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## Publikationen

### **Textile Sensor Surrogate Modelling using Sparse Identification**

Steiger, M. K., Petz, P. M. C. F. & Schuler, S. M., 21 Dez. 2023, (Angenommen/Im Druck).

### **Comparative Analysis of SRAM PUF Temperature Susceptibility on Embedded Systems**

Zeinzinger, M., Langer, J., Eibensteiner, F., Petz, P. M. C. F., Drack, L., Dorfmeister, D. & Ramler, R., 11 Sep. 2023, (Angenommen/Im Druck).

### **Drift Compensation of Wearable Textile Sensors in Mobile Applications**

Petz, P. M. C. F., Zeinzinger, M., Eibensteiner, F., Langer, J. & Aigner, R., 5 Sep. 2023, (Angenommen/Im Druck). 6 S.

### **Embedded Retraining for Conductive Textile Sensor Calibration and Compensation**

Petz, P. M. C. F., Eibensteiner, F., Zeinzinger, M. & Langer, J., 9 Mai 2023, (Angenommen/Im Druck). 6 S.

### **Investigation of the Functional Ageing of Conductive Coated Fabrics under Simulated Washing Conditions**

Biermaier, C., Petz, P. M. C. F., Bechtold, T. & Pham, T., Feb. 2023, in: *Advanced Polymer-Coated Materials: Fabrication, Characterization and Applications*. 16, 3, 16 S., 912.

### **A Textile Based Capacitive Pressure and Shear Force Sensor**

Schuler, S. M., Petz, P. M. C. F., Eibensteiner, F. & Langer, J., 2023, *FLEPS 2023 - IEEE International Conference on Flexible and Printable Sensors and Systems, Proceedings*. Institute of Electrical and Electronics Engineers Inc., 4 S. (FLEPS 2023 - IEEE International Conference on Flexible and Printable Sensors and Systems, Proceedings).

### **Explainable Damage Models for Functional Ageing Effects in Abraded Copper Coated Textiles**

Petz, P., Biermaier, C., Scharinger, J. & Langer, J., 2023, *I2MTC 2023 - 2023 IEEE International Instrumentation and Measurement Technology Conference: Rising Above Covid-19, Proceedings*. Institute of Electrical and Electronics Engineers Inc., 6 S. (Conference Record - IEEE Instrumentation and Measurement Technology Conference; Band 2023-May).

### **A Deep Learning based Approach for Hand Gesture Recognition on a Low-power Microcontroller using IMU Sensors**

Meißl, F. D., Eibensteiner, F., Langer, J. & Petz, P. M. C. F., 2 Sep. 2022, (Angenommen/Im Druck).

### **Online Handwriting Recognition using LSTM on Microcontroller and IMU Sensors**

Lauß, D., Eibensteiner, F., Langer, J. & Petz, P. M. C. F., 2 Sep. 2022, (Angenommen/Im Druck).

### **Feasibility Analysis of a Textile Metal Detector Utilizing a Conductive Yarn**

Schuler, S. M., Petz, P. M. C. F. & Eibensteiner, F., 2022, *FLEPS 2022 - IEEE International Conference on Flexible and Printable Sensors and Systems, Proceedings*. Institute of Electrical and Electronics Engineers Inc., (FLEPS 2022 - IEEE International Conference on Flexible and Printable Sensors and Systems, Proceedings).

### **Influences of Coating and Spandex Compositions of Conductive Textiles Used as Strain Sensors Using an Automated Test System**

Wohlrab, S., Petz, P. M. C. F., Eibensteiner, F. & Langer, J., 2022, *Intelligent Computing - Proceedings of the 2022 Computing Conference*. Arai, K. (Hrsg.). Springer, S. 306-321 16 S. (Lecture Notes in Networks and Systems; Band 507 LNNS).

### **Nondestructive Testing and Evaluation of Smart Textile Sensors using Embedded Systems**

Petz, P. M. C. F., Eibensteiner, F. & Langer, J., 2022, *8th IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2022*. Institute of Electrical and Electronics Engineers Inc., S. 329-334 6 S. (8th IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2022).

### **Reliability of Conductive Textile Sensors Exposed to Ageing and Prolonged Use**

Petz, P. M. C. F., Eibensteiner, F. & Langer, J., 2022, *FLEPS 2022 - IEEE International Conference on Flexible and Printable Sensors and Systems, Proceedings*. Institute of Electrical and Electronics Engineers Inc., (FLEPS 2022 - IEEE International Conference on Flexible and Printable Sensors and Systems, Proceedings).

### **Textile in the Loop as Automated Verification Tool for Smart Textiles Application**

Petz, P. M. C. F., Langer, J. & Eibensteiner, F., 21 Dez. 2021, (Angenommen/Im Druck).

### **Textile in the Loop as Automated Verification Tool for Smart Textiles Applications**

Petz, P. M. C. F., Langer, J. & Eibensteiner, F., 21 Dez. 2021, (Angenommen/Im Druck) *Textile in the Loop as Automated Verification Tool for Smart Textiles Applications*.

### **Sensor Shirt as Universal Platform for Real-Time Monitoring of Posture and Movements for Occupational Health and Ergonomics**

Petz, P., Eibensteiner, F. & Langer, J., 2021, in: *Procedia Computer Science*. 180, S. 200-207 8 S.

### **Textiler Träger: Textiler Träger**

Eibensteiner, F., Langer, J. & Petz, P. M. C. F., 3 Feb. 2020, IPC Nr. A 50084/2020, 3 Feb. 2020

### **Performance Evaluation of Conductive Textiles for Movement Pattern Recognition in Smart Socks**

Petz, P., Eibensteiner, F. & Langer, J., Juni 2019, *Proceedings of the International Conference on Information and Digital Technologies 2019, IDT 2019*. Institute of Electrical and Electronics Engineers Inc., S. 370-375 6 S. 8813323. (Proceedings of the International Conference on Information and Digital Technologies 2019, IDT 2019).

### **Performance Evaluation of Conductive Textiles for Movement Patternrecognition in Smart Socks**

Petz, P., Eibensteiner, F. & Langer, J., 2019, *Proceedings of Information and Digital Technologies*. S. 370-375