

Elevator Pitches and Presentations 2.1 Production technology, machinery, digitalisation –State of the art and perspectives

Time: Tuesday, 05.09.2023

Location: Humboldtbaun, Lecture Room HU-211/212

Chairman: J. P. Bergmann (D-Ilmenau)

| Elevator Pitches Session 2.1 | |
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| 1:30 p.m. | P.-Y. Chen T-H. Hsieh, T-Hsien Hsieh, W.-Y. Jywe (CN-Taiwan) |
| Application of CNC machine tool and robot arm performance data acquisition and monitoring technology | |
| 1:35 p.m. | J. Reimann, M. Rohe, A. Rauch, J. Hildebrand, J. P. Bergmann (D-Ilmenau) |
| Directed Energy Deposition-Arc (DED-Arc) and numerical welding simulation as a method to determine the homogeneity | |
| 1:40 p.m. | M. Rohe, J. Hildebrand, J.P. Bergmann (D-Ilmenau) |
| Investigation of a quantified sound probe for stud weld quality measurement with numerical simulation data and real-world welds | |
| 1:45 p.m. | B. Neitzel (D-Ilmenau), F. Puch (D-Rudolstadt) |
| Demonstrations- und Transfernetzwerk KI in der Produktion (ProKI-Ilmenau) – Schwerpunkt: Fügen | |
| Presentations Session 2.1 | |
| 1:50 p.m. | A. Farahani, P. Atoofi, J. Votay, F. Hamker (D-Chemnitz) |
| Implicit Neural Representations for Deep Drawing and Joining Experiments | |



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| 2:10 p.m. | M. Sennewald, M. Hasieber, K. Szallies, J.P. Bergmann (D-Ilmenau) |
| Influence of microstructure and microgeometry of the probe on friction stir welding of AA 6060 T66 | |
| 2:30 p.m. | K. Szallies, J. Hüser, O. Piper, J.P. Bergmann (D-Ilmenau), B. Stoll (D-Erfurt) |
| An experimental study of interface formation in single-sided resistance spot-welded copper-aluminum joints | |
| 2:50 – 3:10 p.m. Coffee break and Visits of Expositions | |
| 3:10 p.m. | C. Diegel, L. Schmidt, K. Schricker, J. Löser, J. P. Bergmann (D-Ilmenau), F. Zaiß (D-Stuttgart) |
| Full penetration laser beam welding of high-alloyed steels using a concentric intensity distribution for spatter reduction | |
| 3:30 p.m. | N. Humann, K. Schricker, J.P. Bergmann (D-Ilmenau) |
| Effect of shielding gas flow on weld seam surface in remote laser beam welding using a modular flat jet nozzle | |
| 3:50 p.m. | L. Schmidt, K. Schricker, J. P. Bergmann, S. Gourishetti, T. Krüger, A. Kátai (D-Ilmenau), S. Kodera, F. Römer, D. Böttger (D-Saarbrücken) |
| Detection of welding defects by acoustic process monitoring in laser beam welding | |
| End of Session | |

