

Session Program

19-22 Jun 2023



42nd International Deep Drawing Research Group Conference - IDDRG 2023

***SIMULATIONS (INCL. MATERIAL MODELS,
TOPOLOGY OPTIMIZATION, TRIBOLOGY,
SPRINGBACK COMPENSATION, AND
GEOMETRY ASSURANCE)***

House of Culture, Luleå, Sweden
Skeppsbrogatan 17, 972 31 Luleå, Sweden

Monday 19 June

15:50

SIMULATIONS (INCL. MATERIAL MODELS, TOPOLOGY OPTIMIZATION, TRIBOLOGY, SPRINGBACK COMPENSATION, AND GEOMETRY ASSURANCE)

Session | **Location:** Kulturens hus Luleå, 1. Lilla Salen, Skeppsbrogatan 17, 972 31 Luleå, Schweden | **Convener:** Pasi Peura

15:50–16:10

Substitutive models of press deflections for efficient numerical die cambering

Speaker

Mr Peter Ottosson

16:10–16:30

Simulation of deep drawing of dual phase steel sheets incorporating tribological behaviour predicted by advanced friction modelling

Speaker

Archit Shrivastava

16:30–16:50

Numerical modelling of shear cutting using particle methods

Speaker

Mr Olle Sandin

16:50–17:10

Evaluation of anisotropic fracture in AA1050-O sheet using uncoupled ductile fracture models with Hill48 plasticity

Speaker

Mr Aishwary Gupta

17:10

Tuesday 20 June

11:40

SIMULATIONS (INCL. MATERIAL MODELS, TOPOLOGY OPTIMIZATION, TRIBOLOGY, SPRINGBACK COMPENSATION, AND GEOMETRY ASSURANCE)

Session | **Location:** Kulturens hus Luleå, 1. Lilla Salen | **Convener:** Johan Pilthammar

11:40-12:00

Research on the evolving yielding behavior and micro-mechanism in biaxial deformation of DP1180 sheet based on crystal plasticity finite element model

Speaker

Mr Bingying Zhou

12:00-12:20

An artificial neural network approach on crystal plasticity for material modeling in macroscopic simulations

Speaker

Mr Lukas Martinitz

12:20

14:10

SIMULATIONS (INCL. MATERIAL MODELS, TOPOLOGY OPTIMIZATION, TRIBOLOGY, SPRINGBACK COMPENSATION, AND GEOMETRY ASSURANCE)

Session | **Location:** Kulturens hus Luleå, 1. Lilla Salen | **Convener:** Nico Langerak

14:10-14:30

Measurement and prediction methods for forming limit strain of stretch bending deformation in sheet metal forming

Speaker

Yuki Taguchi

14:30-14:50

Displacement based simulation and material calibration based on digital image correlation part I - theory

Speaker

Christian Liebold

14:50-15:10

An overview of Methods for Simulating Sheet Metal Forming with Elastic Dies

Speaker

Johan Pilthammar

15:10-15:30

Three Industrial Cases of Sheet Metal Forming Simulations with Elastic Dies

Speaker

Johan Pilthammar

15:30-15:50

Displacement based simulation and material calibration based on digital image correlation part II - application

15:50

Speaker

Mr Christian Ilg

16:20

SIMULATIONS (INCL. MATERIAL MODELS, TOPOLOGY OPTIMIZATION, TRIBOLOGY, SPRINGBACK COMPENSATION, AND GEOMETRY ASSURANCE)**Session** | **Location:** Kulturens hus Luleå, 1. Lilla Salen | **Convener:** Vincent Grolleau

16:20–16:40

Development of a new cyclic shear test setup for characterizing thin metallic foils**Speaker**

Maxim Beck

16:40–17:00

Impact of elastic modulus evolution on springback prediction**Speaker**

Dr Xavier LEMOINE

17:00–17:20

Prediction of texture-induced plastic anisotropy in AA6014-T4 aluminium sheets utilising two different crystal plasticity constitutive models**Speaker**

Alexander Wessel

17:20