

## Control Engineering, Faculty of Technology, University of Oulu

Here are our publications starting from year 2000: refereed journal articles, edited books, book chapters & selected conferences. In addition there are 121 laboratory reports, 26 doctoral dissertations, numerous other reports, abstracts and conference appearances not listed here.

Updated 20 February 2019.

### Contents

1. Refereed Journal Articles.....	2
2. Edited Books.....	9
3. Book chapters .....	10
4. Selected Conferences.....	13

## I. Refereed Journal Articles

[x] before a publication denotes 'Julkaisufoorumi'-rating in publication year (<https://www.tsv.fi/julkaisufoorumi/haku.php?lang=en>).

### 2019

- [1] **Hietaharju, P., Ruusunen, M. & Leiviskä, K.** (2019) Enabling demand side management: heat demand forecasting at city level. *Materials*, 12(2), 202. doi: 10.3390/ma12020202
- [1] **Ohenoja, M., Ruusunen, M. & Leiviskä, K.** (2019) Hierarchical control of an integrated fuel processing and fuel cell system. *Materials*, 12(1), 21. doi: 10.3390/ma12010021
- [1] **Nikula, R., Karioja, K., Leiviskä, K. & Juuso, E.** (2017) Prediction of mechanical stress in roller leveler based on vibration measurements and steel strip properties. *Journal of Intelligent Manufacturing*, (in press), doi: 10.1007/s10845-017-1341-3

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- [0] **Ohenoja, M., Sorsa, A. & Leiviskä, K.** (2018) Model structure identification for fuel cell polarization curves. *Computers*, 7(4), 60. doi: 10.3390/computers7040060
- [1] **Mäyrä, O., Ruusunen, M., Jalli, M., Jauhiainen, L., & Leiviskä, K.** (2018) Plant disease outbreak – prediction by advanced data analysis. *SNE – Simulation Notes Europe*, 28(3), p. 113-115. doi: 10.11128/sne.28.sn.10431
- [1] **Tomperi, J.** (2018) Utilizing optical monitoring to predict the effluent quality in the activated sludge processes. *SNE – Simulation Notes Europe*, 28(3), p. 89-92. doi: 10.11128/sne.28.sn.10423
- [1] **Koistinen, A.** (2018) Monitoring and control in mining. *SNE – Simulation Notes Europe*, 28(3), p. 81-84. doi: 10.11128/sne.28.sn.10421
- [1] **Ohenoja, M., Boodhoo, K., Reay, D., Paavola, M. & Leiviskä, K.** (2018) Process control in intensified continuous solids handling. *Chemical Engineering & Processing: Process Intensification*, 131, 59-69. doi: 10.1016/j.cep.2018.07.008
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- [1] Santa-aho, S., **Sorsa, A.**, Warttinen, J., Lundin, P., Suominen, L., Jokiaho, T., Honkanen, M., **Leiviskä, K.**, & Vippola, M. (2018) Surface layer characterization of shot peened gear specimens. *Materials Performance and Characterization*, Vol. 7(4). doi: 10.1520/MPC20170169
- [1] Lindblad, J., Routa, J., Ruotsalainen, J., Kolström, M., **Isokangas, A.** & Sikanen, L. (2018) Weather based moisture content modelling of harvesting residues in the stand. *Silva Fennica*, Vol. 52(2), 16 p. doi: 10.14214/sf.7830
- [1] **Juuso, E.** (2018) An advanced teaching scheme for integrating problem-based learning in control education. *Open Engineering*, 8(1), pp. 41-49. doi:10.1515/eng-2018-0006
- [1] **Sorsa, A.**, Santa-aho, S., Warttinen, J., Suominen, L., Vippola, M. & **Leiviskä, K.** (2018) Effect of shot peening parameters to residual stress profiles and Barkhausen noise. *Journal of Nondestructive Evaluation*, Vol. 37(10), 11 p. doi: 10.1007/s10921-018-0463-7
- [1] **Tomperi, J. & Leiviskä, K.** (2018) Comparison of modelling accuracy with and without exploiting automated optical monitoring information in predicting the treated wastewater quality.

Environmental Technology (United Kingdom), Vol.39(11), pp. 1442-1449. doi: 10.1080/09593330.2017.1331267

- [1] **Tomperi, J., Juuso, E., Kuokkanen, A. & Leiviskä, K.** (2018) Monitoring a municipal wastewater treatment process using a trend analysis. Environmental Technology (United Kingdom), Vol. 39(24), 3193-3202. doi: 10.1080/09593330.2017.1375026

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- [0] **Juuso, E.** (2017) Intelligent performance analysis with a natural language interface. Management Systems in Production Engineering, 25(3), p. 168-175. doi: 10.1515/mspe-2017-0025.
- [1] **Tomperi, J., Piippo, S., Aikio, O., Luoma, T., Leiviskä, K. & Pongrácz, E.** (2017) Sustainable waste management in Northern rural areas: Local utilisation of bio-wastes. International Journal of Energy and Environment (IJEE), 8(5), p. 365-374.
- [0] **Juuso, E.** (2017) Intelligent control of a solar thermal power plant: adaption in varying conditions. Journal of Automation and Control Engineering, 5(1), p. 26-30. doi: 10.18178/joace.5.1.26-30.

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- [1] **Laukka, A., Saari, J., Ruuska, J., Juuso, E. & Lahdelma, S.** (2016) Condition-based monitoring for underground mobile machines. International Journal of Industrial and Systems Engineering, 23(1), p. 74-89. doi: 10.1504/IJISE.2016.075808
- [2] Louis, J., Calo, A., **Leiviskä, K.,** Pongrácz, E. (2016) Modelling home electricity management for sustainability: The impact of response levels, technological deployment & occupancy. Energy and Buildings, 119, p. 218-232. doi: 10.1016/j.enbuild.2016.03.012
- [2] Ollakka, H., **Ruuska, J.** & Taskila, S. (2016) The application of principal component analysis for bioheapleaching process - Case study: Talvivaara mine. Minerals Engineering, 95, p. 48-58. doi: 10.1016/j.mineng.2016.06.009
- [1] **Tomperi, J., Juuso, E. & Leiviskä, K.** (2016) Early warning of changing drinking water quality by trend analysis. Journal of Water and Health, 14(3), p. 433-442. doi: 10.2166/wh.2016.330

- [2] **Seppälä, P., Sorsa, A., Paavola, M., Ruuska J.,** Remes A., Kumar H., Lamberg P., & **Leiviskä K.** (2016) Development and calibration of a dynamic flotation circuit model. *Minerals Engineering*, 96–97, p. 168-176. doi: 10.1016/j.mineng.2016.07.004.
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- [-] **Tomperi, J.**, Luoma, T., Pongrácz, E., **Leiviskä, K.** (2014) Energy potential of biodegradable wastes in Kolari. *Pollack Periodica*, 9(SUPPL. 1), p. 5-15.
- [1] **Tomperi, J., Juuso, E.**, Eteläniemi, M., **Leiviskä, K.** (2014) Drinking water quality monitoring using trend analysis. *Journal of Water and Health*, 12(2), p. 230-241.
- [2] Santa-aho, S., **Sorsa, A.**, Hakanen, M., **Leiviskä, K.**, Vippola, M., Lepistö, T. (2014) Barkhausen noise-magnetizing voltage sweep measurement in evaluation of residual stress in hardened components. *Measurement Science and Technology*, 25(8).
- [1] Rantamäki J., **Isokangas A.**, Ala-Kaila K., Honkanen T. (2014). Estimation methods of log loading performance in industrial debarking for the kraft pulping process. *Nordic Pulp & Paper Research Journal*, 29(4), p. 592-598.

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**Juuso, E. K.** (2004) Integration of intelligent systems in development of smart adaptive systems. *International Journal of Approximate Reasoning* 35:307–337. doi: 10.1016/j.ijar.2003.08.008.

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## 2. Edited Books

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### 2009

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**Leiviskä, K.**, ed. (2009) Process and Maintenance Management. Book 14 in Series "Papermaking Science and Technology". Paper Engineers' Association/Paperi ja Puu. ISBN 978-952-5216-34-9. Jyväskylä 2009. 379 p.

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**Jaako, J.**, ed. (2008) Research Assessment Exercise 2007, Research Evaluation of the University of Oulu, Panel Reports. Oulun yliopistopaino: Oulu. ISBN 978-951-42-8752-7, ISBN 978-951-42-8753-4 PDF.

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**Leiviskä, K.**, ed. (2006) ALSIS'06 - 1st IFAC Workshop on Applications of Large Scale Industrial Systems. August 30-31, 2006, Helsinki/Stockholm. Workshop CD. ISBN 952-5183-28-9.

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### 2005

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Gabrys, B., **Leiviskä, K.** & Strackeljan, J., eds. (2005) Do Smart Adaptive Systems Exist? Studies in Fuzziness and Soft Computing 173, Springer-Verlag Berlin Heidelberg 2005. 370 s.

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**Leiviskä, K.**, ed. (2004) Advanced fuzzy/neural control - AFNC'04. A Proceedings volume from the 2nd IFAC Workshop, University of Oulu, Finland, 16-17 September 2004. Helsinki, IFAC 2004. 211 s.

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### 3. Book chapters

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- [3] **Ohenoja, M., Paavola, & Leiviskä, K.** (2018) Control design tools for intensified solids handling process concepts. **In:** *Advances in Systematic Creativity: Creating and Managing Innovations*, eds. Chechurin, L., & Collan, M. Palgrave Macmillan, p. 167-180. doi: 10.1007/978-3-319-78075-7\_11

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