

List of Publications

Henrik Saxén
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Journal Publications

1. Westerlund T. and H. Saxén, "On the Uniqueness in Equilibrium Calculations", *Chemical Engineering Science* **42** (1987) 188-190.
2. Westerlund, T. and H. Saxén, Authors reply to comments by R.A. Heidemann, *Chemical Engineering Science* **42** (1987) 2797-2799.
3. Saxén, H., "Blast Furnace On-Line Simulation Model", *Metallurgical Transactions B* **21B** (1990) 913-923.
4. Gustafsson, S., G. Henriksson and H. Saxén, "Parametric Optimization of a Paper Machine Heat Recovery System", *Industrial & Engineering Chemistry Research* **29** (1990) 2252-2257.
5. Bulsari, A.B. and H. Saxén, "A feed-forward artificial neural network for system identification a chemical process", *Journal of Systems Engineering* **1** (1991) 13-21.
6. Bulsari, A.B. and H. Saxén, "System identification of a biochemical process using feed-forward neural networks", *Neurocomputing* **3** (1991) 125-133.
7. Bulsari, A.B. and H. Saxén, "System identification using the symmetric logarithmoid as an activation function in a feed-forward neural network", *Neural network world* **1** (1991) 221-224.
8. Bulsari, A.B., A. Medvedev and H. Saxén, "Sensor fault detection using state vector estimator and feed-forward neural networks applied to a simulated biochemical process", *Acta Polytechnica Scandinavica, Chemical Technology and Metallurgy Series* **199** (1991) 1-20.
9. Bulsari, A. and H. Saxén, "Feed-forward neural networks with a continuum of nodes", *Journal of Systems Engineering* **2** (1992) 27-33.
10. Bulsari, A.B. and H. Saxén, "Implementation of a Chemical Reactor Selection Expert System in an Artificial Neural Network", *Engineering Applications of Artificial Intelligence* **5** (1992) 113-119.
11. Bulsari, A.B., A. Kraslawski and H. Saxén, "Continuous steel casting diagnostic fuzzy expert system in an artificial neural network", *Scandinavian Journal of Metallurgy* **21** (1992) 146-150.
12. Bulsari, A.B., H. Saxén and A. Kraslawski, "Fuzzy Simulation by an Artificial Neural Network", *Engineering Applications of Artificial Intelligence* **5** (1992) 401-406.
13. Bulsari, A.B. and H. Saxén, "Filtering, Smoothing and Prediction for a Biochemical Process Using Feed-Forward Neural Networks", *Neural network world* **5** (1992) 511-524.
14. Bulsari, A.B. and H. Saxén, "Continuous Steel Casting Heuristics in a Feed-Forward Neural Network", *Journal of Systems Engineering* **2** (1992) 290-295.
15. Bulsari, A.B., A. Medvedev and H. Saxén, "A Sensor Fault Detection and Isolation Method", *Mathematical Modelling and Scientific Computing* **1** (1993) 318-328.

16. Bulsari, A.B. and H. Saxén, "Continuous Steel Casting Diagnostics in a Neural Network", *Modelling, Measurement & Control C* **35** (1993) 1-16, AMSE Press.
17. Bulsari, A.B. and H. Saxén, "A Neural Network Controller for a Biochemical Process", *Modelling, Measurement & Control C* **35** (1993) 17-28, AMSE Press.
18. Saxén, H. and M. Sillanpää, "A Model for Decision Support in Continuous Steel Casting", *Modelling and Simulation in Materials Science and Engineering* **2** (1994) 79-98.
19. Kuntze, T.M. and H. Saxén, "Simulation of Deep-Bed Kilning of Malt", *Industrial & Engineering Chemistry Research* **33** (1994) 321-328.
20. Saxén, H., "Short-term prediction of silicon content in pig iron", *Canadian Metallurgical Quarterly* **33** (1994) 319- 326.
21. Bulsari, A.B. and H. Saxén, "Using feed-forward neural networks for estimation of microbial concentration in a imulated biochemical process", *Biosensors and Bioelectronics* **9** (1994) 105-109.
22. Bulsari, A.B. and H. Saxén, "Filtering, smoothing and prediction for a biochemical process using neural networks", *Expert Systems: The International Journal of Knowledge Engineering and Neural Networks* **11** (1994) 159-166.
23. Bulsari, A.B. and H. Saxén, "A Recurrent Network for Modeling Noisy Temporal Sequences", *Neurocomputing* **7** (1995) 29-40.
24. Bulsari, A.B. and H. Saxén, "Classification of Blast Furnace Probe Temperatures Using Neural Networks", *Steel Research* **66** (1995) 231-236.
25. Karilainen, L., H. Saxén and K. Raipala, "Interactive control of blast furnaces", *Steel Technology International* (1995/1996) 54-60.
26. Saxén, H., "Interpretation of probe temperatures in the blast furnace using polynomial approximations", *Steel Research* **67** (1996) 73-78.
27. Saxén, B. and H. Saxén, "A Neural-Network Based Model of Bioreaction Kinetics", *Canadian Journal of Chemical Engineering* **73** (1996) 124-131.
28. Nikus, M. and H. Saxén, "On-line Model of Gas Distribution in the Blast Furnace", *Steel Research* **67** (1996) 121-126.
29. Saxén, H. and R. Östermark, "State realization with exogenous variables - A test on blast furnace data", *European Journal of Operational Research* **89** (1996) 34-52.
30. Östermark, R. and H. Saxén, "VARMAX-modelling of blast furnace process variables", *European Journal of Operational Research* **90** (1996) 85-101.
31. Saxén, H., "Nonlinear Time Series Analysis by Neural Networks: A Case Study", *International Journal of Neural Systems* **7** (1996) 195-201.
32. Nikus, M. and H. Saxén, "Prediction of a blast furnace burden distribution variable", *ISIJ International* **36** (1996) 1142-1150.
33. Saxén, H., "On the approximation of a quadratic map by a small neural network", *Neurocomputing* **12** (1996) 313-326.
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35. Saxén, H., "Simplified simulation of the transient behavior of temperatures in the upper shaft of the blast furnace", *Metallurgical and Materials Transactions B* **29B** (1998) 691-697.
36. Saxén, H., M. Nikus and J. Hinnelä, "Burden Distribution Estimation in the Blast Furnace from Stockrod and Probe Signals", *Steel Research* **68** (1998) 406-412.
37. Fredman, T.P. and H. Saxén, "On A Recurrent Neural Network Producing Oscillations", *International Journal of Neural Systems* **8** (1998) 499-508.
38. Fredman, T.P., J.R.E. Torrkulla and H. Saxén, "Two Dimensional Dynamic Simulation of the Thermal State of Ladles", *Metallurgical and Materials Transactions B* **30B** (1999) 323-330.
39. Östermark, R., R. Höglund and H. Saxén, "Estimating system response to a regime shift: some evidence on international asset pricing", *Kybernetes* **28** (1999) 732-752.
40. Waller, M. and H. Saxén, "Estimating the degree of time-variance in a parametric model", *Automatica* **36** (2000) 619-625.
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42. Waller, M. and H. Saxén, "On the development of predictive models with applications to a metallurgical process", *Industrial & Engineering Chemistry Research* **39** (2000) 982-988.
43. Torrkulla, J. and H. Saxén, "Model of the state of the blast furnace hearth", *ISIJ International* **40** (2000) 438-447.
44. Hinnelä, J. and H. Saxén, "Neural network model of burden layer formation dynamics in the blast furnace", *ISIJ International* **41** (2001) 142-150.
45. Brännbacka, J. and H. Saxén, "Modeling the liquid levels in the blast furnace hearth", *ISIJ International* **41** (2001) 1131-1138.
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51. Hinnelä, J., H. Saxén and F. Pettersson, "Modeling of the blast furnace burden distribution by evolving neural networks", *Industrial & Engineering Chemistry Research* **42** (2003) 2314-2323.
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61. Laitinen, P. and H. Saxén, “Data-Driven Modeling of Quality and Performance Indices in Sintermaking”, *Steel Research International* **77** (2006) 152-157.
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75. Brännbacka, J. and H. Saxén, "Model for Fast Computation of Blast Furnace Hearth Erosion and Buildup Profiles", *Industrial & Engineering Chemistry Research* **47** (2008) 7793-7801.
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77. Helle, M., H. Saxén and O. Kerkkonen, "Assessment of the State of the Blast Furnace High Temperature Region by Tuyere Core Drilling", *ISIJ International* **49** (2009) 203-209.
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Conference publications

More than 250 conference papers.