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## Publications

### **Adaptive Velocity Estimation for Lagrangian Systems using Modulating Functions**

Noack, M., Reger, J. & Jouffroy, J., 2023, *2023 IEEE International Conference on Mechatronics (ICM)*. IEEE, 8 p.

### **Investigation of marine vessels equipped with an airkeel subject to wave-induced disturbances**

Chaudhuri, S., Ramezani, H. & Jouffroy, J., 2023, *2023 IEEE Conference on Control Technology and Applications (CCTA)*. IEEE, p. 484-489 (IEEE Conference on Control Technology and Applications).

### **On Roll Stabilisation Using a Canting Keel**

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### **An Open-Source Benchmark Simulator: Control of a BlueROV2 Underwater Robot**

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### **Modelling and control of a canting keel-based ship roll stabilization system for crane operations**

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### **Towards Printing Mechatronics: 3D-printed conductive interfacing for digital signals**

Popa, A-A., Duggen, L. & Jouffroy, J., Jul 2020, *Proceedings of the 2020 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*. p. 430-435 9159016

### **3D Printed Hybrid Flexible Electronics with Direct Light Synthesis**

Popa, A-A., Zellers, B., Iversen, S., Kennedy, D., Cortes, P., Duggen, L., Jouffroy, J., Rogers, K., Conner, B. & MacDonald, E., 2020, *Advances in Additive Manufacturing, Modeling Systems and 3D Prototyping - Proceedings of the AHFE 2019 International Conference on Additive Manufacturing, Modeling Systems and 3D Prototyping: Proceedings of the AHFE 2019 International Conference on Human Factors and Systems Interaction*. Di Nicolantonio, M., Rossi, E. & Alexander, T. (eds.). Springer, p. 83-92 (Advances in Intelligent Systems and Computing, Vol. 975).

### **An Accurate Programmable Pulse Generator for Stepper Actuated Real-Time Control Systems**

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### **On-line parameter estimation of reduced-order models for buildings energy dynamics using the modulating function method**

Ionesi, A. & Jouffroy, J., 31. Jan 2019, *Proceedings of the 2018 Winter Simulation Conference: Simulation for a Noble Cause*. Rabe, M., Juan, A. A., Mustafee, N., Skoogh, A., Jain, S. & Johansson, B. (eds.). IEEE, p. 503-514 (Winter Simulation Conference. Proceedings).

### **On-line parameter and state estimation of an air handling unit model: Experimental results using the modulating function method**

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**Towards Printing mechatronics: An optimized battery-powered 3D-printed coupling design**

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**Step-height detection for the Umbrella Wheel stair-climber using model prediction**

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**Infinite-Dimensional Boundary Observer for Lithium-Ion Battery State Estimation**

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**Finite-time simultaneous parameter and state estimation using modulating functions**

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**Internally actuated autonomous sailing buoy**

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**Development of flexible tactile sensors for hexapod robots**

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**A convergence result for the unscented Kalman-Bucy filter using contraction theory: 2013 European Control Conference, ECC 2013**

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**Towards Selective Tidal-Stream Transport for Lagrangian profilers**

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**A tutorial on incremental stability analysis using contraction theory**

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**Algebraische Ableitungsschätzung im Kontext der Rekonstruierbarkeit**

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**Formation control of marine craft using constraint functions**

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**Some ancestors of contraction analysis**

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### **Real-time geo-referenced video mosaicking with the MATISSE system**

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### **Emphasizing interdisciplinarity of control in laboratory courses: illustration with the inverted pendulum**

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### **Integrator backstepping using contraction theory: a brief technological note**

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### **On the use of contraction theory for the design of nonlinear observers for ocean vehicles**

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### **Control design on the basis of approximate nonlinear models: the inverted pendulum example**

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## **Activities**

### **Technical Committee (TC) on Marine Systems of the International Federation of Automatic Control (IFAC) (External organisation)**

Jerome Jouffroy (Member)

18. Sept 2009 → ...