - 14:30	<i>Lunch - Holiday Inn Hotel</i>
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Monday, June 2

Main Auditorium		KEYNOTE LECTURES II
June 2 (14:30 - 15:00)		Chairman: <i>Nader Asnafi</i>
TIME	PRESENTING AUTHOR	TITLE
14:30 - 15:00	<i>Jianguo Lin</i>	<b>Materials Characterisation and Modelling for Hot Stamping Applications</b> <i>Jianguo Lin, Hong Kong Polytechnic University, China / Imperial College London, UK</i>

Main Auditorium			Parallel Session: <b>Ironing, Stamping and Spinning</b>
June 2 (15:00 - 16:40)			Chairman: <i>Hui Long</i>
TIME	ID	PRESENTING AUTHOR	TITLE
15:00	01030	<i>Kaarel Siimut</i>	<b>Improving adjustable ironing punch performance using cemented carbide components</b> <i>Kaarel Siimut, Kasper Mygind Madsen, Ermanno Ceron, Chris Valentin Nielsen</i>
15:20	01007	<i>Yeong-Maw Hwang</i>	<b>Study of deep drawing combined with ironing of a7075 aluminum alloy</b> <i>Yeong-Maw Hwang, Yen-Lin Wu, Cheng-Chi Wang</i>
15:40	01067	<i>Yusuke Okude</i>	<b>Circular and square cups drawing and ironing of Ti alloy sheets by incremental press forming method</b> <i>Yusuke Okude, Taku Iwaoka, Isao Nakamura, Tsuyoshi Muraoka, Takashi Katagiri</i>
16:00	02002	<i>Joseba Mendiguren</i>	<b>Integrating stamping tool temperature effects into early-stage process design: insights from an industrial benchmark</b> <i>Lide Insausti, Alexander Barlo, Mats Sigvant, Johan Pilthammar, Eneko Saenz de Argandoña, Joseba Mendiguren</i>
16:20	01040	<i>Hui Long</i>	<b>Investigation of wrinkling initiation in shear spinning</b> <i>Zhikun Li, Hui Long</i>

Room 02.1			Parallel Session: <b>Tribology II</b>
June 2 (15:00 - 16:40)			Chairman: <i>Chris V. Nielsen</i>
TIME	ID	PRESENTING AUTHOR	TITLE
15:00	01031	<i>Jonas Moske</i>	<b>Inline wear detection in high-speed progressive dies using photometric stereo</b> <i>Jonas Moske, Hasan Kutlu, Adrian Steinmeier, Pedro Santos, Arjan Kuijper, Andreas Weinmann, Peter Groche</i>
15:20	02003	<i>Eneko Saenz-de-Argandoña</i>	<b>Quantifying the amount of restraining due to friction in the different areas of drawing tools: a numerical analysis</b> <i>Eneko Saenz-de-Argandoña, Alaitz Zabala, Ainhoa Guinea, Daniel Cañizares, Joseba Mendiguren</i>
15:40	01036	<i>Hengan Ou</i>	<b>Investigation of frictional behaviour in incremental sheet forming of grade one titanium sheet</b> <i>Lars Kørner, Hengan Ou</i>
16:00	01062	<i>Aiden Carley-Clopton</i>	<b>Multiscale simulation of surface roughening of a deep drawing steel due to sub-surface plastic deformation</b> <i>Aiden Carley-Clopton, Grethe Winther, Oleg V. Mishin, Chris V. Nielsen</i>

Room 02.2			Parallel Session: <b>Materials Testing II</b>
June 2 (15:00 - 16:40)			Chairman: <i>Yannis Korkolis</i>
TIME	ID	PRESENTING AUTHOR	TITLE
15:00	01056	<i>Kusaka Shota</i>	<b>The effect of bake hardening on the plastic strain dependency of elastic modulus</b> <i>Kusaka Shota, Takashi Iwama, Kentaro Sato, Yoichiro Onishi, Tsuyoshi Shiozaki, Fusahito Yoshida</i>
15:20	01027	<i>Jemal Ebrahim Dessie</i>	<b>Determination of kinematic hardening parameters in W-temper forming of 6082 aluminum alloy</b> <i>Jemal Ebrahim Dessie, László Rónai, Zsolt Lukács</i>
15:40	02028	<i>Sushil K. Mishra</i>	<b>Tension-compression asymmetry in AA2219: effect of temperature and stress states</b> <i>Priya Tiwari, A.H. Siddiqui, Amit Singh, S. Narayan Murty, Sushil K. Mishra</i>
16:00	01058	<i>Philipp Althaus</i>	<b>Characterisation and modelling of the flow behaviour of a medium manganese steel for hot forming</b> <i>Philipp Althaus, Radhakanta Rana, Hendrik Wester, Johanna Uhe, Bernd-Arno Behrens</i>
16:20	01001	<i>José Divo Bressan</i>	<b>Investigations of roughness evolution in uniaxial and biaxial stretching of interstitial free - IF steel sheet</b> <i>José Divo Bressan, Ricardo Kirchoff Unfer</i>

Room 01.1			Parallel Session: <b>Hybrid Processes</b>
June 2 (15:00 - 16:40)			Chairman: <i>Eneko Saenz de Argandoña</i>
TIME	ID	PRESENTING AUTHOR	TITLE
15:00	01018	<i>Henrik Zieroth</i>	<b>Improving the local formability of a AA7075 aluminum alloy by laser-induced modification of the alloying concept</b> <i>Henrik Zieroth, Marcel Stephan, Michael Schmidt, Marion Merklein</i>
15:20	01072	<i>Artem Alimov</i>	<b>Methodology for additive repair of press hardening dies using generic die segments and targeted deposition strategy</b> <i>Artem Alimov, Rico Haase, Gökhan Ertugrul, Alexander Sviridov, Verena Kräusel, Claudio Krug, Sebastian Härtel</i>
15:40	01060	<i>Valentino A.M. Cristino</i>	<b>Integration of bending operation in hybrid additive manufacturing chains based on powder bed fusion</b> <i>Valentino A.M. Cristino, Rui F.V. Sampaio, João P.M. Pragana, Ivo M.F. Bragança, Carlos M.A. Silva, Paulo A.F. Martins</i>
16:00	02012	<i>Gabriel Centeno</i>	<b>On the preliminary evaluation of formability of Ti6Al4V selected laser melted sheets</b> <i>J. Andrés López-Fernández, Ana Rosa-Sainz, Inés Ferrer, Gabriel Centeno, M. Luisa García-Romeu, Carpóforo Vallengano</i>
16:20	01008	<i>Muhammad Ali Kaleem</i>	<b>Design criteria to use 3D printed polymeric tools in metal forming processes</b> <i>Muhammad Ali Kaleem, Peter Frohn-Sörensen, Rainer Steinheimer, Bernd Engel</i>

16:40 - 17:00	Coffee Break
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Monday, June 2

Main Auditorium			Parallel Session: <b>Processes I</b>
June 2 (17:00 - 18:20)			Chairman: <i>Marion Merklein</i>
TIME	ID	PRESENTING AUTHOR	TITLE
17:00	02031	<i>Jong-Hwa Hong</i>	<b>Manufacturing process of 46XX high-capacity, high-density cylindrical-type battery cell can</b> <i>Jong-Hwa Hong, Ye-Chan Seo, Sumin Ji, Sedong Lee, Hongseok Seong, Eun-Yoo Yoon</i>
17:20	02030	<i>Wenlong Xie</i>	<b>Influence of process parameters on the quality of flexible forming of 316L bipolar plate</b> <i>Wenlong Xie, Zonghui Su, Siying Deng, Yong Xu, Hongwu Song, Shihong Zhang</i>
17:40	01021	<i>Abdelrahman Essa</i>	<b>Inline monitoring of material properties and product shape in roll forming</b> <i>Abdelrahman Essa, Marcus Decker, Harshil Padharia, Matthias Weiss</i>
18:00	02001	<i>Takashi Matsuno</i>	<b>Derivation of point plot-based ductile fracture loci through assimilation of finite element simulation and individual actual punched surface profile</b> <i>Takashi Matsuno, Jin Eguchi, Yasuhiro Kunii, Kazuyuki Shimizu, Yuki Matsuki, Toyohisa Shinmiya, Eiji Iizuka</i>

Room 02.1			Parallel Session: <b>Simulation I</b>
June 2 (17:00 - 18:20)			Chairman: <i>Luis F. Menezes</i>
TIME	ID	PRESENTING AUTHOR	TITLE
17:00	01089	<i>Werner Feix</i>	<b>An approach to modeling friction-stir welded joints in forming</b> <i>Werner Feix, Celalettin Karadogan, Tobias Graf, André Haufe</i>
17:20	02004	<i>Dominique Saletti</i>	<b>Effect of <math>\sigma_s</math> and <math>r_s</math> identification method from bulge test on aluminium stamping simulation</b> <i>Dominique Saletti, Dominique Daniel, Thierry Bayle, Laurent Laszczyk</i>
17:40	01094	<i>André Leonhardt</i>	<b>Increasing the displaced fluid volume of curved metal membranes for diaphragm compressors</b> <i>Mikhail Solovov, André Leonhardt, Andreas Kunke, Till Clausmeyer</i>
18:00	01024	<i>Heng-Sheng Lin</i>	<b>Evaluation of forming methods for a micro cup-part used in an ultra-miniatured radio-frequency connector</b> <i>Heng-Sheng Lin, Chuan-Hsi Hung, Zong-Ying Wang, Xing-Yonug Lo</i>



Room 02.2			Parallel Session: <b>Materials Testing III</b>
June 2 (17:00 - 18:20)			Chairman: <i>Sandrine Thuillier</i>
TIME	ID	PRESENTING AUTHOR	TITLE
17:00	01082	<i>Leopold Wagner</i>	<b>Analysis of experimental scattering sources in local ductility measurement from flat tensile test sample fracture surfaces</b> <i>Patrick Larour, Wolfgang Lumetzberger, Leopold Wagner</i>
17:20	01063	<i>Silke Klitschke</i>	<b>Investigations on strain rate dependent forming limits of 5xxx aluminium alloys for flow-line-free sheet metal forming</b> <i>Silke Klitschke, Lukas Hauser, Mathias Liewald</i>
17:40	02020	<i>David Palomo</i>	<b>On the thermomechanical behaviour of polymeric sheets at localized necking</b> <i>David Palomo, Andrés J. Martínez-Donaire, Domingo Morales, Carpóforo Vallellano</i>
18:00	01055	<i>Sriram Sadagopan</i>	<b>Effect of prestrain and strain path on retained austenite transformation and eventual fracture behavior of Q&amp;P steels</b> <i>Sriram Sadagopan, Brian Lin, Narayan Pottore, Su Liu, Hong Zhu</i>

Room 01.1			Parallel Session: <b>Session in Honor of Professor Shihong Zhang</b>
June 2 (17:00 - 18:20)			Chairman: <i>Paulo A.F. Martins</i>
TIME	ID	PRESENTING AUTHOR	TITLE
17:00	-	<i>Nader Asnafi</i>	<b>Tool and die making, surface treatment, and repair by laser-based additive processes</b> <i>Nader Asnafi</i>
17:20	02041	<i>Siyong Deng</i>	<b>Investigation on the formability and deformation mechanism of Zircaloy-4 sheets with different initial textures during stamping</b> <i>Siyong Deng, Wenlong Xie, Shuaifeng Chen, Hongwu Song, Shihong Zhang</i>
17:40	01029	<i>M.W. Fu</i>	<b>Crystal plasticity finite element method application in micro/meso-scaled deep drawing and some related concerns</b> <i>Xu Tong, M.W. Fu</i>
18:00	-	<i>Shuaifeng Chen</i>	<b>Fabrication of high-performance thin copper tube, wire and sheet: Alloy design and CP-FE simulation</b> <i>Shuaifeng Chen</i>

Tuesday, June 3

Main Auditorium		KEYNOTE LECTURES III
June 3 (09:00 - 10:00)		Chairman: <i>Abel Santos</i>
TIME	PRESENTING AUTHOR	TITLE
09:00 - 09:30	<i>Sandrine Thuillier</i>	<b>Heterogeneous mechanical testing for virtual sheet metal forming</b> <i>Sandrine Thuillier, Université de Bretagne Sud, France</i>
09:30- 10:00	<i>Carlos Saraiva</i>	<b>Research and Development at MCG-Mind for Metal</b> <i>Carlos Saraiva, MCG – Mind for Metal, Portugal</i>

10:00 - 10:30	<i>Coffee Break</i>
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Main Auditorium			Parallel Session: <b>Formability I</b>
June 3 (10:30 - 12:10)			Chairman: <i>Till Clausmeyer</i>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01049	<i>Kevin Buducan</i>	<b>Mini-punch experimental device development and analysis for ductile damage identification of naval structures</b> <i>Kevin Buducan, Christophe Pradille, Serge Bonhomme, Dorian Brousse, Bruno Leblé, Pierre-Olivier Bouchard</i>
10:50	02005	<i>Michael Brünig</i>	<b>Biaxial experiments and numerical analysis on damage and fracture in anisotropic aluminum sheets</b> <i>Michael Brünig, Sanjeev Koirala, Steffen Gerke</i>
11:10	01004	<i>Leopold Wagner</i>	<b>Competing failure modes in hole expansion testing of AHSS sheets</b> <i>Leopold Wagner, Patrick Larour, Johann Freudenthaler, Gernot Trattinig, Erich Berger</i>
11:30	01026	<i>Xiaoyu Yang</i>	<b>The effect of banded microstructures on the hole expansion behavior of hot-rolled steel</b> <i>Xiaoyu Yang, Zhenli Mi</i>
11:50	01022	<i>Ji-Chao Zhang</i>	<b>Study on the failure behavior of advanced high strength steel considering stamping history</b> <i>Ji-Chao Zhang, Changwei Lian, Fei Han</i>

Room 02.1			Parallel Session: <b>Simulation II</b>
June 3 (10:30 - 11:50)			Chairman: <i>Gabriel Centeno</i>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01085	<i>Gabriel Marín</i>	<b>Design of multi-step dies for sheet forming using a workpiece-performance-based approach: a preliminary study</b> <i>Gabriel Marín, Florian Weber, Hosen Sulaiman, Martin Heuse, Yannis Korkolis</i>
10:50	01070	<i>Joséphine Chatellier</i>	<b>Characterization and modeling of multi-step drawing process for thick steel sheets</b> <i>Joséphine Chatellier, Christophe Pradille, Christophe Kerisit, Pierre-Olivier Bouchard</i>
11:10	01065	<i>Toni Chezan</i>	<b>Integrating optical draw-in measurements with finite element analysis for enhanced process insights in sheet metal forming</b> <i>Toni Chezan, Trunal Dhawale, Johan Pilthammar, Alexander Barlo, Omsri Aeddula</i>
11:30	01032	<i>Saaya Kanayama</i>	<b>Pad force required in shear-deformation sheet forming of curved hat channels for ultra-high-strength steels</b> <i>Saaya Kanayama, Tohru Yonebayashi, Yasuharu Tanaka, Shunji Hiwatashi</i>

Room 02.2			Parallel Session: <b>Joining I</b> (organized by Alexander Brosius, Gerson Meshut and Marion Merklein)
June 3 (10:30 - 11:50)			Chairman: <b>Alexander Brosius</b>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01069	Pia Katharina Holtkamp	<b>Integration of multiple-linear and tumbling kinematics into self-piercing riveting</b> Pia Katharina Holtkamp, Simon Wituschek, Michael Lechner, Gerson Meschut
10:50	01086	Stephan Lüder	<b>Investigation of the impact of a rotationally superimposed punch stroke on the binding mechanisms of a clinched joint</b> Stephan Lüder, Eugen Wolf, Hans Christian Schmale, Alexander Brosius
11:10	01028	Abdulkhkim S. Rahmato	<b>Effect of pre-strain on the strength of similar aluminium EN AW5754-H22 alloy joined by clinching</b> Abdulkhkim S. Rahmato, Péter Z. Kovács
11:30	02022	Ivo M.F. Bragança	<b>Modelling wire-arc-additive manufacturing for joining by forming applications</b> João M.A. Viegas, Pedro M.S. Rosado, Rui F.V. Sampaio, João P.M. Pragana, Ivo M.F. Bragança, Carlos M.A. Silva, Paulo A.F. Martins

Room 01.1			Parallel Session: <b>Tubes</b>
June 3 (10:30 - 12:10)			Chairman: <b>Shihong Zhang</b>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01077	Rui Amaral	<b>Analysis of springback in rotary draw bending process: numerical modeling with experimental validation</b> Rui Amaral, Daniel Cruz, Maria Almeida, Manuel Barros, Abel Santos, Ana Reis
10:50	02016	João Magrinho	<b>On the determination of the forming limits of low alloy steel thin-walled tubes</b> João Magrinho, Pedro Cruz, Eneko Sáenz-De-Argandoña, Joseba Mendiguren, Maria Beatriz Silva
11:10	01048	Qinxiang Xia	<b>Study on the formation mechanism of fish-scale defects during flow forming of copper alloy tubes with large thickness-to-diameter ratio</b> Qinxiang Xia, Jie Zhao, Gangfeng Xiao, Delin Tang, Huachun Cui
11:30	01044	Rachid Baleh	<b>Energy performance of non-conventional metal tubular systems via a new multiaxial loading path</b> Rachid Baleh, Hayat Belguebli
11:50	02023	Inês Almeida	<b>Formability limits by fracture in square tubes and L-section profiles</b> Inês Almeida, João Magrinho, Maria Beatriz Silva

12:10 - 14:30	Lunch - Holiday Inn Hotel
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Tuesday, June 3

Main Auditorium			Parallel Session: <b>Hot and Warm Forming I</b>
June 3 (14:30 - 16:10)			Chairman: <i>Yoshinori Yoshida</i>
TIME	ID	PRESENTING AUTHOR	TITLE
14:30	01016	<i>Jan Henning Risse</i>	<b>Investigation of hot stamping transition zones at tailored carburization at elevated temperatures</b> <i>Jan Henning Risse, Marion Merklein</i>
14:50	01009	<i>Zhusheng Shi</i>	<b>Experimental and numerical investigations of effects of HFQ conditions on forming of AA6082 B-pillar components</b> <i>Jiaqi Li, Ruiqiang Zhang, Jianguo Lin, Zhusheng Shi</i>
15:10	01047	<i>Shuki Nakamura</i>	<b>Heat treatment conditions for forming AA6022 aluminum sheet in a forming process with intermediate heat treatment</b> <i>Shuki Nakamura, Ryutaro Akiyoshi, Masatoshi Yoshida</i>
15:30	01003	<i>Keitaro Mori</i>	<b>Simulation of hot stamping considering self-tempering</b> <i>Keitaro Mori, Masahiro Kubo, Kazuo Okamura</i>
15:50	01034	<i>Laura Grifé</i>	<b>The relationship between fracture toughness and blanking performance of 850MPa hot-rolled steels</b> <i>Vili Kesti, Laura Grifé, Pekka Plosila, David Frómeta, Antti Kajjalainen</i>

Room 02.1			Parallel Session: <b>Formability II</b>
June 3 (14:30 - 16:10)			Chairman: <i>José Divo Bressan</i>
TIME	ID	PRESENTING AUTHOR	TITLE
14:30	01064	<i>Gregoire Mainguy</i>	<b>Comparison of nonlinear strain path correction models for the FLC characterisation</b> <i>Gregoire Mainguy, Tudor Balan, Xavier Lemoine</i>
14:50	02018	<i>Olle Sandin</i>	<b>Using the particle finite element method for predicting edge-cracking in complex phase high-strength steel sheets</b> <i>Olle Sandin, Patrick Larour, Juan Manuel Rodríguez, Jörgen Kajberg, Daniel Casellas</i>
15:10	01066	<i>Advaith Narayanan</i>	<b>Sheared edge formability of multi-phase steels under in- and out-of plane deformation</b> <i>Advaith Narayanan, Rhys Northcote, Patrick Cleary, Miguel Quinones, Cliff Butcher</i>
15:30	02015	<i>Vincent Grolleau</i>	<b>Punch in a punch: validating FLC and fracture models for severe strain path changes</b> <i>Vincent Grolleau, Engin Sen, Erik de Best, Christian C. Roth, Dirk Mohr</i>
15:50	01076	<i>David Frómeta</i>	<b>Enhanced ductility and fracture classification maps for advanced high-strength steels considering local ductility and fracture toughness</b> <i>David Frómeta, Laura Grifé, Daniel Casellas</i>

Room 02.2			Parallel Session: <b>Simulation III</b>
June 3 (14:30 - 16:10)			Chairman: <i>Mathias Liewald</i>
TIME	ID	PRESENTING AUTHOR	TITLE
14:30	01020	<i>Marta Oliveira</i>	<b>Correcting the earing profile resulting from misalignments of the blank in the deep drawing of a cylindrical cup</b> <i>Marta Oliveira, Diogo M. Neto, Luis F. Menezes, Pedro M. Seixas, André F. Pereira</i>
14:50	01017	<i>Tsuyoshi Muraoka</i>	<b>Ear height control by die radius shape in cylindrical deep drawing</b> <i>Tsuyoshi Muraoka, Yusuke Okude, Isao Nakamura, Takashi Katagiri</i>
15:10	01093	<i>Wei Tong</i>	<b>On the equivalence and differences of three plane-stress yield criteria for modelling orthotropic sheet metals with the tension-compression strength differential effect</b> <i>Jie Sheng, Wei Tong</i>
15:30	01078	<i>Xavier Lemoine</i>	<b>Yoshida-Uemori model: Improvement of the elastic modulus evolutive model and Springback application</b> <i>Xavier Lemoine</i>
15:50	01013	<i>Jan Jepkens</i>	<b>Introduction and validation of a surrogate model for warm forming and cathodic dip treatment of AA7075</b> <i>Jan Jepkens, Eduard Ortleib, Dominyka Vasquez Ramirez, Hendrik Wester, Johanna Uhe, Bernd-Arno Behrens</i>

Room 01.1			Parallel Session: <b>Joining II</b> (organized by Alexander Brosius, Gerson Meschut and Marion Merklein)
June 3 (14:30 - 15:50)			Chairman: <i>Ermanno Ceron</i>
TIME	ID	PRESENTING AUTHOR	TITLE
14:30	01081	<i>Moritz Neuser</i>	<b>Mechanical joinability of microstructurally graded structural components manufactured from hypoeutectic aluminium casting alloys</b> <i>Moritz Neuser, Malte Christian Schlichter, Kay-Peter Hoyer, Mathias Bobbert, Gerson Meschut, Mirko Schaper</i>
14:50	01054	<i>Mohammad Mehdi Kasaei</i>	<b>Tube fit joining: a novel technique for busbar-to-prismatic cell interconnections in electric vehicles</b> <i>Mohammad Mehdi Kasaei, Vasco B. Gomes, Ricardo J.C. Carbas, Eduardo A.S. Marques, Lucas F.M. da Silva</i>
15:10	01095	<i>Pedro Rosado</i>	<b>On the hybridization of double-flush riveting with adhesive bonding</b> <i>João M.B. Alpendre, Pedro M.S. Rosado, Rui F.V. Sampaio, João P.M. Pragana, Ivo M.F. Bragança, Carlos M.A. Silva, Paulo A.F. Martins</i>
15:30	01035	<i>Deekshith R Devulapally</i>	<b>Impact of non-rotationally symmetric joint orientation on neighbouring joints and component performance in lap shear specimens</b> <i>Deekshith R Devulapally, Christian Steinfelder, Thomas Tröster, Alexander Brosius</i>

16:10 - 16:30	Coffee Break
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Tuesday, June 3

Main Auditorium			Parallel Session: <b>Simulation IV</b>
June 3 (16:30 - 17:30)			Chairman: <i>Zsolt Lukács</i>
TIME	ID	PRESENTING AUTHOR	TITLE
16:30	01033	<i>Oana Cazacu</i>	<b>Multi-scale modelling of plastic anisotropy of aluminum sheets and application to deep-drawing</b> <i>Oana Cazacu, Benoit Revil-Baudard</i>
16:50	02035	<i>Miguel Sousa Pereira</i>	<b>Integrated simulation process chain: from 3d roll forming design to crash analysis</b> <i>Albert Sedlmaier, Thomas Dietl, André Abee, Johann Harrasser, Miguel Sousa Pereira</i>
17:10	01019	<i>Luis F. Menezes</i>	<b>Influence of thickness variability on the deep drawing of a cylindrical cup</b> <i>Luis F. Menezes, Marta Oliveira, Diogo M. Neto, Carlos Monteiro, André F. Pereira</i>

Room 02.1			Parallel Session: <b>Hot and Warm Forming II</b>
June 3 (16:30 - 17:30)			Chairman: <i>Jianguo Lin</i>
TIME	ID	PRESENTING AUTHOR	TITLE
16:30	01012	<i>Wan-Ling Chen</i>	<b>Observation of microstructural characteristics on the formability for AA 7075 alloy sheets under warm forming conditions</b> <i>Wan-Ling Chen, Rong-Shean Lee</i>
16:50	01025	<i>Lorenz Albracht</i>	<b>Increasing the performance of hot forming parts by resistance heating in XHV-adequate atmosphere</b> <i>Bernd-Arno Behrens, Sven Hübner, Ulrich Holländer, André Langohr, Alexander Schnettger, Jan-Ulrich Gellermann, Jörn Wehmeyer, Lorenz Albracht</i>
17:10	02027	<i>Georg Kunschert</i>	<b>Enhanced formability of a-β titanium sheet material below 500°C</b> <i>Georg Kunschert, Jürgen A. Nietsch, Angelika Cerny, Florian Grabner, Johannes A. Österreichler</i>

Room 02.2			Parallel Session: <b>Formability III</b>
June 3 (16:30 - 17:30)			Chairman: <i>Hengan Ou</i>
TIME	ID	PRESENTING AUTHOR	TITLE
16:30	02014	<i>John Magliaro</i>	<b>Formability limits, damage and fracture mechanisms in AA5182 Al-Mg sheets formed under subzero temperature conditions</b> <i>John Magliaro, Amir Behtash, Ahmet Alpas</i>
16:50	02024	<i>Yuichi Matsuki</i>	<b>The mechanism of microstructural transformation upon edge heat treatment on stretch flangeability and fracture of ultrahigh-strength steel with sheared edge</b> <i>Yuichi Matsuki, Toyohisa Shinmiya</i>
17:10	02021	<i>Jan Gerlach</i>	<b>Damage-induced changes in elastic stiffness of DP800 sheets at large strains</b> <i>Jan Gerlach, Robin Gitschel, Marlon Hahn, Yannis P. Korkolis, A. Erman Tekkaya</i>

Room 01.1			Parallel Session: <b>Processes II</b>
June 3 (16:30 - 17:30)			Chairman: <i>Gabriela Vincze</i>
TIME	ID	PRESENTING AUTHOR	TITLE
16:30	01005	<i>Jan-Ulrich Gellermann</i>	<b>Method planning for deep drawing in the production of workpieces with variable shapes</b> <i>Richard Krimm, Sven Hübner, Dennis Schmiele, Lennart Hinz, Malte Nagel, Jan-Ulrich Gellermann</i>
16:50	02007	<i>Miguel Jesus</i>	<b>Process limits improvement in sheet injection using locally heat-treated aluminium alloy</b> <i>João Magrinho, Angela Cusanno, Miguel Jesus, Antonio Piccininni, Pasquale Guglielmi, Gianfranco Palumbo, Maria Beatriz Silva</i>
17:10	01083	<i>Junhao Zhang</i>	<b>Research on the residual stress distribution of aircraft engine blades repaired by laser shock peening and laser cladding composite process</b> <i>Xiuquan Cheng, Junhao Zhang, Ruhao He, Gangfeng Xiao, Qinxiang Xia</i>

Páteo da Galé - Praça do Comércio		June 3
20:00 - 23:00	Conference Dinner	

Wednesday, June 4

Main Auditorium		KEYNOTE LECTURES IV
June 4 (09:00 - 10:00)		Chairman: <i>Marta Oliveira</i>
TIME	PRESENTING AUTHOR	TITLE
09:00 - 09:30	<i>Mathias Liewald</i>	<b>Advancing Sheet Metal Characterization: The Need for further Standardized Testing Procedures</b> <i>Mathias Liewald, University of Stuttgart, Germany</i>
09:30 - 10:00	<i>Vasco Burguete</i>	<b>Research and Development at JDEUS</b> <i>Vasco Burguete, JDEUS/DENSO, Portugal</i>
10:00 - 10:30	Coffee Break	

Main Auditorium			Parallel Session: <b>Sensors</b>
June 4 (10:30 - 12:10)			Chairman: <i>Joseba Mendiguren</i>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01092	<i>Lander Galdos</i>	<b>Novel approaches for in-line draw-in measurement using cost effective tactile sensors</b> <i>Lander Galdos, Laura Muñiz, Javier Trinidad, Andoitz Aranburu, Julian Ramirez Okariz, Aratz Barandiaran</i>
10:50	01091	<i>Dietmar Friesen</i>	<b>Investigation into noise emission reduction of a cutting press via active vibration control</b> <i>Dietmar Friesen, Dennis Schmiele, Richard Krimm, Bernd-Arno Behrens</i>
11:10	01057	<i>Peter Scholz</i>	<b>Contributions to increasing the accuracy and reducing the forming forces of robot-based two-point incremental forming</b> <i>Peter Scholz, Dieter Weise, Alexander Pierer, Christian Naumann, Martin Dix, Marina Terlau, Axel von Freyberg, Andreas Fischer</i>
11:30	01050	<i>Karl Johann Tilly</i>	<b>Development of a soft sensor for determining the cooling rate for press hardening of medium manganese steel</b> <i>Karl Johann Tilly, Emad Scharifi, David Bailly</i>
11:50	01088	<i>Thomas Werner</i>	<b>Investigation of a test rig based on smart vision sensors for automated inspection of press-hardened automotive body components</b> <i>Fabio Simon, Thomas Werner, Andreas Weidemann, Christina Guillaume, Alexander Brosius</i>

Room 02.1			Parallel Session: <b>Processes III</b>
June 4 (10:30 - 11:50)			Chairman: <i>Gianfranco Palumbo</i>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01043	<i>Haruki Sato</i>	<b>New sequential forming process involving single-forming machine for hat cross-sectional panels with various in-plane curvatures</b> <i>Haruki Sato, Eiichi Ota, Minami Fujimura, Yasumoto Sato, Masatoshi Sawamura, Atsushi Mikuni, Shigeru Inamori, Noriyuki Ueno</i>
10:50	02033	<i>Yi-Chun Chen</i>	<b>Application of cold stamping process with 1500 MPa ultra-high-strength steel for aftermarket bumper</b> <i>Yi-Chun Chen, Wan-Ling Chen, Chun-Kai Lin, Yi-Kai Lin, Yu-Lien Li</i>
11:10	01084	<i>Olaf Schrage</i>	<b>High-speed blanking and its potential for producing ultra-high-strength automotive safety components</b> <i>Olaf Schrage, Roald Lingbeek, Priidu Peetsalu, Marlon Hahn, Hamed Dardaei Joghnan, Yannis P. Korkolis, A. Erman Tekkaya</i>
11:30	01068	<i>Philipp Zimmermann</i>	<b>Springback compensation of symmetrical and quasi-symmetrical sheet metal car body parts</b> <i>Arndt Birkert, Nico Kellenbenz, Philipp Zimmermann, Felix Lepple</i>



Room 02.2			Parallel Session: <b>Artificial Intelligence I</b>
June 4 (10:30 - 12:10)			Chairman: <i>Carlos Alves Silva</i>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01090	<i>Pascal Heinzelmann</i>	<b>A comprehensive benchmark dataset for sheet metal forming: advancing machine learning and surrogate modelling in process simulations</b> <i>Pascal Heinzelmann, Sebastian Baum, Kim Rouven Riedmüller, Mathias Liewald, Michael Weyrich</i>
10:50	01071	<i>Daniel Cruz</i>	<b>Application of recurrent neural networks in uncertainty analysis of sheet metal forming</b> <i>Daniel Cruz, Tomás Parreira, Armando Marques, Pedro Prates, Marta Oliveira, Diogo Neto, Abel Santos, Rui Amaral, Manuel R. Barbosa, André Pereira</i>
11:10	01041	<i>Florian Göttl</i>	<b>Advances in neural network assisted tool pressure prediction</b> <i>Florian Göttl, Felix Harst, Arndt Birkert, Nicolaj Stache</i>
11:30	02038	<i>Yoshinori Yoshida</i>	<b>Automatic identification of critical damage value with in-situ shearing test and notched plate tensile test with image analysis</b> <i>Yoshinori Yoshida, Asuka Kutsukake</i>
11:50	02011	<i>Margarida Gralha</i>	<b>Development of a machine learning algorithm for geometric compensation of single point incremental forming (SPIF) process</b> <i>Margarida Gralha, João Magrinho, João Sousa, Maria Beatriz Silva</i>

Room 01.1			Parallel Session: <b>Formability IV</b>
June 4 (10:30 - 12:10)			Chairman: <i>Pasi Peura</i>
TIME	ID	PRESENTING AUTHOR	TITLE
10:30	01006	<i>Gabriela Vincze</i>	<b>The effect of strain rate sensitivity on the prediction of the formability of advanced high-strength steels</b> <i>Marilena Butuc, Toni Chezan, Gabriela Vincze</i>
10:50	01059	<i>K. Narasimhan</i>	<b>Strain path influence on formability and microstructural evolution of IFHS steel via miniature LDH test</b> <i>Pavan Kumar, Peeyush Mahajan, Sushil Mishra, Rahul Datta, K. Narasimhan</i>
11:10	02006	<i>Konrad Perzynski</i>	<b>Numerical analysis of crack evolution in PVD-deposited TiN-coated steel sheets under loading conditions</b> <i>Konrad Perzynski, Lukasz Madej</i>
11:30	02039	<i>Johan Pilthammar</i>	<b>An application of crystal plasticity to predict forming limit curve of dual-phase steels with validation</b> <i>Kiranmayi Abburi Venkata, Rohith Uppaluri, Johan Pilthammar, Renaud Gutkin</i>
11:50	01073	<i>Pekka Plosila</i>	<b>An investigation on behaviour of 800 MPa grade hot-rolled steels in interrupted ISO 16630 hole expansion testing</b> <i>Pekka Plosila, Raimo Vierelä, Päivi Juntunen, Vili Kesti, Jukka Kömi, Antti Kaijalainen</i>

12:10 - 14:30	Lunch - Holiday Inn Hotel		
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Wednesday, June 4

Main Auditorium		KEYNOTE LECTURES V
June 4 (14:30 - 15:00)		Chairman: <i>Beatriz Silva</i>
TIME	PRESENTING AUTHOR	TITLE
14:30 – 15:00	<i>Shihong Zhang</i>	<b>Formability improvement and spring back reduction of light metal sheets at high ultra-high strain rates</b> <i>Shihong Zhang, Institute of Metal Research, Chinese Academy of Sciences, China</i>

Main Auditorium			Parallel Session: <b>Artificial Intelligence II</b>
June 4 (15:00 - 16:20)			Chairman: <i>Mohammad Mehdi Kasaei</i>
TIME	ID	PRESENTING AUTHOR	TITLE
15:00	01045	<i>Purnendu Das</i>	<b>Parametric evaluation and predictive modelling of formability in <math>\mu</math>-SPIF process</b> <i>Vijay Kumar Sahu, Purnendu Das, Avishek Adhikary, Kaushik Bandyopadhyay</i>
15:20	01087	<i>Koki Komatsu</i>	<b>An evolutionary algorithm-based numerical material testing system based on a crystal plasticity finite element model</b> <i>Koki Komatsu, Tetsuo Oya</i>
15:40	01023	<i>Pedro Prates</i>	<b>Limitations of XGBoost in predicting material parameters for complex constitutive models</b> <i>Pedro Prates, Dário Mitreiro, António Campos</i>
16:00	01015	<i>Eiichi Ota</i>	<b>Data-driven approach for extracting steady-state data from unsteady-state flow stress without material modelling</b> <i>Eiichi Ota, Minami Fujimura, Yasumoto Sato</i>

Room 02.1			Parallel Session: <b>Treatments</b>
June 4 (15:00 - 16:20)			Chairman: <i>João Pragana</i>
TIME	ID	PRESENTING AUTHOR	TITLE
15:00	02009	<i>Yuqiang Chen</i>	<b>The effects of cyclic-strengthening interrupted aging on the microstructure evolution and stress corrosion resistance of aluminum alloy</b> <i>Yuqiang Chen, Guanglin Ran, Dingding Lu, Yufeng Song, Qian Zhi</i>
15:20	02019	<i>Kuokuo Sun</i>	<b>Simultaneously improving strength, ductility and formability in 2195 Al-Li alloy components via pre-aging treatment</b> <i>Kuokuo Sun, Mei Zhan, Xiaoguang Fan</i>
15:40	02010	<i>Maria Beatriz Silva</i>	<b>Impact of aluminium ageing in an industrial stamping process</b> <i>Margarida Teixeira, João Magrinho, Paulo Sousa, Nuno Ferreira, Vitor Pereira, António Borges, Filipe Diogo, Carlos Saraiva, Maria Beatriz Silva</i>
16:00	02032	<i>Uday Chakkingal</i>	<b>Modification of hole expansion ratios of dual phase steels by hole edge thermal treatment</b> <i>Aman Mohitta, Murugaiyan Amirthalingam, Uday Chakkingal</i>

Room 01.1			Parallel Session: <b>Formability V</b>
June 4 (15:00 – 16:20)			Chairman: <i>Krishnaiyengar Narasimhan</i>
TIME	ID	PRESENTING AUTHOR	TITLE
15:00	02037	<i>Gihak Yim</i>	<b>The effect of retained austenite stability on the formability of third generation advanced high strength steel</b> <i>Gihak Yim, Hyejin Kim, Seungpill Jung, Jinhwa Jeon, Joosik Hyun</i>
15:20	02017	<i>Xueyang Li</i>	<b>An engineering approximation on the transformation of plastic work into heat at various strain rates and stress states</b> <i>Xueyang Li, Christian C. Roth, Vincent Grolleau, Dirk Mohr</i>
15:40	01014	<i>Joern Wehmeyer</i>	<b>Reinforcement of fibre-reinforced plastic components using metal inserts</b> <i>Bernd-Arno Behrens, Sven Hübner, Jan-Ulrich Gellermann, Joern Wehmeyer</i>
16:00	01046	<i>Dennis Albers</i>	<b>Experimental evaluation of a feature based bipolar plate forming approach in a hybrid tool</b> <i>Dennis Albers, Karl Ngondji, Florian Hüsing, Christian Brecher</i>
16:20 - 16:40		Coffee Break	
Main Auditorium			June 4
16:40 - 17:30		Closing Ceremony	

Thursday, **June 5**

Hotel Holiday Inn		June 5
08:30	Bus Departure from Hotel Holiday Inn to MCG - Mind for Metal and JDEUS	
13:00	Bus Departure from MCG - Mind for Metal and JDEUS to Hotel Holiday Inn	
14:00	Arrival at Hotel Holiday Inn	

