

List of articles

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Most relevant 10 articles

1. C.-M. Ionescu, I. Muntean, J. Tenreiro-Machado, R. De Keyser, and M. Abrudean, "A theoretical study on modeling the respiratory tract with ladder networks by means of intrinsic fractal geometry," IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol. 57, no. 2, pp. 246–253, 2010.
2. I. Muntean, M. Unguresan and M. Abrudean, "A N-15 isotopic exchange column simulator using partial derivative equations," 2010 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR), 2010, pp. 1-4, doi: 10.1109/AQTR.2010.5520889
3. Savu, A., Muntean, I., Lazea, G., & Agachi, P. Ș. (2011). A study for the implementation of an economic optimization of coking plants. Chemical Engineering Transactions, 24, 409-414. <https://doi.org/10.3303/CET1124069>
4. I. Muntean, M. L. Unguresan, A. Savu and M. Abrudean, "Modeling and composition estimation of an isotopic distillation column," Proceedings of 2012 IEEE International Conference on Automation, Quality and Testing, Robotics, 2012, pp. 109-113, doi: 10.1109/AQTR.2012.6237684.
5. I. Muntean, S. Stan, M. Abrudean and K. Chao, "Remote Management: An Architecture for Mechatronic Systems," 2013 IEEE 10th International Conference on e-Business Engineering, 2013, pp. 498-503, doi: 10.1109/ICEBE.2013.78.
6. T. Liu, I. Muntean and Y. Wang, "Two-Dimensional Iterative Learning Control for Batch Processes with State Delay and Time-Varying Uncertainties", IFAC Proceedings Volumes, vol. 44, 2011
7. K.-M. Chao, A.E. James, A.G. Nanos, J.-H. Chen, S.-D. Stan, I. Muntean, G. Figliolini, P. Rea, C.B. Bouzgarrou, J. Cooper, J.v. Capelle, "Cloud E-learning for Mechatronics: CLEM", Future Generation Computer Systems, 2015, 48, pp. 46-59
8. I. Muntean, R. Both, R. Crisan and I. Nascu, "RGA analysis and decentralized control for a wastewater treatment plant," 2015 IEEE International Conference on Industrial Technology (ICIT), 2015, pp. 453-458, doi: 10.1109/ICIT.2015.7125140.
9. I. Muntean, "On the plantwide control of the Acetone-Chloroform-Benzene-Toluene separation process – a two layer control architecture," 2020 24th International Conference on System Theory, Control and Computing (ICSTCC), 2020, pp. 781-787, doi: 10.1109/ICSTCC50638.2020.9259681
10. N. Kilyen, R. Lemnariu, G.D. Mois, Y. Chen, B. Morris, I. Muntean, "IEEE ITSS & Bosch Future Mobility Challenge – a hands-on start to autonomous driving", IEEE Intelligent Transportation Systems Magazine, 2021 doi:10.1109/MITS.2021.3081939 (accepted)

PhD Thesis

- Modelling, simulation and control of distillation processes, Technical University of Cluj-Napoca, 2011

Books and book chapters

1. E. Culea, R. Muntean, M. Culea, I. Muntean, Fizică, UT Press, 2011
2. I. Muntean, Teoria sistemelor și automatizări : îndrumător de laborator, UT Press, 2013
3. L. Tamás, I. Muntean, E. Páll, Hydraulic and pneumatic control equipment, UT Press, 2015

Journal articles

11. C.-M. Ionescu, I. Muntean, J. Tenreiro-Machado, R. De Keyser, and M. Abrudean, "A theoretical study on modeling the respiratory tract with ladder networks by means of intrinsic fractal geometry," IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol. 57, no. 2, pp. 246–253, 2010.
12. K.-M. Chao, A.E. James, A.G. Nanos, J.-H. Chen, S.-D. Stan, I. Muntean, G. Figliolini, P. Rea, C.B. Bouzgarrou, J. Cooper, J.v. Capelle, "Cloud E-learning for Mechatronics: CLEM", Future Generation Computer Systems, 2015, 48, pp. 46-59
13. N. Kilyen, R. Lemnariu, G.D. Mois, Y. Chen, B. Morris, I. Muntean, "IEEE ITSS & Bosch Future Mobility Challenge – a hands-on start to autonomous driving", IEEE Intelligent Transportation Systems Magazine, 2021 doi:10.1109/MITS.2021.3081939 (accepted)

Conferences (ISI)

1. I. Muntean, C. Ionescu and I. Nascu, "Models for the Respiratory System Using Morphology-Based Electrical Analogy," 2008 First International Conference on Complexity and Intelligence of the Artificial and Natural Complex Systems. Medical Applications of the Complex Systems. Biomedical Computing, 2008, pp. 243-249, doi: 10.1109/CANS.2008.36.
2. I. Muntean, C.-M. Ionescu, and I. NASCU, "Inverse modeling of the respiratory tree using continued fractions expansions," in ADVANCED BIO-INSPIRED COMPUTATIONAL METHODS, Bucharest, Romania, 2008, pp. 232–239.
3. I. Muntean, C.-M. Ionescu, and I. Nascu, "A simulator for the respiratory tree in healthy subjects derived from continued fractions expansions," in AIP CONFERENCE PROCEEDINGS, Bucharest, Romania, 2008, vol. 1117, pp. 225–231.
4. I. Muntean, C.-M. Ionescu, and I. Nascu, "Morphology-based ladder network modeling of the respiratory mechanics," in COMPLEXITY IN ARTIFICIAL AND NATURAL SYSTEMS, PROCEEDINGS, Mures, Romania, 2008, pp. 219–225.
5. I. Muntean, M. Unguresan and M. Abrudean, "A N-15 isotopic exchange column simulator using partial derivative equations," 2010 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR), 2010, pp. 1-4, doi: 10.1109/AQTR.2010.5520889
6. Savu, A., Muntean, I., Lazea, G., & Agachi, P. Ş. (2011). A study for the implementation of an economic optimization of coking plants. Chemical Engineering Transactions, 24, 409-414. <https://doi.org/10.3303/CET1124069>
7. I. Muntean, M. L. Unguresan, A. Savu and M. Abrudean, "Modeling and composition estimation of an isotopic distillation column," Proceedings of 2012 IEEE International Conference on Automation, Quality and Testing, Robotics, 2012, pp. 109-113, doi: 10.1109/AQTR.2012.6237684.

8. I. Muntean, S. Stan, M. Abrudean and K. Chao, "Remote Management: An Architecture for Mechatronic Systems," 2013 IEEE 10th International Conference on e-Business Engineering, 2013, pp. 498-503, doi: 10.1109/ICEBE.2013.78.
9. A.A. Racz, I. Muntean, S.-D. Stan, "A Look into Electric/Hybrid Cars from an Ecological Perspective", Procedia Technology, 2015, 19, pp. 438-443
10. A.A. Busu, I. Muntean, S.-D. Stan, "An analysis of the current challenges of WEEE remanufacturing", Procedia Technology, 2015, 19, pp. 444-450
11. I. Muntean and I. Clitan, "Digitization of continuous interval transfer functions: A revisited method and its application on a case study," 2014 IEEE International Conference on Automation, Quality and Testing, Robotics, 2014, pp. 1-4, doi: 10.1109/AQTR.2014.6857829.
12. C. Iulia and I. Muntean, "Internal model control for a hydraulically driven robotic arm," 2014 IEEE International Conference on Automation, Quality and Testing, Robotics, 2014, pp. 1-5, doi: 10.1109/AQTR.2014.6857827.
13. I. Muntean, R. Both, R. Crisan and I. Nascu, "RGA analysis and decentralized control for a wastewater treatment plant," 2015 IEEE International Conference on Industrial Technology (ICIT), 2015, pp. 453-458, doi: 10.1109/ICIT.2015.7125140.

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1. C. Ionescu, I. Muntean, and R. De Keyser, "The Respiratory Impedance in an Asymmetric Model of the Lung Structure", BRAIN, vol. 1, pp. pp. 101-108, Jan. 2011.
2. A. Savu, I. Muntean, G. Lazea, and P.S. Agachi, "A study for the implementation of an economic optimization of coking plants." Chemical Engineering Transactions, vol. 24, pp. 409-414, 2011 <https://doi.org/10.3303/CET1124069>
3. C.-M. Ionescu, I. Muntean, and R. De Keyser, "The influence of asymmetric space filling in the human lung," ACTA UNIVERSITATIS APULENSIS. MATHEMATICS-INFORMATICS, pp. 28–36, 2011.
4. T. Liu, I. Muntean and Y. Wang, "Two-Dimensional Iterative Learning Control for Batch Processes with State Delay and Time-Varying Uncertainties", IFAC Proceedings Volumes, vol. 44, 2011
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6. I. Muntean, "Proof of concept system for supporting energy efficiency in office buildings", 9th International Conference on Modern Power Systems, Cluj-Napoca, 2021 (presented)"
7. I. Clitan, I. Muntean, "Direct-Current Motor Speed Control Using a PID Discrete Controller", 9th International Conference on Modern Power Systems, Cluj-Napoca, 2021 (presented)
8. R. Both, I. Muntean, "Advanced Control Design for Anti-Lock Braking Systems", 9th International Conference on Modern Power Systems, Cluj-Napoca, 2021 (presented)

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