

Topic 3: Mechatronics, biomechatronics and mechanism technology

Session 3.1 Mechatronics

Article ID: 3.1.019

Mauch, Manuel; Gundelsweiler, Bernd:

Optimization of the actuation behaviour of a hybrid electromagnetic switching/holding solenoid

DOI: <https://doi.org/10.22032/dbt.58874>

Article ID: 3.1.028

Hutter, Marco; Holder, Daniel; Maier, Thomas; Gundelsweiler, Bernd:

Multistable setups combining magnetic shape memory alloys with reluctance counterforces

DOI: <https://doi.org/10.22032/dbt.58873>

Article ID: 3.1.030

Mettenleiter, Luca:

Multivariable stability analysis of position-controlled payloads to support shrink in semiconductor manufacturing

DOI: <https://doi.org/10.22032/dbt.58875>

Article ID: 3.1.046

Carrillo Li, Enrique Roberto:

Hybrid fuzzy neural network – genetic algorithm applied to the control of magnetorheological and smart material vehicle semiactive suspensions

DOI: <https://doi.org/10.22032/dbt.58872>

Article ID: 3.1.085

Büchner, Florian; Jestädt, Lukas; Ivanov, Valentin; Bachmann, Thomas:

Self-adapting motion cueing algorithm based on a kinematics reference model

DOI: <https://doi.org/10.22032/dbt.58871>

Article ID: 3.1.092

Büchner, Florian; Rieger, David Benjamin; Purschke, Björn; Ivanov, Valentin; Bachmann, Thomas:

Extending teleoperated driving using a shared X-in-the-loop environment

DOI: <https://doi.org/10.22032/dbt.58870>

Session 3.2 Biomechatronics

Article ID: 3.2.033

Jünemann, Philipp; Mechtenberg, Malte; Schneider, Axel; Waßmuth, Joachim:

Comparative study of a bioinspired sound source localization algorithm and a standard beamformer

DOI: <https://doi.org/10.22032/dbt.59141>

- Article ID:** 3.2.050
Steinz, Josefine; Lutherdt, Stefan; Witte, Hartmut:
Concept for the measurement of vital parameters during the use of an infrared cabin to investigate physiological effects and to individualize the sauna session
DOI: <https://doi.org/10.22032/dbt.58880>
- Article ID:** 3.2.058
Schaeffer, Leon; Herrmann, David; Böhm, Valter:
Theoretical considerations on a 2D compliant tensegrity joint in context of a biomedical application
DOI: <https://doi.org/10.22032/dbt.58879>
- Article ID:** 3.2.062
Figueiredo Soares, Victor; Stoeterau, Rodrigo Lima:
Flow and hemocompatibility study of straight-bladed impeller VADs
DOI: <https://doi.org/10.22032/dbt.58881>
- Article ID:** 3.2.088
Jäger, Max; Helbig, Thomas; Witte, Hartmut:
Control for non-linear compliant actuation of an upper arm exoskeleton
DOI: <https://doi.org/10.22032/dbt.58877>
- Article ID:** 3.2.102
Rincón Ruiz, Carlos Gianpaul; Alencastre, Jorge:
Analytical modelling of a dynamic vibration absorber for Parkinson disease
DOI: <https://doi.org/10.22032/dbt.58878>
- Article ID:** 3.2.144
Uhrhan, Katja; Jäger, Max; Witte, Hartmut:
Threshold based reduction of EMS stimulation artifacts in the electromyogram when stimulation intensity increases
DOI: <https://doi.org/10.22032/dbt.59139>

Session 3.3: Mechanism technology

- Article ID:** 3.3.004
Hermoza-Llanos, Estefania; Rodríguez Hernández, Jorge A.; Zentner, Lena:
Development of a novel synthesis method of a rigid-body four-bar linkage into a compliant mechanism
DOI: <https://doi.org/10.22032/dbt.58886>
- Article ID:** 3.3.014
Rödiger, Silas; Könke, Carsten; Beinersdorf, Heiko; Kugler, Marion:
Weight reduction in lightweight structures of dynamically loaded systems by new energy dissipative elements in bolted joints
DOI: <https://doi.org/10.22032/dbt.58887>
- Article ID:** 3.3.042
Stojiljković, Dušan; Pavlović, Nenad T.:
Design of the compound compliant Scott-Russel mechanism with non-conventional optimization of flexure hinges
DOI: <https://doi.org/10.22032/dbt.58889>
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Article ID: 3.3.060

Herrmann, David; Schaeffer, Leon; Zentner, Lena; Böhm, Valter:
Theoretical considerations on 3D tensegrity joints for the use in manipulation systems

DOI: <https://doi.org/10.22032/dbt.58888>

Article ID: 3.3.103

Becker, Sid; Gutschmidt, Stefanie; Rangelow, Ivo W.:
Underlying physics of thermal actuation in composite MEMS

DOI: <https://doi.org/10.22032/dbt.58885>
