Conference Program

Sunday, June 3, 2018 - Crowne Plaza Hotel

Time	Activity	Location
13:00 - 18:00	On-Site Registration	Conference Center Lobby
18:00 - 20:00	Welcome Reception	Kitchener 1 - 3

Monday, June 4, 2018 - Crowne Plaza Hotel

Time	Activity	Location
7:30 - 8:30	*Continental Breakfast*	Grand Ballroom

8:30 - 8:40	Opening - Michael Worswick, Nico Langerak	Grand Ballroom
8:40 - 9:20	Keynote: **Marion Merklein** Friedrich-Alexander-Universität Erlangen-Nürnberg *"Hot forming of steel and aluminum sheet metals – from fundamentals to industrial applications"*	
9:20 - 10:00	Keynote: **Timothy Skszek** Magna International, Corporate R&D *"Focus on the Future, A synthesis of design, lightweight materials and forming processes"*	

10:00 - 10:30	*Coffee Break and Exhibition*	Viking Suite

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
10:30 - 12:10	PHS-I *Session: 100* Chair: S. Sriram	Fracture-I *Session: 200* Chair: C. Butcher	Formability-I *Session: 300* Chair: B. Hance	Processes-I Control/opt *Session: 400* Chair: A.H. van den Boogaard	Warm Forming-I *Session: 500* Chair: H. Kim

Time	Activity	Location
12:10 - 13:30	*Lunch*	Grand Ballroom

13:30 -14:10	Keynote: **Pavel Hora** ETH Zürich *"Advanced failure prediction methods for a combined detection of necking and crack phenomena in complex sheet metal forming processes"*	Grand Ballroom

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
14:15 - 15:30	PHS-II *Session: 100* Chair: P. Duroux	Crash-I *Session: 600* Chair: D. Mohr	Drawbeads *Session: 700* Chair: DJ. Zhou	Processes-II Impulsive *Session: 400* Chair: J. Imbert	Warm/Hot Forming-II *Session: 500* Chair: M.G. Lee

15:30 - 16:00	*Coffee Break and Exhibition*	Viking Suite

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
16:00 - 18:05	Edge Formability-I *Session: 800* Chair: X. Wu	Hybrids/ Composites *Session: 900* Chair: S. Malcolm	Formability-II *Session: 300* Chair: B. Kinsey	Tribology-I *Session: 1000* Chair: M. Sigvant	Warm/Hot Forming-III *Session: 500* Chair: T. Miklós

Free Evening

Tuesday, June 5, 2018 - Crowne Plaza Hotel

Time	Activity	Location
7:30 - 8:30	*Continental Breakfast*	Grand Ballroom

8:30 - 9:10	Keynote: **Matthias Liewald** Universität Stuttgart *"Adaptive control strategies for deep drawing high performance sheet materials"*	Grand Ballroom
9:10 - 9:50	Keynote: **James Dykeman** Honda R&D Americas *"Evolving Test Methods for Sheet Material Fracture Characterization and Prediction"*	

9:50 - 10:30	*Coffee Break and Exhibition*	Viking Suite

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
10:30 - 12:10	AHSS-I *Session: 1100* Chair: A. Bardelcik	Fracture-II *Session: 200* Chair: T. Clausmeyer	Springback-I *Session: 1200* Chair: Y. Korkolis	Processes-III *Session: 400* Chair: A. Abedini	Warm/Hot Forming-IV *Session: 500* Chair: E.H. Lee

Time	Activity	Location
12:10 - 13:30	*Lunch*	Grand Ballroom

13:30 -14:10	Keynote: Bart Carleer Autoform *"Simulation Efficiency along the stamping process chain"*	Grand Ballroom

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
14:15 - 15:30	Edge Formability-II *Session: 800* Chair: C. van Tyne	Crash-II *Session: 600* Chair: S. Klitschke	Formability-III *Session: 300* Chair: S. Thuillier	PHS-III *Session: 100* Chair: K. Daun	Warm/Hot Forming-V *Session: 500* Chair: E.-L. Odenberger

15:30 - 16:00	*Coffee Break and Exhibition*	Viking Suite

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
16:00 - 18:05	Edge Formability-III *Session: 800* Chair: S. Golovashchenko	Constitutive Modelling-I *Session: 1300* Chair: D. Green	Formability-IV *Session: 300* Chair: Z. Deng	Processes-IV *Session: 400* Chair: M. Nurcheshmeh	Warm/Hot Forming-VI *Session: 500* Chair: T. Feister

Time	Activity	Location
18:30 - 19:00	*Reception*	Grand Ballroom
19:00 - 22:00	Gala Dinner	

Wednesday, June 6, 2018 - Crowne Plaza Hotel

Time	Activity	Location
7:30 - 8:30	*Continental Breakfast*	Grand Ballroom

8:30 - 9:10	Keynote: **Dorel Banabic** Technical University of Cluj Napoca *"Advances in assessing of sheet metal formability" (in honor of Prof. Marciniak's 100-year anniversary)*	Grand Ballroom
9:10 - 9:50	Keynote: **Thomas Stoughton** GM R&D Center *"Novel Use of DIC Technology to Improve Characterization of Metal Deformation"*	

10:00 - 10:30	*Coffee Break and Exhibition*	Viking Suite

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
10:30 - 12:10	Tribology-II *Session: 1000* Chair: B. Rolfe	Constitutive Modelling-II *Session: 1300* Chair: T. Kuwabara	Formability-V *Session: 300* Chair: J. Carsley	Processes-V *Session: 400* Chair: M. Jain	

Time	Activity	Location
12:10 - 13:30	*Lunch*	Grand Ballroom

Time	Parallel Sessions:				
	Kitchener 1	Kitchener 2	Kitchener 3	Kitchener 4	Trillium
13:35 - 15:40	Edge Formability-IV *Session: 800* Chair: W. Volk	AHSS-II *Session: 1100* Chair: K.S. Raghavan	Fracture-III *Session: 200* Chair: G. Huang	Springback-II *Session: 1200* Chair: P.-Y. Manach	

15:40 - 16:10	*Coffee Break and Exhibition*	Viking Suite

16:10 - 16:50	Keynote: **Michael Worswick** University of Waterloo *"Advancing magnesium alloy sheet from laboratory characterization and simulation to full-scale auto parts"*	Grand Ballroom
16:50 - 17:00	IDDRG 2019: N. Langerak and A.H. van den Boogaard	
17:00 - 17:10	Closing: Michael Worswick	

Free Evening

Thursday, June 7, 2018 - Industry Tours

Participants pre-registered for Industry Tours will be notified of itinerary directly via email

Monday, June 4th 2018
Kitchener 1

Session 100 **PHS-I** **Kitchener 1**
Chair: S. Sriram

Original Paper #	Time	ID	Presenting Author, Title, Authors, Affiliation
#110	10:30 - 10:55	101	C. Pfeffer **Influence of process parameters on the hot stamping of carbon-martensitic chromium steel sheets** *B.-A. Behrens, S. Hübner, C. Sunderkötter, L. Gebel, S. Gnaß, G. Berndt, C. Trimborn, C. Pfeffer* Leibniz Universität Hannover/Volkswagen
#109	10:55 - 11:20	102	S.Marth **From Blank to Fractured Component: Numerical and Experimental Results of a Laboratory Scale Component** *S. Marth, S. Golling, R. Östlund, M. Oldenburg* Luleå University of Technology/Gestamp R&D
#053	11:20 - 11:45	103	H.Yan **Intercritical Annealing of 22MnB5 for Hot Forming Die Quenching** *H. Yan, M. Di Ciano, M. Verma, K.J. Daun* University of Waterloo
#097	11:45 - 12:10	104	K Narasimhan **Formability studies on 22MnB5 steel during hot stamping process conditions** *V. Sarawagi, S. Narkhede, A.K. Singh, K. Narasimhan* IIT Bombay

Session 100 **PHS-II** **Kitchener 1**
Chair: P. Duroux

	Time	ID	Presenting Author, Title, Authors, Affiliation
#011	14:15 - 14:40	105	L. Penter **Compensation for tool deformation and expansion in virtual try-outs of hot stamping tools** *L. Penter, S. Ihlenfeldt, N. Pierschel* TU Dresden/Fraunhofer Institute for Machine Tools and Forming Technology
#106	14:40 - 15:05	106	A. Padré **New approaches to thermal tool performance,cooling and machining strategy: the strongly correlated triple that determines the cost effectiveness of the process** *I. Valls, A. Hamasaiid and A. Padré* Rovalma S.A.
#177	15:05 - 15:30	107	K. Kannan **Impact of Flow Conditions in Cooling Channels on Thermal Cycling** *K. Kannan, T. Brenne, M. Düring* AutoForm Engineering USA Inc./AutoForm Engineering Deutschland GmbH/AutoForm Engineering B.V.

Session 800 **Edge Formability-I** **Kitchener 1**
Chair: X. Wu

	Time	ID	Presenting Author, Title, Authors, Affiliation
#143	16:00 - 16:25	801	S. Golovashchenko **Mechanism of Fracture in Sheet Metal Cutting Processes and its Effect on Sheared Edge Stretchability** *SF. Golovashchenko, N. Wang, S. Nasheralahkami, NA. Reinberg, W. Zhou* Oakland University
#063	16:25 - 16:50	802	N. Habibi **Numerical quantification of damage accumulation resulting from blanking in multi-phase steel** *N. Habibi, F. Pütz, M. Könemann, V. Brinnel, S. Münstermann, M. Feistle, W. Volk* RWTH-Aachen University/TU Munich
#099	16:50 - 17:15	803	A. Maillard **Evaluation of the feasibility of the hole-flanging process using a multiple criteria method** *A. MAILLARD, M. RACHIK, H. SFAR, P. SCHREIBER* CETIM - Technical Center for Mechanical Industries /Université de technologie de Compiègne
#034	17:15 - 17:40	804	J. Goncalves **Importance of hole punching conditions during Hole Expansion tests** *J. Goncalves* Global R&D ArcelorMittal Maizières

Monday, June 4th 2018

Kitchener 2

Session 200 **Fracture-I** **Kitchener 2**

Chair: C. Butcher

Original Paper #	Time	ID	Presenting Author, Title, Authors, Affiliation
#014	10:30 - 10:55	201	L. Wagner **Influence of specimen geometry on measures of local fracture strain obtained from uniaxial tensile tests of AHSS sheets** *L. Wagner, P. Larour* Voestalpine Stahl GmbH – R&D – Forming Technologies
#039	10:55 - 11:20	202	C. Butcher **Non-Unique Descriptions of Proportional Fracture Loci using the Stress Triaxiality and Equivalent Strain (Oral only)** C. Butcher, A. Abedini University of Waterloo
#175	11:20 - 11:45	203	D. Mohr **On the Potential of Machine Learning Algorithms to Predict the Plasticity and Fracture Response of Sheet Metal (Oral only)** *M.B. Gorji, D. Mohr* Massachusetts Institute of Technology/Swiss Federal Institute of Technology (ETH)
#002	11:45 - 12:10	204	A. Abedini **Fracture characterization of ZEK100 magnesium alloy sheet under monotonic and non-proportional loading histories** *A. Abedini, C. Butcher, M.J. Worswick* University of Waterloo

Session 600 **Crash-I** **Kitchener 2**

Chair: D. Mohr

Time	ID	Presenting Author, Title, Authors, Affiliation
#128 14:15 - 14:40	601	S. Klitschke **Adiabatic heating under various loading situations and strain rates for advanced high-strength steels** *S. Klitschke, A. Trondl, F. Huberth, M. Liewald* Fraunhofer Institute for Mechanics of Materials IWM/University of Stuttgart
#163 14:40 - 15:05	602	F. Abu-Farha **Accounting for Rate Dependency of Deformation and Failure in Forming and Crash Simulations of Advanced High Strength Steels (Oral only)** R. Alturk, A. Agha, F. Abu-Farha Clemson University/FADI-AMT LLC
#180 15:05 - 15:30	603	A. Haufe **Remarks on constitutive and structural modelling of small radii in sheet metal and crashworthiness simulation** *A. Haufe, T. Erhart, F. Andrade, T. Willmann, M. Bischoff* DYNAmore GmbH/Universität Stuttgart

Session 900 **Hybrids/Composites** **Kitchener 2**

Chair: S. Malcolm

Time	ID	Presenting Author, Title, Authors, Affiliation
#170 16:00 - 16:25	901	D. Trudel-Boucher **Stamping of high performance thermoplastic composite intrusion beams** *D. Trudel-Boucher, M. Champagne* National Research Council Canada
#007 16:25 - 16:50	902	M. Riemer **On the development of a finite element model to analyze the behavior of hybrid composites considering the manufacturing history** *M. Riemer, R. Kießling, R. Müller, W.-G. Drossel, D. Landgrebe, J. Ihlemann* Fraunhofer Institute for Machine Tools and Forming Technology IWU/Chemnitz University of Technology
#187 16:50 - 17:15	903	G. Meirson **HP-RTM/LCM as a viable option to replace vehicle metal structure components (Oral only)** *G. Meirson, V. Ugresic, A. Hrymak, F. Henning* Fraunhofer Project Centre/University of Western Ontario/Fraunhofer ICT Germany
#153 17:15 - 17:40	904	D. Kim **Delamination behavior of high strength vibration damping sheet in V-bending test** H. Park, J. Lee, S.-J. Kim, D. Kim Korea Institute of Materials Science/Pusan National University
#020 17:40 - 18:05	905	J. Olevnik **Experimental and numerical analysis on bilayer tube flaring** *J.M. Olevnik, C.P. Nikhare* The Pennsylvania State University

Monday, June 4th 2018

Kitchener 3

Session 300 **Formability-I** **Kitchener 3**

Chair: B. Hance

Original Paper #	Time	ID	Presenting Author, Title, Authors, Affiliation
#066	10:30 - 10:55	301	B. Hance **A Simplified Stress-Based Forming Limit Criterion for Advanced High Strength Steel (AHSS)** *B.M. Hance, L. Huang* United States Steel Corporation
#003	10:55 - 11:20	302	S. Münstermann **A numerical approach to evaluate roughness effects on localization and damage in sheet materials** *S. Münstermann, P. Wechsuwanmanee, W. Liu, J. Lian* RWTH Aachen University
#006	11:20 - 11:45	303	L. Huang **Development of a New Index to Depict the Total Forming Capacity of Sheet Metals** *L. Huang, M.F. Shi* United States Steel Corporation
#150	11:45 - 12:10	304	Duroux, P. **Understanding the FLC prediction thanks to fine simulation with damage modelisation** *Q. Chichery, P. Duroux, X. Bellut* ArcelorMittal Global R&D Montataire

Session 700 **Drawbeads** **Kitchener 3**

Chair: D.J. Zhou

	Time	ID	Presenting Author, Title, Authors, Affiliation
#016	14:15 - 14:40	701	A.Duarte **Enabling stamping processes through meticulous FE Modelling - segmented drawbeads and remesh criteria** *O.C. Haase, V.L. Silveira, P.M.A. Stemler, R.A.M. Viana, A.S. Duarte* Sixpro Virtual&Practical Process/Universidade Federal de Minas Gerais
#026	14:40 - 15:05	702	J. Mendiguren **On the accurate characterization of the drawbead up-lift forces** *I. Gil, L. Galdos, N. Otegi , J. Mendiguren, E. Saenz de Argandoña* Mondragon Unibertsitatea
#142	15:05 - 15:30	703	E. Lekarczyk **Experimental and Analytical Study of Drawbead Restraining Force for Sheet Metal Drawing Operations (Oral only)** *E.M. Lekarczyk, S.F. Golovashchenko, C. Du, D. Zhou* Oakland University/Fiat Chrysler Automotive, LLC, North America

Session 300 **Formability-II** **Kitchener 3**

Chair: B. Kinsey

	Time	ID	Presenting Author, Title, Authors, Affiliation
#107	16:00 - 16:25	305	K. Drotleff **Advanced necking criterion for nonlinear strain paths to a complex sheet metal forming component** *K. Drotleff, M. Liewald* University of Stuttgart
#135	16:25 - 16:50	306	S. Thuillier **Strain Path Changes in Reverse Redrawing of DP Steels** *D. Hérault, S. Thuillier, P.Y. Manach, J.L. Duval* Univ. Bretagne Sud/ESI Group
#141	16:50 - 17:15	307	Y.P. Korkolis **Formability Improvements of DP 1180 Subjected to Continuous-Bending-Under-Tension** *C. Poulin, Y.P. Korkolis, B.L. Kinsey, M. Knezevic* University of New Hampshire
#030	17:15 - 17:40	308	H. Hippke **A failure model for non-proportional loading under plane stress condition based on GFLC in comparison to eMMFC and** *H. Hippke, B. Berisha, P. Hora* ETH Zürich/Inspire AG
#136	17:40 - 18:05	309	M. Nurcheshmeh **Prediction of Sheet Metal Forming Limits in Multistage Forming Processes** *M. Nurcheshmeh, D. Green, C. Byrne, A. Habib* Western Kentucky University/University of Windsor

Monday, June 4th 2018

Kitchener 4

Session 400 **Processes-I (Control/Opt)** **Kitchener 4**

Chair: A.H. van den Boogaard

	Time	ID	Presenting Author, Title, Authors, Affiliation
#068	10:30 - 10:55	401	P. Fischer **Implementation of feedback control in kitchen sink production** *P. Fischer, D. Harsch, J. Heingärtner, Y. Renkci, P. Hora* ETH Zurich/Inspire ivp/Franke Technology and Trademark Ltd.
#117	10:55 - 11:20	402	S. Tatipala **Introductory study of sheet metal forming simulations to evaluate process robustness** *S. Tatipala, J. Pilthammar, M. Sigvant, J. Wall, C.M. Johansson* Blekinge Institute of Technology/Volvo Cars
#152	11:20 - 11:45	403	J. Heingärtner **Implementation of a tribology-based process control system for deep drawing processes** *J. Heingärtner, D. Bonfanti, D. Harsch, F. Dietrich, P. Hora* inspire AG/ETH Zurich/Opel Automobile AG
#112	11:45 - 12:10	404	D. Harsch **Considering fluctuations of material properties, stainless steel 1.4301, on manufacturability of kitchen sinks** *D. Harsch, P. Fischer, B. Berisha, J. Heingärtner, Y. Renkci, P. Hora* ETH Zürich/inspire AG - ivp/Franke Technology and Trademark Ltd

Session 400 **Processes-II (Impulsive)** **Kitchener 4**

Chair: J. Imbert

	Time	ID	Presenting Author, Title, Authors, Affiliation
#160	14:15 - 14:40	405	S-H Zhang **Effect of Impact Hydroforming Loads on the Formability of AA5A06 Sheet Metal** *S.-H. Zhang, Y. Ma, Y. Xu, A.A. El-Aty, D. Chen, Y.-L. Shang, A.I. Pokrovsky* Chinese Academy of Sciences (CAS)/Dalian University of Technology/National Academy of Sciences of Belarus
#069	14:40 - 15:05	406	G. Bazin **Magnetic pulse forming for small aeronautic components** **CANCELLED** *C. Sow, G. Bazin, D. Daniel, E. Bon, D. Priem, G. Racineux* IRT Jules Verne/STELIA Aerospace/Constellium Technology Center/Ecole Centrale de Nantes
#154	15:05 - 15:30	407	H. Park **Form-fit joining behavior between an aluminum tube and sheet using electromagnetic forming** *H. Park, J. Lee, S.-J. Kim, Y. Lee, D. Kim* Korea Institute of Materials Science/ Pusan National University

Session 1000 **Tribology-I** **Kitchener 4**

Chair: M. Sigvant

	Time	ID	Presenting Author, Title, Authors, Affiliation
#073	16:00 - 16:25	1001	M. Sigvant **Friction in sheet metal forming simulations: Introduction of new sheet metal coatings and lubricants** *M. Sigvant, J. Pilthammar, J. Hol, J.H. Wiebenga, T. Chezan, B. Carleer, A.H. van den Boogaard* Volvo Cars/Blekinge Institute of Technology/TriboForm Engineering/Tata Steel/AutoForm Engineering/University of Twente
#173	16:25 - 16:50	1002	S. Sriram **Influence of delta phase morphology in galvannealed coated steels on formability** *S. Sriram, V. Krishnardula, H. Hahn* ArcelorMittal Global R&D East Chicago
#035	16:50 - 17:15	1003	J. Hazrati **Tool Texturing for Deep Drawing Applications** *J.Hazrati, P.Stein, P.Kramer, A.H. van den Boogaard* University of Twente/Technische Universität Darmstadt
#031	17:15 - 17:40	1008	M. Shafiei **Wear and Galling Behavior of Coated Tools Used in Pierce Punching of Automotive Aluminum Sheet (Oral only)** *M. Shafiei, D.J. Zhou, D. Young, D. Adamski* Novelis Global Research & Technology Center/Fiat Chrysler Automobiles/Ford Motor Company/General Motors Technical Center
#118	17:40 - 18:05	1005	D.Wiklund **Phenomenological friction model in deep drawing of aluminum sheet metals** *D. Wiklund and M. Larsson* Swerea IVF/University West

Monday, June 4th 2018
Trillium

Session 500 **Warm/Hot Forming-I** **Trillium**
Chair: H. Kim

	Time	ID	Presenting Author, Title, Authors, Affiliation
#010	10:30 - 10:55	501	A.Camberg **Formability Enhancement of EN AW-5182 H18 Aluminum Alloy Sheet Metal Parts in a Flash-Forming Process: Testing, Calibration and Evaluation of Fracture Models** *A.A. Camberg, F. Bohner, J. Tölle, A. Schneidt, S. Meiners, T. Tröster* Paderborn University/BENTELER Automobiltechnik GmbH
#005	10:55 - 11:20	502	Noder, J. **An Experimental and Numerical Investigation of Non-isothermal Cup Drawing of a 7XXX-T76 Aluminum Alloy Sheet** *J. Noder, A. Abedini, T. Rahmaan, S. DiCecco, C. Butcher, M. Worswick* University of Waterloo
#072	11:20 - 11:45	503	Laurent, H. **The influence of warm forming conditions on the natural aging and springback of a 6016-T4 aluminum alloy** *H. Laurent, V.M. Simões, M.C. Oliveira, L.F. Menezes* University of Bretagne Sud/University of Coimbra
#120	11:45 - 12:10	504	Jurendic, S. **Modelling of the Pre-Strain Dependent Age Hardening Response in AA6000 Series Aluminium Alloys** *S. Jurendic, Z. Liang, M. Fumeaux, R. Burrows* Novelis Deutschland GmbH/Novelis Switzerland SA/Novelis Global R & T Center

Session 500 **Warm/Hot Forming-II** **Trillium**
Chair: M.G. Lee

	Time	ID	Presenting Author, Title, Authors, Affiliation
#021	14:15 - 14:40	505	Odenberger, E.-L. **Thermo-mechanical Material Characterization and Stretch-bend Forming of AA6016** *E-L. Odenberger , Ll. Pérez Caro, H. Åhlin, M. Oldenburg* Swerea IVF AB/Luleå University of Technology
#148	14:40 - 15:05	506	Anyasodor, G. **Mass production-line and process route to enable the use of high strength aluminium alloy materials in car body** *G. Anyasodor, C. Koroschetz* AP&T Group
#182	15:05 - 15:30	507	Pandya, K. **Stress state, strain rate and temperature dependent plasticity and failure response of aluminum alloy 7075 during warm and hot forming (Oral only)** *K.S. Pandya, C.C. Roth, D. Mohr* ETH Zürich

Session 500 **Warm/Hot Forming-III** **Trillium**
Chair: T. Miklós

	Time	ID	Presenting Author, Title, Authors, Affiliation
#125	16:00 - 16:25	508	Bosler, P. **Effects of Lubrication on the Warm Forming of High Strength Aluminum 7075-T6 Alloy (Oral only)** *P. Bosler, H. Kim* EFUCHS Lubricants Co./EWI Forming Center
#188	16:25 - 16:50	509	Lehmann, H. **Presshardening heat treatment equipment with an installed "Inline Printer" for Tailored Properties (Oral only)** H. Lehmann Schwartz GmbH
#126	16:50 - 17:15	510	Feister, T. **Failure predictions in warm forming of 7075-T6 aluminum structural parts** *T. Feister, H. Kim, A. Gwinn, T. Schiller, M. Austin* KTH Parts Industries Inc./EWI Forming Center/Tower International/American Tooling Center
#183	17:15 - 17:40	511	E.-H. Lee **A study on forming process of AA5083 alloy with infrared local heat treatment** *E.-H. Lee, S. Ko* Handong Global University/Hyundai Motor Company
#190	17:40-18:05	524	Kim, H. **Design Guidelines for Warm Forming of High-Strength Aluminum Alloys (Oral Only)** H. Kim, R. Hahnlen, C. Du, D. Zhou, J. Singh, P. Oberhauser, M. Austin, A. Samant, Y. Demiralp, V. Tungah EWI Forming Center/Honda R&D Americas/Fiat Chrysler Automobiles/AMAG rolling GmbH/American Tooling Center/ KTH Parts Industries Inc/AutoForm Engineering/ESI North America

Tuesday, June 5th 2018

Kitchener 1

Session 1100 **AHSS-I** **Kitchener 1**

Chair: A. Bardelcik

	Time	ID	Presenting Author, Title, Authors, Affiliation
#012	10:30 - 10:55	1101	K.S. Raghavan **Dynamic Strain Aging Behavior in Dual Phase and Multiphase High Strength Steel** *J. Hu , K.S. Raghavan* AK Steel Corporation
#171	10:55 - 11:20	1102	C. Kohar **Crystal Plasticity based Transformation Induced Plasticity Formulation for Predictions of Forming Limit Diagrams** *P. Zhang, C.P. Kohar, A. Brahme, S.-H. Choi, R.K. Mishra, K. Inal* Univesity of Waterloo/Sunchon National University/General Motors Research and Development Center
#091	11:20 - 11:45	1103	H. Shuto **Development of High Strength Steels with High Press Formability and Fatigue Property** *H. Shuto, Y. Ito, D. Maeda, T. Yokoi* Nippon Steel & Sumitomo Metal Corporation
#169	11:45 - 12:10	1104	C. Chiriac **Effects of Austenite Stability on Forming and Work Hardening Behavior of 1.2 GPa Gen3 AHSS** *C. Chiriac, R. Sohmshetty, J. Balzer, T. Mueller, J.D. Ju* Ford Motor Company

Session 800 **Edge Formability-II** **Kitchener 1**

Chair: C. van Tyne

	Time	ID	Presenting Author, Title, Authors, Affiliation
#161	14:15 - 14:40	805	T. Clausmeyer **Influence of cutting tool stiffness on edge formability** *E. Levin, P. Larour, M. Heuse, D. Staupendahl, T. Clausmeyer, A. E. Tekkaya* TU Dortmund University/voestalpine Stahl GmbH/Faurecia Autositze GmbH
#132	14:40 - 15:05	806	X. Wu **Trim Die Damage and "Self-Reconditioning" Effect on Trimmed Edge of Sheet Metal Blanks** *A. Al-Shawk, X. Wu, Q. Yang* Wayne State University/Al-Furat Al-Awsat Technical University
#022	15:05 - 15:30	807	H.-Y. Lee **A Study on the Punch Shape for Improving Tool Life in Shearing AHSS** *H.Y. Lee, J.Y. Park* POSCO Global R&D Center

Session 800 **Edge Formability-III** **Kitchener 1**

Chair: S. Golovashchenko

	Time	ID	Presenting Author, Title, Authors, Affiliation
#028	16:00 - 16:25	808	C. van Tyne **Sample Edge Effects on Tensile Properties and Sheet Formability** *B. Goshert, O.R. Terrazas, D.K. Matlock, C.J. Van Tyne* Colorado School of Mines/ATI Specialty Materials
#164	16:25 - 16:50	809	D. Anderson **Effect of Edge Quality on Formability of an AA6xxx Aluminum Alloy** *H. Cestoni, D. Anderson* Novelis, Inc.
#137	16:50 - 17:15	810	Z. Cui **Evaluation of Wear-induced Plastic Deformation at the Trimmed Edge of DP980 Steel Sheets** *Z. Cui, S. Bhattacharya, D.E. Green, A.T. Alpas* University of Windsor
#082	17:15 - 17:40	811	K. Narasimhan **Burr formation and shear strain field evolution studies during sheet metal blanking** J. Barik, V. Sonkamble, K. Narasimhan Indian Institute of Technology Bombay
#131	17:40 - 18:05	812	Shawk, A. **Topological Characterization of Machined Edges Prepared by Different Cutting Methods, and Edge Evolution in Tensile Deformation** *A. Shawk, P. Lu, P. Vedanti, X. Wu* Wayne State University/Al-Furat Al-Awsat Technical University

Tuesday, June 5th 2018
Kitchener 2

Session 200 **Fracture-II** **Kitchener 2**
Chair: T. Clausmeyer

	Time	ID	Presenting Author, Title, Authors, Affiliation
#015	10:30 - 10:55	205	L. Durrenberger **Bending angle correction regarding sheet thickness** *L.Durrenberger, P.Dietsch* ArcelorMittal Maizières
#043	10:55 - 11:20	206	K. Cheong **Fracture Characterization in Proportional Plane Stress Loading by Imposing Severe Through-Thickness Strain Gradients (Oral only)** *Kenneth Cheong, Cliff Butcher, James Dykeman* University of Waterloo/Honda R&D Americas
#095	11:20 - 11:45	207	A. Kupke **Determination of the bendability of ductile materials** *A. Kupke, M. Barnett, G. Luckey, M. Weiss* Deakin University/Ford Motor Company
#162	11:45 - 12:10	208	J.G. Londono **Fundamental Differences between Fracture Behavior of Thin Sheets under Plane Strain Bending and Tension** *P.B. Woelke, J.G. Londono, L.O. Knoerr, J.Dykeman, S. Malcolm* Thornton Tomasetti/Thyssenkrupp Steel NA/Honda R&D Americas, Inc.

Session 600 **Crash-II** **Kitchener 2**
Chair: S. Klitschke

	Time	ID	Presenting Author, Title, Authors, Affiliation
#113	14:15 - 14:40	604	P. Henn **Investigation on crashworthiness characterisation of 6xxx-series aluminium sheet alloys based on local ductility criteria and edge compression tests** *P. Henn, M. Liewald, M. Sindel* University of Stuttgart/AUDI AG
#174	14:40 - 15:05	605	C. Roth **Temperature and Strain Rate Dependent Plasticity of Advanced High Strength Steel: Experiments and Modeling (Oral** *C.C. Roth, X. Li, D. Mohr* Swiss Federal Institute of Technology (ETH)
#004	15:05 - 15:30	606	M. Tummers **Introduction of a 1000 MPA crush tip within a Usibor 1500-AS axial crush rail using in-die heated hot stamping** *M.Tummers, K.Omer, A.Abedini, C.Peister, C.Butcher, M.J.Worswick, S.Malcom, C.Yau, R.Soldaat* University of Waterloo/Honda R&D Americas/Prometek Research Centre/ArcelorMittal Dofasco

Session 1300 **Constitutive Modelling-I** **Kitchener 2**
Chair: D. Green

	Time	ID	Presenting Author, Title, Authors, Affiliation
#029	16:00 - 16:25	1301	M. Rosenschon **Analysis of the stress- and directional-dependent Bauschinger-effect of sheet metals** *M. Rosenschon, M. Merklein* Friedrich-Alexander-Universität Erlangen-Nürnberg
#155	16:25 - 16:50	1302	F. Gutknecht **Experimental setup to characterize flow-induced anisotropy of sheet metals** *F. Gutknecht, G. Gerstein, H. Traphöner, T. Clausmeyer, F. Nürnberger* TU Dortmund University/Leibniz Universität Hannover,
#094	16:50 - 17:15	1303	N. Boudeau **How to Post-Process Experimental Results from the Flange Bulging Test? Application to the characterization of a Zinc** *N. Boudeau, L.Vitu, N. Laforge, P. Malécot, G. Michel, M. Milesi, S. Manov* UBFC/CNRS-UMR6174/UFC/ENSMM/UTBM/VMZinc Building Solutions
#133	17:15 - 17:40	1304	I.S. Sarraf **A numerical method to predict the rate-sensitive hardening behaviour of sheet materials using uniaxial and biaxial flow curves** *I.S. Sarraf, D.E. Green* University of Windsor

Tuesday, June 5th 2018
Kitchener 3

Session 1200 **Springback-I** **Kitchener 3**
Chair: Y. Korkolis

	Time	ID	Presenting Author, Title, Authors, Affiliation
#055	10:30 - 10:55	1201	Y.-W. Wang **A New Hybrid Bead with Post-stretching Method to Effectively Control Spring-back for Advanced High Strength Steels** *Y. Jia, C. Pu, F. Zhu, K. Schmid, Y.-W. Wang* AK Steel Corporation/General Motors Corporation
#050	10:55 - 11:20	1202	T. Altan **Determination of variable E-modulus through wipe bending and application to springback prediction** *A. Fallahiarezoodar, C. Goertemiller, A. Groseclose, T. Altan* Ohio State University/GM Global Technical Center
#057	11:20 - 11:45	1203	M. Paak **A Parametric Study of Springback For Compensation Strategies** *M. Paak, H. Zoghi, S. Huhn* Forming Technologies Inc
#085	11:45 - 12:10	1204	K. Jiang **A springback energy based method of springback prediction for complex automotive parts** *K. Jiang, Y. Hou, J. Lin, J. Min* Tongji University

Session 300 **Formability-III** **Kitchener 3**
Chair: S. Thuillier

	Time	ID	Presenting Author, Title, Authors, Affiliation
#083	14:15 - 14:40	310	R. Tabata **An Application of Non-Uniform Stretch Flanging Theory to Edge-Crack-Avoidable Product Design** *R.Tabata, J.Nitta , S.Yonemura, M.Mizumura, S.Hiwatashi* Nippon Steel & Sumitomo Metal Corporation
#019	14:40 - 15:05	311	E. Affronti **Metallographic analysis of failure mechanisms during Nakajima tests for the evaluation of forming limits on a dual-phase steel** *E. Affronti, M. Weidinger, M. Merklein* Friedrich-Alexander-Universität Erlangen-Nürnberg
#079	15:05 - 15:30	312	M. Nick **Damage Evolution in Nakajima Tests of DP800 Dual Phase Steel** *T. Bergs, M. Nick, D. Trauth, F. Klocke* Fraunhofer-Institut für Produktionstechnologie/RWTH Aachen University

Session 300 **Formability-IV** **Kitchener 3**
Chair: Z. Deng

	Time	ID	Presenting Author, Title, Authors, Affiliation
#056	16:00 - 16:25	313	Z. Deng **Development of Novel Forming Limit Curve Testing Method** *Z. Deng, J.P. McGuire* Aleris North American Automotive Innovation Center
#159	16:25 - 16:50	314	L. Deng **Plastic instabilities in AA5754-O under various stress states** *Y. Hou, J. Min, J. Lin, J.E. Carsley, T.B. Stoughton* Tongji University/General Motors Global Research & Development
#086	16:50 - 17:15	315	Z. Chen **Determination of forming limit for aluminium alloy sheet eliminating the interferences of through-thickness stress and non-linear strain path** *Z. Chen, G. Fang* Tsinghua University/State Key Lab of Tribology
#087	17:15 - 17:40	316	W. Yuan **Experimental Investigation of Forming Limit Curve for AA5754-O** *W. Yuan, M. Wan, X. Wu* Beihang University
#033	17:40 - 18:05	317	Goncalves, J. **Stakes and solutions for in-plane sheet-metal formability assessment** *J.Goncalves, G. Jotz, F. Huet* Global R&D ArcelorMittal Maizières

Tuesday, June 5th 2018

Kitchener 4

Session 400 **Processes-III** **Kitchener 4**

Chair: A. Abedini

	Time	ID	Presenting Author, Title, Authors, Affiliation
#104	10:30 - 10:55	408	M. Gösling **Efficient simulation of ironing process for deep drawn parts** *M. Gösling, A. Güner, I. Burchitz, Th.Thülig, B. Carleer* BILSTEIN GmbH & Co. KG/Autoform Engineering
#045	10:55 - 11:20	409	R.M. Patil **Developing a progressive draw with ironing tool for manufacturing a solenoid casing** *R. Patil, B. Marrapu, K. Jakkula, A. Shetty* Tube Investments of India **CANCELLED**
#084	11:20 - 11:45	410	Y. Xu **Experiment and Numerical Simulation of Hydroforming of 2198 Al-Li Alloy Curved Sheet Parts with Large Unsupported** *B. Zhou, Y. Xu* Harbin Institute of Technology
#081	11:45 - 12:10	411	T. Maki **Sheet Hydroforming and Other New Potential Forming Technologies** *T. Maki, J. Cheng* Amino North America Corporation

Session 100 **PHS-III** **Kitchener 4**

Chair: K. Daun

	Time	ID	Presenting Author, Title, Authors, Affiliation
#049	14:15 - 14:40	108	I. Yakubtsov **Evolution of Al-Si Coating Microstructure during Heat-Treatment of Usibor 1500** *I. Yakubtsov, R. Sohmshetty* Ford Motor Company
#052	14:40 - 15:05	109	M. Verma **Minimizing the Cycle Time of a Roller Hearth Furnace for Hot-Forming Die-Quenching** *M. Verma, M. Di Ciano, J. Richard Cullham, C. Yau, K.J. Daun* University of Waterloo/Cosma International
#149	15:05 - 15:30	110	J. Tawk **Advanced Design for Continuous Roller Furnace for Hot Forming Line** *B. Dvorak, J.J. Tawk, T. Vít* BENTELER Mechanical Engineering GmbH/BENTELER Maschinenbau GmbH/Technical University of Liberec

Session 400 **Processes-IV** **Kitchener 4**

Chair: M. Nurcheshmeh

	Time	ID	Presenting Author, Title, Authors, Affiliation
#024	16:00 - 16:25	412	Mamros, E. **Experimental and numerical investigation on tube flaring with a rotational tool** *E.M. Mamros and C.P. Nikhare* Penn State
#054	16:25 - 16:50	413	Horstman, R. **An Investigation on Square Tube Forming using a Reuleaux triangle** *R.J. Horstman and C.P. Nikhare* Penn State
#044	16:50 - 17:15	414	Bhargava, M. **Comparison of thickness variation in multistage deep drawing of a stator motor housing by experimental and simulation methods** *M. Bhargava, R. Patil, K. Jakkula, A. Shetty* Tube Investments of India **CANCELLED**

Tuesday, June 5th 2018

Trillium

Session 500 **Warm/Hot Forming-IV** **Trillium**

Chair: E.H. Lee

	Time	ID	Presenting Author, Title, Authors, Affiliation
#037	10:30 - 10:55	512	K. Omer **Deep Drawing Parameters and Characteristics for the Hot Forming of AA7075** *K. Omer, C. Butcher, S. Esmaeili, M. Worswick* University of Waterloo
#040	10:55 - 11:20	513	H. Vogt **Formability of 7000 aluminum alloys in warm and hot forming condition** *B.-A. Behrens, S. Hübner, H. Vogt* Leibniz Universität Hannover
#064	11:20 - 11:45	514	Q. Zhang **Investigating the Quench Sensitivity of High Strength AA6082 Aluminum Alloy during the New FAST Forming Process** *Q. Zhang, X. Luan, S. Dhawan, D.J. Politis, Z. Cai, L. Wang* Imperial College London
#124	11:45 - 12:10	515	H. Kim **Comparison of Drawability between Warm Forming and Cold Forming of Aluminum 6xxx Alloys** *H. Kim, R. Hahnlen, T. Feister, V. Tunga* EWI Forming Center/Honda R&D Americas/KTH Parts Industries/ESI North America

Session 500 **Warm/Hot Forming-V** **Trillium**

Chair: E.L. Odenberger

	Time	ID	Presenting Author, Title, Authors, Affiliation
#032	14:15 - 14:40	516	B. Williams **Warm Forming Response of ZEK100 Sheet obtained under Biaxial Stretching with Full-Field Displacement Measurements** *B.W. Williams, J. McKinley, K.P. Boyle, L. Blaga, S. Kurukuri, M.J. Worswick* Canmet Materials/ University of Waterloo
#038	14:40 - 15:05	517	S. Kurukuri **Cylindrical Cup Deep Drawing of ZEK100 Sheet at Elevated Temperatures** *S. Kurukuri, M. Boba, C. Butcher, M. Worswick, R. Mishra* University of Waterloo/General Motors
#144	15:05 - 15:30	518	M. Jain **Standard and Strain Path Change Forming Limit Diagrams of AZ31B Magnesium Sheet at Elevated Temperatures** *G. Zhou, M. K. Jain, D. Li, R. S. Mishra* McMaster University/Shanghai Jiao Tong University/General Motors Research and Development Center

Session 500 **Warm/Hot Forming-VI** **Trillium**

Chair: T. Feister

	Time	ID	Presenting Author, Title, Authors, Affiliation
#092	16:00 - 16:25	519	Y. Choi **Mechanical Properties and Forming of 7XXX Aluminum Alloy Sheet under W-Temper Heat Treatment** *Y. Choi, S. Lee, M.-G. Lee* Korea University
#146	16:25 - 16:50	520	M. Tisza **High strength aluminum alloys in car manufacturing** *M. Tisza, Z. Lukács* University of Miskolc
#158	16:50 - 17:15	521	G. D'Amours **High Temperature Characterization and Material Model Calibration for Hot Stamping of AA7075 Aluminium Sheet** *G. D'Amours, A. Ilinich* Aluminium Technology Centre/Ford Research and Innovation Center
#048	17:15 - 17:40	522	S. DiCecco **Limit Strain Characterization in an Aluminum Die-Quenching Process** *S. DiCecco, M Di Ciano, C . Butcher, M. Worswick* University of Waterloo
#189	17:40-18:05	523	M. Mohamed **Advances in FEM simulation of HFQ®AA6082 tailor welded blanks for automotive applications** *M. Mohamed, D. Norman, A. Petre, F. Melotti, D. Szegda* Impression Technologies

Wednesday, June 6th 2018

Kitchener 1

Session 1000 **Tribology-II** **Kitchener 1**

Chair: B. Rolfe

	Time	ID	Presenting Author, Title, Authors, Affiliation
#009	10:30 - 10:55	1006	V. Shanbhag **Understanding the source of acoustic emission signals during the wear of stamping tools** *V.V. Shanbhag, B.F. Rolfe, Arunachalam N., M.P. Pereira* Deakin University/IIT Madras
#023	10:55 - 11:20	1007	A. Maillard **Wear influence on particle emission in aluminum blanking** *A. Maillard, B. Boucaud* CETIM - Technical Center for Mechanical Industries
#041	11:20 - 11:45	1004	J. van Beeck **Advanced tribomechanical modelling of sheet metal forming for the automotive industry** *J. van Beeck, T. Chezan, T. Khandeparkar* Tata Steel
#096	11:45 - 12:10	1009	J. Kim **Scratch Modeling of Paint Coated Sheet Metal for Multi-Stage Deep Drawing Process** *J. Kim, J.W. Yoon, B. Lee, J. Kim, J. Park* Korea Advanced Institute of Science and Technology/Deakin University/LG Electronics

Session 800 **Edge Formability-IV** **Kitchener 1**

Chair: W. Volk

	Time	ID	Presenting Author, Title, Authors, Affiliation
#145	13:35 - 14:00	813	M. Jain **Study of Trimming Behavior of Automotive AZ31 and ZEK100 Sheet Materials** *P. Zhang, M.K. Jain, R.K. Mishra* McMaster University/General Motors Research and Development Center
#167	14:00 - 14:25	814	I. Paetzold **Determination of the minimum possible damage due to shear cutting using a multi-stage shear cutting process** *I. Paetzold, M. Feistle, R. Golle, W. Volk, A. Frehn, R. Ilskens* Technical University of Munich/BENTELER Automobiltechnik GmbH
#168	14:25 - 14:50	815	I. Paetzold **Maximizing the expansion ratio through multi-stage cutting processes during collar forming** *M. Feistle, I. Pätzold, R. Golle, W. Volk, A. Frehn, R. Ilskens* Technical University of Munich/BENTELER
#122	14:50 - 15:15	816	C. Gu **A Practical Methodology to Evaluate and Predict Edge Cracking for Advanced High Strength Steel** *C.J. Gu, H. Kim, J. Dykeman, H.-C. Shih* EWI Forming Center/Honda R&D Americas/US Steel
#116	15:15 - 15:40	817	Senn, S. **Numerical investigation of piercing of DP600 within a critical range of slant angle** *S. Senn, M. Liewald* University of Stuttgart

Wednesday, June 6th 2018

Kitchener 2

Session 1300 **Constitutive Modelling-II** **Kitchener 2**

Chair: T. Kuwabara

	Time	ID	Presenting Author, Title, Authors, Affiliation
#051	10:30 - 10:55	1305	D. Anderson **Micro and Macro Analysis of Anisotropy of an AA3104 Aluminum Alloy** *D. Anderson, B. Raeisinia* Novelis/OxMet Technologies
#134	10:55 - 11:20	1306	I.S. Sarraf **Prediction of DP600 and TRIP780 yield loci using Yoshida anisotropic yield function** *I.S. Sarraf, D.E. Green* University of Windsor
#147	11:20 - 11:45	1307	C. Nagano **Measurement of Differential Hardening under Biaxial Stress of Pure Titanium Sheet** *C. Nagano, T. Kuwabara, Y. Shimada, R. Kawamura* Tokyo University of Agriculture and Technology/Honda Engineering Co
#140	11:45 - 12:10	1308	Tong, W. **CANCELLED** **On the Shear Testing of Thin Flat Sheet Metals and Its Applications in Anisotropic Plasticity Constitutive Modeling** *W. Tong and M. Alharbi* Southern Methodist University

Session 1100 **AHSS-II** **Kitchener 2**

Chair: K.S. Raghavan

	Time	ID	Presenting Author, Title, Authors, Affiliation
#172	13:35 - 14:00	1105	Sriram, S. **Effect of Al addition on the formability of uncoated commercial DP1180 Steel Products** *S. Sriram, G. Huang, N. Pottore, H. Ghassemi-Armaki* ArcelorMittal Global R&D, E. Chicago Center
#191	14:00 - 14:25	1106	Butcher, C. **Evaluation and Selection of Fracture Characterization Tests for Dual Phase Steels with Coil-to-Coil Variation (Oral only)** *N. Pathak, K. Omer, C. Butcher, M. Worswick, T. Skszek* University of Waterloo/Magna International
#076	14:25 - 14:50	1107	L. Xu **Interpretation of the abnormal high-temperature flow behavior of Fe-Mn-Al duplex lightweight steel** *L. Xu, H. Wu, Y. Chen* University of Science and Technology Beijing
#165	14:50 - 15:15	1108	A. Bardelcik **Meso-Scale Finite Element Modelling of Hot Stamped Tailored Microstructures using Accurate Representations of Phase Morphology** *C.J. Vowles, A. Bardelcik* University of Guelph

Wednesday, June 6th 2018

Kitchener 3

Session 300 **Formability-V** **Kitchener 3**

Chair: J. Carsley

	Time	ID	Presenting Author, Title, Authors, Affiliation
#139	10:30 - 10:55	318	G. Fang **Determination and Application of FLD of Aluminum Alloy 5083 Sheet** *G. Fang, J.-Q. Zhao, Q. Wang* Tsinghua University
#138	10:55 - 11:20	319	K.S. Prasad **Effect of Temperature and Deformation Speed on Formability of IN718 Sheets: Experimentation and Modelling** *K.S. Prasad, S.K. Panda, S.K. Kar, S.K. Singh, S.V.S.N. Murty, S.C. Sharma* I.I.T. Kharagpur/GRIET/Indian Space Research Organisation
#089	11:20 - 11:45	320	Farahnak, P. **Effect of specimen size on material characterization and using data for simulation of cruciform specimen with thickness variation** *P. Farahnak, M. Urbanek , M. Rund , P. Konopik, J. Džugan* COMTES FHT a.s.
#090	11:45 - 12:10	321	W. Noh **Numerical and Experimental Investigation for Formability of Friction Stir Welded Dissimilar Aluminum Alloys** *W. Noh, J. Song, I. Jang, S. Gwak, C. Kim, C. Jung* Korea Institute of Industrial Technology/Daewoo Industrial R&D Center

Session 200 **Fracture-III** **Kitchener 3**

Chair: G. Huang

	Time	ID	Presenting Author, Title, Authors, Affiliation
#080	13:35 - 14:00	209	M. Gorji **Predicting Shear Fracture in Deep Drawing: Combined Yld2000-3d and Hosford-Coulomb Fracture Model** *M.B. Gorji, D. Mohr* Massachusetts Institute of Technology/Swiss Federal Institute of Technology (ETH)
#179	14:00 - 14:25	210	G. Huang **Fracture characterization of AHSS using two different experimental methods** *G. Huang, K. Tihay, S. Sriram, B. Weber, P. Dietsch, D. Cornette* ArcelorMittal Global R&D - East Chicago/ArcelorMittal Global R&D - Maizières
#013	14:25 - 14:50	211	K.S. Raghavan **Strain Rate and Orientation Effects on Fracture Strain Limits in Advanced High Strength Steel** *K.S. Raghavan, J. Hu* AK Steel Corporation
#181	14:50 - 15:15	212	P. Samadian **Failure Characterization of Multi-Alloy and Multi-Gauge Hot-Stamped Tailor-Welded Blanks** *P. Samadian, M.J. Worswick, M.A. Wells* University of Waterloo
#025	15:15 - 15:40	213	M. Madrid **The Fracture Resistance of Dual-Phase and Q&P Sheet Steels in Tension** *M. Madrid, C.J. Van Tyne, S. Sriram, E.J. Pavlina, J. Hu, K.D. Clarke* Colorado School of Mines/Virginia Tech/ArcelorMittal/AK Steel Research and Innovation Center

Wednesday, June 6th 2018

Kitchener 4

Session 400 **Processes-V** **Kitchener 4**

Chair: M. Jain

	Time	ID	Presenting Author, Title, Authors, Affiliation
#166	10:30 - 10:55	415	M. Schneider **Development of a Folding Tool for Miuri-Structures** *M. Schneider, M. Liewald* University of Stuttgart
#061	10:55 - 11:20	416	T. Benkert **A Holistic Approach to Lightweight Design of Multi-Component Gearwheels** *T. Benkert, M. Hiller, W. Volk* Technical University of Munich
#058	11:20 - 11:45	417	K. Changela **Characterization of Ultra-Fine Grained AA 6061 alloy Sheets Processed through Two Different Severe Plastic Deformation Techniques** *K. Changela, K. Hariharan, D.R Kumar* Indian Institute of Technology Delhi
#129	11:45 - 12:10	418	O. El Fakir **Multi-objective sheet metal forming simulations using a software agnostic platform** *O. El Fakir, A. Wang, Q. Zhang, X. Liu, J. Liu, L. Wang* Imperial College London

Session 1200 **Springback-II** **Kitchener 4**

Chair: P.Y. Manach

	Time	ID	Presenting Author, Title, Authors, Affiliation
#098	13:35 - 14:00	1205	A. Mousavi **Improving the springback behavior of deep drawn parts by macro-structured tools** *A. Mousavi, A. Brosius* Technische Universität Dresden
#103	14:00 - 14:25	1206	M. Gösling **Effect of coining on springback behaviour** *M. Gösling, A. Güner, I. Burchitz, B. Carleer* BILSTEIN GmbH & Co. KG/Autoform Engineering
#157	14:25 - 14:50	1207	B. Hartmann **Optimization of the process robustness of the stamping of complex body parts with regard to dimensional accuracy** *A. Birkert, B. Hartmann, M. Scholle, M. Straub* Hochschule Heilbronn, Zentrum für Umformtechnik und Karosseriebau/inigence gmbh
#070	14:50 - 15:15	1208	M. Grubenmann **Analysis of yield locus description on springback behavior of CR700Y980T-DP steel** *M. Grubenmann, K. Barth, J. Heingartner, N. Manopulo, P. Hora, A. Torkabadi, T. van den Boogaard, H. Rosen* inspire - ivp/ETH Zurich/University of Twente/thyssenkrupp Steel Europe AG
#018	15:15 - 15:40	1209	A. Duarte **FEM stress state analysis on springback reduction methods: variable blank holder force and stake bead** *V.L. Silveira, O.C. Haase, P.M.A. Stemler, R.A.M. Viana, A.S. Duarte* Sixpro Virtual & Practical Process/Universidade Federal de Minas Gerais