

Topic 2: Industry 4.0 and digitalisation in mechanical engineering

Session 2.1 Production technology, machinery, digitalisation – State of the art and perspectives

Article ID: 2.1.011

Sturm, Kerstin; Husung, Stephan; Wünsche, Christine:

Error classification as a basis for automating the conformity of production process in the automotive industry

DOI: <https://doi.org/10.22032/dbt.58850>

Article ID: 2.1.036

Reimann, Jan; Rohe, Maximilian; Rauch, Alexander; Hildebrand, Jörg; Bergmann, Jean Pierre:

Directed energy deposition-arc (DED-Arc) and numerical welding simulation as a method to determine the homogeneity

DOI: <https://doi.org/10.22032/dbt.58852>

Article ID: 2.1.045

Jevtić, Adrijana; Pezoldt, Kerstin:

Digital twins: definition, application options in the product life cycle and marketing

DOI: <https://doi.org/10.22032/dbt.58851>

Article ID: 2.1.065

Rohe, Maximilian; Hildebrand, Jörg; Bergmann, Jean Pierre:

Investigation of a quantified sound probe for stud weld quality measurement with numerical simulation data

DOI: <https://doi.org/10.22032/dbt.58853>

Article ID: 2.1.114

Sennewald, Martin; Hasieber, Michael; Szallies, Konstantin; Bergmann, Jean Pierre:

Influence of microstructure and microgeometry of the probe on friction stir welding of AA 6060 T66

DOI: <https://doi.org/10.22032/dbt.58854>

Article ID: 2.1.139

Farahani, Aida; Atoofi, Payam; Vitay, Julien; Hamker, Fred H.:

Implicit neural representations for deep drawing and joining experiments

DOI: <https://doi.org/10.22032/dbt.58849>

Session 2.2 Image processing based process and quality control

Article ID: 2.2.035

Bräuer-Burchardt, Christian; Preißler, Marc; Ramm, Roland; Breitbarth, Andreas; Dittmann, Jan Thomas; Munkelt, Christoph; Verhoek, Michael; Kühmstedt, Peter; Notni, Gunther:

Mobile 3D sensor for documenting maintenance processes of large complex structures

DOI: <https://doi.org/10.22032/dbt.58857>

Article ID: 2.2.037

Vehar, Darko; Nestler, Rico; Franke, Karl-Heinz:

Capturing 3D textured inner pipe surfaces for sewer inspection

DOI: <https://doi.org/10.22032/dbt.58860>

Article ID: 2.2.049

Anding, Katharina; Polte, Galina; Garten, Daniel; Linss, Elske; Notni, Gunther:

Intelligent classification and data augmentation for high accuracy AI applications for quality assurance of mineral aggregates

DOI: <https://doi.org/10.22032/dbt.58855>

Article ID: 2.2.075

Richter, Martin; Rosenberger, Maik; Illmann, Raik; Buchanan, David; Notni, Gunther:

Suitability study for real-time depth map generation using stereo matchers in OpenCV and Python

DOI: <https://doi.org/10.22032/dbt.58859>

Article ID: 2.2.090

Illmann, Raik; Fütterer, Richard; Lummitsch, Sascha; Rosenberger, Maik; Notni, Gunther; Findeisen, Erik:

Investigation into the implementation of a multimodal 3D measurement system for a forestry harvesting process

DOI: <https://doi.org/10.22032/dbt.58858>

Session 2.3 Plastics technology – Interfaces in materials, processing and manufacturing

Article ID: 2.3.002

Mohammadkarimi, Shiva; Neitzel, Benedikt; Puch, Florian:

Influence of the recycling process parameters on CFRTP waste properties

DOI: <https://doi.org/10.22032/dbt.58866>

Article ID: 2.3.010

Hiller, Benedikt T.; Rennert, Mirko; Nase, Michael:

Comparison of the properties of biogenic wine by-products stabilized biocomposites compounded with a miniaturized single-screw extruder and a co-rotating twin-screw extruder

DOI: <https://doi.org/10.22032/dbt.58862>

Article ID: 2.3.012

Trienens, Dorte; Schöppner, Volker:

Investigation regarding the correlation of the relative influences during the extrusion process of cast films on the resulting melt quality

DOI: <https://doi.org/10.22032/dbt.58867>

Article ID: 2.3.043

Köllermeier, Jonas; Schöppner, Volker:

Optimizing the processing performance of a single screw extruder using live simulations based on real time experimental data

DOI: <https://doi.org/10.22032/dbt.58863>

Article ID: 2.3.084

Baumann, Andreas; Hausmann, Joachim:

Effect of high energy radiation on technical polymers

DOI: <https://doi.org/10.22032/dbt.58861>

Article ID: 2.3.110

Krempf, Nina; Shahroodi, Zahra:

Revolutionizing fiber-reinforced thermoplastic composite recycling: The LightCycle project's journey towards energy-efficient upcycling and quality material regeneration

DOI: <https://doi.org/10.22032/dbt.58865>
