

References

- Aracil J and Gordillo F 2004 Describing function method for stability analysis of PD and PI fuzzy controllers. *Fuzzy Sets and Systems* **143**, 233–249.
- Assilian S and Mamdani E 1974a Learning control algorithms in real dynamic systems. *Proc. Fourth Int. Conf. On Digital Computer Applications to Process Control, Zürich*, pp. 13–20 IFAC/IFIP. Springer.
- Assilian S and Mamdani EH 1974b An experiment in linguistic synthesis with a fuzzy logic controller. *Int. J. Man Machine Studies* **7**(1), 1–13.
- Åström KJ and Hägglund T 2006 *Advanced PID Control*. Instrumentation, Systems, and Automation Society (ISA), ISA, 67 Alexander Drive, PO Box 12277, Research Triangle Park, North Carolina 27709, USA.
- Åström KJ and Wittenmark B 1984 *Computer controlled systems – theory and design*. Prentice-Hall.
- Åström KJ and Wittenmark B 1995 *Adaptive Control* 2nd edn. Addison-Wesley.
- Atherton D 2011 *An Introduction to Nonlinearity in Control Systems*. Ventus Publishing ApS, Available from: bookboon.com [cited 17 Feb 2013].
- Atherton DP 1975 *Nonlinear Control Engineering* unabridged edn. Van Nostrand Reinhold Company.
- Atherton DP 1982 *Nonlinear Control Engineering* student edn. Van Nostrand Reinhold Company.
- Babuška R 1998 *Fuzzy Modeling For Control*. Kluwer Academic Publishers.
- Babuška R 1999 An overview of fuzzy modelling and model-based fuzzy control In *Fuzzy Logic Control: Advances in Applications* (ed. Verbruggen HB and Babuška R) Robotics and Intelligent Systems – Vol 23 World Scientific pp. 3–35. ISBN 981-02-3825-8.
- Bennett S 1993 Development of the PID controller. *IEEE Control Systems* **13**(5), 58–65.
- Bequette B 2003 *Process Control: Modeling, Design, and Simulation* PTR. Prentice Hall.
- Bezdek J and Pal SK 1992 *Fuzzy models for pattern recognition*. IEEE Press, New York. (Selected reprints).
- Bhatti A, Spurgeon, SK DR, and Edwards C 1999 Sliding mode configurations for automotive engine control. *International Journal of Adaptive Control and Signal Processing* **13**, 49–69.
- Braae M and Rutherford D 1979a Selection of parameters for a fuzzy logic controller. *Fuzzy Sets and Systems* **2**, 185–199.
- Braae M and Rutherford D 1979b Theoretical and linguistic aspects of the fuzzy logic controller. *Automatica* **15**, 553–577.
- Cohen G and Coon G 1953 Theoretical consideration of retarded control. *Trans. of American society of Mechanical Engineers, ASME* **75**, 827–834.
- Cominos P and Munro N 2002 PID controllers: recent tuning methods and design to specification. *IEE Proceedings – Control Theory And Applications* **149**(1), 46–53.
- Cuesta F, Gordillo F, Aracil J, and Ollero A 1999 Stability analysis of nonlinear multivariable Takagi-Sugeno fuzzy control systems. *IEEE Transactions on Fuzzy Systems* **7**(5), 508–520.
- DiStefano J, Stubberud A, and Williams I 1995 *Schaum's Outline of Theory and Problems of Feedback and Control Systems* Schaum's Outline Series 2nd edn. McGraw-Hill.
- Driankov D, Hellendoorn H, and Reinfrank M 1996 *An introduction to fuzzy control* 2nd edn. Springer-Verlag.
- Duda RO, Hart PE, and Stork DG 2001 *Pattern Classification* 2. edn. Wiley-Interscience.

- Edwards C and Spurgeon SK 1998 *Sliding Mode Control: Theory and Applications* Systems and Control Book Series. Taylor & Francis.
- Farinwata SS, Filev D, and Langari R (eds.) 2000 *Fuzzy Control: Synthesis And Analysis*. Wiley.
- Franklin GF, Powell JD, and Emami-Naeini A 1991 *Feedback Control of Dynamic Systems* Electrical and Computer Engineering: Control Engineering 2nd edn. Addison-Wesley.
- Franksen OI 1979 Group representation of finite polyvalent logic In *Proceedings 7th IFAC Triennial World Congress, Helsinki* (ed. Niemi A) International Federation of Automatic Control, IFAC. Pergamon Press.
- Fukami S, Mizumoto M, and Tanaka K 1980 Some considerations of fuzzy conditional inference. *Fuzzy Sets and Systems* **4**, 243–273.
- Gelb A and Vander Velde WE 1968 *Multiple-Input Describing Functions and Nonlinear System Design*. McGraw-Hill, Also available from: <http://ocw.mit.edu> [cited 17 Feb 2013].
- Gordillo F, Aracil J, and Álamo T 1997 Determining limit cycles in fuzzy control systems *Proceedings of 6th International Fuzzy Systems Conference*, vol. 1, pp. 193–198. IEEE.
- Gupta MM and Sinha NK (eds.) 1996 *Intelligent Control Systems: Theory and practice*. IEEE Press.
- Guzman J, Åström K, Dormido S, Hägglund T, Berenguel M, and Piguet Y 2008 Interactive learning modules for PID control. *IEEE Control Systems* **28**(5), 118–134.
- Gyöngy IJ and Clarke DW 2006 On the automatic tuning and adaptation of PID controllers. *Control Engineering Practice* **14**, 149–163.
- Hájek P 1998 *Metamathematics of Fuzzy Logic* Trends in Logic. Kluwer.
- Hametner C and Jakubek S 2013 Local model network identification for online engine modelling. *Information Sciences* **220**, 210–225.
- Haykin S 2009 *Neural Networks and Learning Machines* 3rd edn. Pearson Education.
- Hendricks E and Sorenson S 1990 Mean value modelling of spark ignition engines. *SAE technical paper 900616*.
- Holmblad LP and Østergaard JJ 1982 Control of a cement kiln by fuzzy logic In *Fuzzy Information and Decision Processes* (ed. Gupta and Sanchez) North-Holland Amsterdam pp. 389–399. (Reprint in: FLS Review No 67, FLS Automation A/S, Høffdingsvej 77, DK-2500 Valby, Copenhagen, Denmark).
- Holmblad LP and Østergaard JJ 1995 The FLS application of fuzzy logic. *Fuzzy Sets and Systems* **70**, 135–146.
- IEC 2000 Programmable controllers – part 7: Fuzzy control programming. Technical Report IEC 61131, International Electrotechnical Commission (IEC). Draft available from <http://www.fuzzytech.com/binaries/ieccd1.pdf> [cited on 17 Feb 2013].
- Isaksson A and Hägglund T (eds.) 2002 *Special section on PID Control* vol. 149.
- Jakubek S, Hametner C, and Keuth N 2008 Total least squares in fuzzy system identification: An application to an industrial engine. *Engineering Applications of Artificial Intelligence* **21**, 1277–1288.
- Jang JSR and Sun CT 1995 Neuro-fuzzy modeling and control In *Proceedings of the IEEE* (ed. 3), **83**, 378–406.
- Jang JSR, Sun CT, and Mizutani E 1997 *Neuro-Fuzzy and Soft Computing* MATLAB Curriculum Series. Prentice Hall.
- Jantzen J 1995 Array approach to fuzzy logic. *Fuzzy Sets and Systems* **70**, 359–370.
- Jantzen J 2003 Internet learning in control: A fuzzy control course In *Prepr. ACE 2003, The 6th IFAC Symposium on Advances in Control Education* (ed. Lindfors J), pp. 27–33. IFAC.
- Jantzen J, Verbruggen H, and Østergaard JJ 1999 Fuzzy control in the process industry: Common practice and challenging perspectives In *Practical Applications of Fuzzy Technologies* (ed. Zimmermann HJ) Dubois and Prade (Eds), The Handbooks of Fuzzy Sets Series Kluwer chapter 1, pp. 3–56.
- Jespersen T 1981 Self-organizing fuzzy logic control of a pH-neutralisation process. Technical Report 8102, Electric Power Eng. Dept., Technical University of Denmark.
- Jørgensen V 1974 A ball-balancing system for demonstration of basic concepts in the state-space control theory. *Int. J. Elect. Enging Educ.* **11**, 367–376.
- Kickert W and Mamdani E 1978 Analysis of a fuzzy logic controller. *Fuzzy Sets and Systems* **1**, 29–44.
- Kickert WJM and Van Nauta Lemke HR 1976 Application of a fuzzy controller in a warm water plant. *Automatica* **12**(4), 301–308.
- Kiszka JB, Kochanska ME, and Sliwinska DS 1985 The influence of some fuzzy implication operators on the accuracy of a fuzzy model. *Fuzzy Sets and Systems* **15**, (Part1) 111–128; (Part 2) 223–240.
- Kosko B 1992 *Neural Networks and Fuzzy Systems. A Dynamical Systems Approach to Machine Intelligence*. Prentice-Hall.
- Larsen PM 1981 Industrial applications of fuzzy logic control In *Fuzzy Reasoning and its Applications* (ed. Mamdani EH and Gaines BR) Academic Press London pp. 335–342.

- Lee CC 1990 Fuzzy logic in control systems: Fuzzy logic controller. *IEEE Trans. Systems, Man & Cybernetics* **20**(2), 404–435.
- Lewis R 1990 *Practical Digital Image Processing* Ellis Horwood Series in Digital and Signal Processing. Ellis Horwood Ltd, New York, etc.
- Li HX and Gatland HB 1995 A new methodology for designing a fuzzy logic controller. *IEEE Trans. Systems, Man & Cybernetics* **25**(3), 505–512.
- Lin CT and Lee CSG 1996 *Neural Fuzzy Systems: A Neuro-Fuzzy Synergism to Intelligent Systems*. Prentice Hall PTR.
- Luenberger DG 1969 *Optimization by Vector Space Methods* Series in Decision and Control. Wiley.
- Maclay D and Dorey R 1995 A controller and design implementation environment for the idle speed control of an internal combustion engine. *IEE Colloquium Digest* **14**, 1–3.
- Mamdani E and Baaklini N 1975 Prescriptive method for deriving control policy in a fuzzy-logic controller. *Electronics Letters* **11**(25/26), 625–626.
- Mamdani EH 1977 Application of fuzzy logic to approximate reasoning using linguistic synthesis. *IEEE Transactions on Computers* **C-26**(12), 1182–1191.
- MathWorks 2012 *Fuzzy Logic Toolbox for Use with Matlab: User's Guide*. online edn The MathWorks Inc. Available from www.mathworks.se [cited 22 Jul 2012].
- Michels K, Klawonn F, Kruse R, and Nürnberger A 2006 *Fuzzy Control: Fundamentals, Stability and Design of Fuzzy Controllers*. Springer.
- Mizumoto M 1992 Realization of PID controls by fuzzy control methods *First Int. Conf. on Fuzzy Systems*, pp. 709–715 The Institute of Electrical and Electronics Engineers, Inc, San Diego.
- Mizumoto M 1995 Realization of PID controls by fuzzy control methods. *Fuzzy Sets and Systems* **70**, 171–182.
- Mizumoto M, Fukami S, and Tanaka K 1979 Some methods of fuzzy reasoning In *Advances in Fuzzy Set Theory Applications* (ed. Gupta, Ragade, and Yager) North-Holland, New York.
- Møller G 1986 A logic programming tool for qualitative system design. *APL Quote Quad (APL86 conference proceedings)* **16**(4), 266–271.
- Møller GL 1998 *On the Technology of Array-Based Logic* PhD thesis Technical University of Denmark, Electric Power Engineering Dept., DK-2800 Lyngby, Denmark (2nd ed.).
- Murakami S, Takemoto F, Fulimura H, and Ide E 1989 Weld-line tracking control of arc welding robot using fuzzy logic controller. *Fuzzy Sets and Systems* **32**(2), 221–237.
- Nauck D, Klawonn F, and Kruse R 1997 *Foundations of Neuro-Fuzzy Systems*. John Wiley and Sons.
- Nelles O 2001 *Nonlinear System Identification*. Springer-Verlag.
- Nguyen HT and Walker EA 2000 *A first course in fuzzy logic* 2nd edn. Chapman & Hall, New York.
- Nise N 1995 *Control Systems Engineering* 2nd edn. Benjamin/Cummings.
- Østergaard JJ 1977 Fuzzy logic control of a heat exchanger system In *Fuzzy Automata and Decision Processes* (ed. Gupta MM, Saridis GN, and Gaines BR) North-Holland Amsterdam pp. 285–320.
- Østergaard JJ 1990 Fuzzy II: The new generation of high level kiln control. *Zement Kalk Gips (Cement-Lime-Gypsum)* **43**(11), 539–541.
- Østergaard JJ 1996 High level control of industrial processes In *Proc. TOOLMET '96* (ed. Yliniemi L and Juuso E), pp. 1–12. University of Oulu, Control Engineering Laboratory, Linnanmaa, FIN-90570 Oulu, Finland.
- Palm R, Driankov D, and Hellendoorn H 1997 *Model Based Fuzzy Control*. Springer.
- Passino KM and Yurkovich S 1998 *Fuzzy Control*. Addison Wesley Longman, Inc.
- Pedrycz W 1993 *Fuzzy control and fuzzy systems* 2nd edn. Wiley and Sons.
- Precup RE and Hellendoorn H 2011 A survey on industrial applications of fuzzy control. *Computers in Industry* **62**, 213–226.
- Procyk TJ and Mamdani EH 1979 A linguistic self-organizing process controller. *Automatica* **15**, 15–30.
- Qiao W and Mizumoto M 1996 PID type fuzzy controller and parameters adaptive method. *Fuzzy Sets and Systems* **78**, 23–35.
- Ross T 2010 *Fuzzy Logic with Engineering Applications* 3rd edn. Wiley.
- Rugh W and Shamma J 2000 Research on gain scheduling. *Automatica* **36**, 1401–1425.
- Rundqwist L 1991 Anti-reset windup for PID controllers In *Proc. 11th triennial world congress of the International Federation of Automatic Control, IFAC* (ed. Jaakso and Utkin), pp. 453–458. Pergamon Press.
- Sala A, Guerra TM, and Babuška R 2005 Perspectives of fuzzy systems and control. *Fuzzy Sets and Systems* **156**, 432–444.
- Self K 1990 Designing with fuzzy logic. *IEEE Spectrum* **27**(11), 42–44 + 105.

- Siler W and Ying H 1989 Fuzzy control theory: The linear case. *Fuzzy Sets and Systems* **33**, 275–290.
- Šiljak D 1968 *Nonlinear Systems: The Parameter Analysis and Design*. John Wiley & Sons.
- Slotine JJE and Li W 1991 *Applied Nonlinear Control*. Prentice Hall.
- Smith LC 1979 Fundamentals of control theory. *Chemical Engineering* **86**(22), 11–39. (Deskbook issue).
- Stoll RR 1979 *Set Theory and Logic* dover edn. Dover Publications, New York. (orig 1963).
- Sugeno M (ed.) 1985 *Industrial applications of fuzzy control*. North-Holland.
- Sugeno M, Murofushi T, Mori T, Tatematsu T, and Tanaka J 1989 Fuzzy algorithmic control of a model car by oral instructions. *Fuzzy Sets and Systems* **32**(2), 207–219.
- Takagi T and Sugeno M 1985 Fuzzy identification of systems and its applications to modeling and control. *IEEE Trans. Systems, Man & Cybernetics* **15**(1), 116–132.
- Tanaka K, Sano M, and Suzuki K 1991 A new tuning method of fuzzy controllers *Proc. IFSA91*, pp. 207–210. IFSA.
- Tso SK and Fung YH 1997 Methodological development of fuzzy-logic controllers from multivariable linear control. *IEEE Trans. Systems, Man & Cybernetics* **27**(3), 566–572.
- von Altrock C 1995 *Fuzzy Logic and Neurofuzzy Applications Explained*. Prentice Hall.
- von Altrock C 1996 *Fuzzy Logic and Neurofuzzy Applications In Business And Finance*. Prentice Hall PTR.
- Wang LX 1997 *A Course in Fuzzy Systems and Control* international edn. Prentice Hall PTR.
- Wenstøp F 1980 Quantitative analysis with linguistic values. *Fuzzy Sets and Systems* **4**(2), 99–115.
- Yamakawa T and Miki T 1986 The current mode fuzzy logic integrated circuits fabricated by the standard CMOS process. *IEEE Trans. Computers* **35**(2), 161–167.
- Yamazaki T 1982 *An improved algorithm for a self-organising controller and its experimental analysis* PhD thesis Queen Mary College, London Dept. of Electrical and Electronic Engineering.
- Yamazaki T and Mamdani EH 1982 On the performance of a rule-based self-organizing controller *Proc. IEEE Conf on Applications of Adaptive and Multivariable Control*, Hull.
- Yasunobu S, Miyamoto S, and Ihara H 1983 Fuzzy control for automatic train operation system *Proc. Int. Congress on Control in Transportation Systems IFAC/IFIP/IFORS*, Baden-Baden.
- Yazdi H 1997 *Control and Supervision of Event-Driven Systems* PhD thesis Technical University of Denmark Dept.
- Ye Z 2007 Modeling, identification, design, and implementation of nonlinear automotive idle speed control systems: An overview. *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*.
- Zadeh L 1994 Soft computing and fuzzy logic. *IEEE Software* **11**(6), 48–56.
- Zadeh LA 1965 Fuzzy sets. *Inf. and Control* **8**, 338–353.
- Zadeh LA 1973 Outline of a new approach to the analysis of complex systems and decision processes. *IEEE Trans. Systems, Man & Cybernetics* **1**, 28–44.
- Zadeh LA 1975 The concept of a linguistic variable and its application to approximate reasoning. *Information Sciences* **8**, 43–80.
- Zadeh LA 1984 Making computers think like people. *IEEE Spectrum* **21**, 26–32.
- Zadeh LA 1988 Fuzzy logic. *IEEE Computer* **21**(4), 83–93.
- Ziegler J and Nichols N 1942 Optimum settings for automatic controllers. *Transactions of the American Society of Mechanical Engineers (ASME)* **64**, 759–768.
- Ziegler J and Nichols N 1943 Process lags in automatic-control circuits. *Transactions of the American Society of Mechanical Engineers (ASME)* **65**, 433–444.
- Zimmermann HJ 1993 *Fuzzy set theory – and its applications* 2nd edn. Kluwer, Boston.
- Zimmermann HJ (ed.) 1999 *Practical Applications of Fuzzy Technologies* The Handbooks of Fuzzy Sets. Kluwer.