

## LITERATURA

D.Y. Abramovitch, L.G. Bushnell, "Report on the Fuzzy versus Conventional Control Debate", *IEEE Control Systems*, 19(3), str. 88-91, 1999.

J. Armin, B. Friedland, A. Harnoy, "Implementation of a Friction Estimation and Compensation Technique", *IEEE Control Systems*, str. 71-75, Avgust 1997.

B. Armstrong-Helouvry, "Stick Slip and Control in Low-Speed Motion", *IEEE Trans. On Automatic Control*, Vol.38. No.10, str. 1483-1496, Oktober 1993.

B. Armstrong-Helouvry, *Control of machines with friction*, Kluwer academic publisher, Boston, 1991.

K. J. Åström, B. Wittenmark, *Adaptive Control*, Addison Wesley Publishing Company, Canada, 1989.

M. Athans, Debate with prof. L.A. Zadeh, *EUFIT'99*, Aachen, Nemčija, september 1999, tudi na <http://fuzzy.iau.dtu.dk/debate.nsf/>.

R. Babuška, "Data-Driven Fuzzy Modeling: Transparency and Complexity Issues", *Proceedings of ESIT '99 - European Symposium on Intelligent Techniques*, Crete, Grčija, junij 1999.

R. Babuška, "Construction of Fuzzy Systems – Interplay between Precision and Transparency", *Proceedings of ESIT 2000 - European Symposium on Intelligent Techniques*, Aachen, Nemčija, september 2000.

T. Bajd, A. Kraj, *Robotika*, Univerza v Ljubljani, Univerza za Elektrotehniko, Ljubljana 1997

A. Bartoszewicz, "On the robustness of variable structure systems in the presence of measurement noise", *Proc. IEEE IECON'99*, Aachen, Nemčija, str. 1733-1736, 1999

R. Berstecher and R. Palm, "Entwurf Eines Adaptiven Robusten Fuzzy Sliding-Mode Reglers, Teil 1", *Automatisierungstechnik*, Oldenbourg Verlag, str. 549-555, November 1999.

R. Berstecher and R. Palm, "Entwurf Eines Adaptiven Robusten Fuzzy Sliding-Mode Reglers, Teil 2", *Automatisierungstechnik*, Oldenbourg Verlag, str. 600-605, December 1999.

R. Berstecher and R. Palm, "Entwurf Eines Adaptiven Robusten Fuzzy Sliding-Mode Reglers, Teil 3", *Automatisierungstechnik*, Oldenbourg Verlag, str. 35-41, Januar 2000.

R. Berstecher, R. Palm H. Unbehauen, "An Adaptive Fuzzy Sliding-Mode Controller", *IEEE Trans. On Industrial Electronics*, Vol. 48, No.1, Februar 2001.

M. Bikdash, "A Highly Interpretable Form of Sugeno Inference System", *IEEE Trans. on Fuzzy Syst.*, vol.7, no. 6, str. 686-695, December 1999.

J. Buron and A. Zinober, "Continuous Approximation of Variable Structure Control", *Int. J. Control*, vol.17, No.6, str. 875-885, 1986.

J. Buron, A. S. I. Zinober, "Continuous approximation of variable structure control", *Int. J. Syst. Sci.*, Vol. 17, No. 6, str. 875-885, 1986

S. P. Chan, "An approach to perturbation compensation for variable structure systems", *Automata*, vol32, no.3 str. 469-473, 1996.

S. P. Chan, "Robust Motion Control using Variable Structure system with perturbation Compensation", Proc. of IECON, San Jose Kalifornija, december 1999.

C.H. Chen (editor), *Fuzzy Logic and Neural Network Handbook*, McGraw-Hill, New York, 1996

C. S. Chen, W. L. Chen, "Robust Adaptive Sliding-Mode Control Using Fuzzy Modeling for an Inverted-Pendulum System", *IEEE Trans. On Industrial Electronics*, Vol. 45, No.2, str. 297-306, April 1998.

S. Commuri and F. L. Lewis, "Adaptive-Fuzzy Logic Control of Robotic Manipulators", *Proc. Of 96 IEEE Int. Conf. On Robotics and Automation*, Minneapolis, Minnesota, April 1996.

O. Cordon, F. Herrera, A. Peregrin, "Applicability of the Fuzzy Operators in the Design of Fuzzy Logic Controllers", *Fuzzy Sets and Systems* 86, str. 15-41, 1997

B. Curk. *Teorija sistemov s spremenljivo strukturo v sintezi vodenja robotskih pogonov*, doktorska disertacija. Maribor, 1995

B. Curk, K. Jezernik, "Perturbation estimation in sliding mode motion control", *Proc. of European control conference ECC'99*, Karlsruhe, Nemčija, 1999

B. Curk, A. Rojko, K. Jezernik, "Disturbance estimation based sliding mode control of DD robot", *Proc. of 8th International workshop on Robotics in Alpe-Adria-Danube region, 1999*, str. 83-88, 1999

B. Curk, K. Jezernik, "Improved preturbation estimation in sliding mode motion control of DD robot", *Proceedings of the IEEE International Symposium on Industrial Electronics - ISIE '99, Bled - Slovenija*, vol.1, str. 331-335, 1999

R. A. DeCarlo, S. H. Zak, G. P. Matthews, "Variable Structure Control of Nonlinear Multivariable Systems", *Proc. of IEEE* 76, str. 212-232, 1988.

R. C. Dorf, *International encyclopedia of robotics*. Volume 2, A Wiley Interscience Publication, USA 1988.

B. Draženović, "The invariance condition in variable structure systems", *Automatica*, Vol.5, str. 287-295, 1969.

C. Edwards and S. Spurgeon, *Sliding Mode Control*, Taylor and Francis, Padstow, UK, 1998.

M. O. Efe, O. Kaynak, "A Comparative Study of Soft Computing Methodologies in Identification of Robotic Manipulators", *Robotics and Autonomous Systems*, Vol. 30, No.3, str. 221-230, 2000.

M. Efe and O. Kaynak, "On Stabilization of Gradient-Based Training Strategies for Computationally Intelligent System", *IEEE Trans. Fuzzy Syst.*, Vol. 8, No. 5, str. 564-575, Oktober 2000.

H. Elmali, N. Olgac, "Sliding mode control with perturbation estimation: A new approach", *Int J. Control*, vol 56, str. 923-941, 1992

H. Elmali, N. Olgac, "Implementation of Sliding Mode Control with Perturbance Estimation", *IEEE Trans. On Control Systems Technology*, Vol. 4, No. 1, str. 79-85, Januar 1996

M. R. Emami, I. B. Türksen, A. A. Goldenberg, "Development of A Systematic Methodology of Fuzzy Logic Modeling", *IEEE Trans. on Fuzzy Syst.*, vol.6, no. 3, str. 346-361, August 1998.

S. V. Emelynov, "Control of first order delay systems by means of an anstatic controller and nonlinear correction", *Autom. Remote Control*, No.8, str 983-991, 1959.

Joseph F. Engelberger. *Robotics in practice*, Kogan Page Ltd, UK 1982.

A. F. Filippov, "Differential equations with discontinuous right-hand sides", *American Mathematical Society Translations* 42, str 199-231, 1964

K. Fischle, D. Schröder, "An Improved Stable Adaptive Fuzzy Control Method", *IEEE Trans. on Fuzzy Syst.*, vol.7, str. 27-40, Februar 1999.

M. M. Gupta, J. Qi, "Design of Fuzzy Logic Controllers Based on Generalized T-operatos", *Fuzzy sets and systems*, Vol. 40, str. 473-489, 1991

Q. P. Ha, Q. H. Nguyen, D.C. Rye, H. F. Durrant-White, "Fuzzy Sliding Mode Controller with Applications", *IEEE Trans. On Industrial Electronics*, Vol. 48, No.1, Februar 2001.

A. Hace, K. Jezernik, M. Terbuc, "VSS motion control for a laser-cutting machine", *Control Engineering Practice*, vol. 9, no. 1, str. 67-77, 2001

A. Hace, *Robustno vodenje elastičnih servopogonov: doktorska disertacija*, Maribor, 2001

H. Hellendoorn, D. Driankov (editorji), *Fuzzy Model Identification*, Springer-Verlag, Berlin, 1997

R. Horowitz. "Learning Control of Robot Manipulators". *ASME Journal of Dynamic Systems, Measurement, and Control* 115, str. 403-411., 1993, dostopno tudi na <http://citeseer.nj.nec.com/horowitz93learning.html>

Y. Hwang, M. Tomizuka, "Fuzzy Smoothing Algorithm for Variable Structure Systems", *IEEE Trans. Fuzzy Syst.*, Vol. 2, No. 4, str. 277-284, 1994.

C. Hwang, C. Kuo, "A Stable Fuzzy Sliding-Mode Control for Affine Nonlinear System with Application to Four-Bar Linkage System", *IEEE Trans. on Fuzzy Systems*, Vol.9, No.2, str. 238-252, april 2001

C. Hwang, S. Lin, "A stability approach to fuzzy control design for nonlinear systems", *Fuzzy Sets Syst.* Vol. 48, no.3, str 279-287, 1992.

J. Y. Hung, W. Gao, J. C. Hung, "Variable Structure Control: A Survey", *IEEE Trans. on Industrial Electronics*, vol. 40, str. 2-21, Februar 1993.

J. R. Jang, "ANFIS: Adaptive-Network-Based Fuzzy Inference System", *IEEE Transactions on Systems, Man, and Cybernetics*, 1993

Y. C. Jin. "Decentralized adaptive fuzzy control of robot manipulators". *IEEE Trans. on Systems, Man, and Cybernetics*, 28(1), str. 47-57, 1998

K. Jezernik, B. Curk, J. Harnik, "Observer Based Sliding Mode Control of Robotic Manipulator", *Robotica*, vol.12, str. 443-448, 1994.

K. Jezernik, B. Curk, J. Harnik, A. Šabanović, "VSS control of robotic manipulators by joint acceleration controller". *Pure math. appl., Ser. A*, 4, št. 1, str. 35-42, 1993

- O. Kaynak, M. Ertugrul, "The Fusion of Computationally Intelligent Methodologies and Sliding Mode Control – A Survey", *IEEE Trans. On Industrial Electronics*, Vol. 48, No.1, str. 4-17, Februar 2001.
- G. J. Klir, B. Yuan, *Fuzzy Sets and Fuzzy Logic: Theory and Application*, Prentice Hall, 1995.
- T. J. Koo, "Stable Model Reference Adaptive Fuzzy Control of a Class of Nonlinear Systems", *IEEE Trans. on Fuzzy Systems*, Vol.9, No.4, str. 624-636, avgust 2001
- R. Kruse, J. Gebhardt, F. Klawonn, *Fundations of Fuzzy Systems*, John Wiley and sons, Stuttgart, 1994.
- P. Kulczycki, "Fuzzy Controller for Mechanical Systems", *IEEE Trans. Fuzzy Syst.*, Vol. 8, No. 5, str. 645-652, oktober 2000.
- H. K. Lam, F. H. F. Leung, P. K. S.Tam, "Nonlinear State Feedback Controller for Nonlinear Systems: Stability Analysis and Design Based on Fuzzy Plant Model", *IEEE Trans. on Fuzzy Systems*, Vol.9, No.4, str. 657-661, avgust 2001
- M. Landajo, M. J. Río, R. Pérez, "A Note on Smooth Approximation Capabilities of Fuzzy Systems", *IEEE Trans. Fuzzy Syst.*, Vo. 9, No. 2, str. 229-237, april 2001
- M. Laviolette, J. W. Seaman, "The Efficacy of Fuzzy Representations of Uncertainty", *IEEE Trans. on Fuzzy Systems*, Vol.2, No.1, str. 4-15, februar 1994
- F.-J. Lin, R.-J. Wai, "Sliding-Mode-Controlled Slider-Crank Mechanism with Fuzzy Neural Network", *IEEE Trans. On Industrial Electronics*, Vol. 48, No.1, str. 60-69, Februar 2001.
- L. Ljung, *System identification*, Prentice-Hall, New Jersey, 1987
- A. Loria, E. E. J. Lefeber, H. Nijmeijer, "Global asymptotic stability of robot manipulators with linear PID and PD control", *Stability and Control: Theory and Applications*, vol. 3, no. 2, str. 138-149, 2000.
- M. Männle, "Identifying Rule-Based TSK Fuzzy Models", in *Proceedings of EUFIT*, Aachen, Germany, September 1999.
- E. H. Mamdani, "Twenty years of fuzzy control: Experiences Gained and Lessons Learnt", *Proc. IEEE Int. Conf. on Fuzzy Systems (FUZZ-IEEE)*, str. 339-344, 1993.
- E. H. Mamdani, "Applications of fuzzy algorithms for simple dynamic plant ", *IEEE Proc.*, 121, No 12., str. 185-189, 1974.
- M. Margaliot, G. Langholz, "Fuzzy Ljapunov based approach to the design of fuzzy controllers", *Fuzzy Sets and Systems* 106, str. 49-59, 1999.
- S. Mitaim, B. Kosko, "The Shape of Fuzzy Sets in Adaptive Function Approximation", *IEEE Trans. on Fuzzy Systems*, Vol.9, No.4, str. 637-656, avgust 2001
- M. Morari, E. Zafiriou, *Robust process control*, Prentice Hall 1989.
- J. T. Moura, H. Emali, N. Olgac, "Sliding Mode Control With Sliding Perturbation Observer", *Journal of Dynamic Systems, Measurement and Control*, Vol.119, str. 657-665, 1997
- Narendra, K.S., Parthasarathy, K., "Identification and Control of Dynamical Systems Using Neural Networks", *IEEE Transactions on Neural Networks*, 1, str. 4—27, 1990.

- K. S. Narendra, A.M. Annaswamy, *Stable Adaptive Systems*. Englewood Cliffs, NJ: Prentice-Hall, 1998.
- H. S. Ramirez , “Sliding regimes in general non-linear systems: a relative degree approach“, *Int. J. Control*, Vol. 50, No. 4, str. 1487-1506, 1989
- P. G. Ranky, C.Y. Ho, *Robot modelling: control and applications with software*, Springer-Verlag, 1985.
- A. Rojko. *Vodenje robota po metodi izračunanega navora*, diplomsko delo, Maribor 1997.
- A. Rojko, K. Jezernik, “Disturbance Rejection by PI Estimator in Position Robot Control“, v *Proc. IEEE Int. Symposium on Industrial Electronics*, Vol.3, July 1999, Bled, Slovenija, str. 1056-1062.
- A. Rojko, K. Jezernik, “PI disturbance estimator in position control of direct drive robot“, *Proc. of Sixth IFAC Symposium on Robot Control SYROCO'00*, September 21st-23rd, Vienna, Austria, 2000.
- A. Rojko, K. Jezernik, “Sliding mode-fuzzy logic control of direct drive robot “, *Proc. of 10th international workshop on Robotics in Alpe-Adria-Danube region, RAAD'01*, 2001
- H. Roubos, M. Setnes. “Compact fuzzy models through complexity reduction and evolutionary optimization. “, *In Proc. of the Ninth IEEE International Conference on Fuzzy Systems*, volume 2, str. 762-767, San Antonio, Texas, Maj 2000
- J. A. Roubos, R. Babuska, P. Bruijn, H. Verbruggen, “Predictive control by local linearization of a Takagi-Sugeno fuzzy model“, *In Proceedings of FUZZ IEEE-98*, str. 37-42, Maj 1998
- S. Sastry, M. Bodson, *Adaptive Control*, Englewood Cliffs, NJ:Prentice-Hall, 1998.
- I. S. Shaw, *Fuzzy Control of Industrial Systems*, Kluwer Academic Publishers, Boston 1998.
- B. Siciliano, K.P. Valavanis (Eds), *Control Problems in Robotics and Automation*, Springer-Verlag, London, 1998.
- J. Sjöberg, Q. Zhang, L. Ljung, A. Benveniste, B. Delyon, P.-Y. Glorennec, H. Hjalmarsson, A. Juditsky. “Nonlinear black-box modeling in system identification: a unified overview“. *Automatica* 31(12), str. 1691—1724, 1995
- J. Slotine, W. Li, *Applied Nonlinear Control*, Englewood Cliffs, NJ:Prentice-Hall, 1991.
- J. Slotine, S. Sastry, “Tracking Control of Non-linear Systems Using Sliding Surfaces, with Application to Robot Manipulators“, *Int. J. Control*, Vol.38, str. 465-492, 1983.
- F. Song, S. M. Smith, “A Comparison of Sliding Mode Fuzzy Controller and Fuzzy Sliding Mode Controller “, *Proc. of The 19<sup>th</sup> International Conference of the North American Fuzzy information Processing Society*, 2000
- Šabanović A., “Sliding Mode in Robotic Manipulators Control Systems“, *Electrotechnical Review*, Vol. 60, No. 2-3, str. 99-107.
- Šabanović A., K. Jezernik, K. Erbatur and O. Kaynak, “Soft Computing Techniques in Discrete Time Sliding Mode Control Systems“, *Automatika* 38, str. 7-14, 1997.

- Šabanović A., K. Jezernik, K. Wada, "Chattering-free Sliding Modes in Robotic Manipulator Control", *Robotica*, vol. 14, str. 17-29, 1996.
- R. Šafarič, K. Jezernik, M. Terbuc, M. Pec. "Neural Network Sliding Mode Direct-Drive Robot Controller". *Microcomput. appl. (Anaheim)*, Vol. 18, No. 1, str. 3-12, 1999.
- T. Takagi, M. Sugeno, "Fuzzy Identification of Systems and Its Applications to Modeling and Control", *IEEE Trans. on Systems, man and Cybernetics*, vol.15, no.1, str. 116-132, januar 1985.
- M. Terbuc, K. Jezernik, "Design of DD robot mechanism", *Proc. of ISIR 96*, Milan, Italy, str. 465-470, 1996.
- C. H. Tsai, T. S. Wang, W.S. Lin, "Robust Fuzzy Model-Following Control of Robot Manipulators", *IEEE Trans. Fuzzy Syst.*, Vol. 8, No. 4, str. 462 – 469, avgust 2000.
- S. Uran. *Vzpostavlanje kontakta med robotom in okolico : doktorsko delo*. Maribor 1998.
- V. I. Utkin, "Variable Structure Systems with Sliding Mode", *IEEE Trans. Automat. Contr.*, Vol. AC-22, No. 2, str. 212-222, 1977.
- V. I. Utkin, *Sliding Modes in Control Optimization*, Springer Verlag, 1981.
- V. I. Utkin, "Sliding Modes Applications in Power Electronics and Motion Control systems", v *Proc. IEEE Int. Symposium on Industrial Electronics*, Vol.1, Bled, Slovenija, str. TU22-TU31, 1999.
- J. Virant, *Uporaba mehke logike v sodobnih sistemih*, Didakta Radovljica, Ljubljana 1992
- H. O. Wang, K. Tanaka, M.F. Griffin, "An Approach to Fuzzy Control of Nonlinear Systems: Stability and Design Issues", *IEEE Trans. Fuzzy Syst.*, Vol. 4, No.1, str. 14-23, februar 1996
- L. X. Wang, *Adaptive Fuzzy Systems and Control*, Englewood Cliffs, NJ: Prentice Hall, 1994.
- W. Wang, H. Rong, "Fuzzy Control Design for the Trajectory Tracking on Uncertain Nonlinear Systems", *IEEE Trans. Fuzzy Syst.*, vol. 7, str. 53-62, Februar 1999.
- L. K. Wong, F. H. F. Leung, P. K.S. Tam, "A Fuzzy Sliding Controller for Nonlinear Systems", *IEEE Trans. On Industrial Electronics*, Vol. 48, No.1, str. 32-37, februar 2001.
- J. C. Wu, T. S. Liu, "A Sliding-Mode Approach to Fuzzy Control Design", *IEEE Trans. Contr. Syst. Technology*, vol. 4, pp. 141-151, marec 1996.
- J. Yen, R. Langari, L. A. Zadeh, *Industrial Applications of Fuzzy Logic and Intelligent Systems*, IEEE Press, New York, 1995
- B. K. Yoo, W. C. Ham, "Adaptive Control of Robot Manipulator Using Fuzzy Compensator", *IEEE Trans. Fuzzy Syst.*, vol. 8, str. 186-199, April 2000.
- K. D. Young, P. V. Kokotovic, "Analysis of feedback loop interaction wiith parasitic actuators and sesnsors", *Automatica*, Vol. 18, str. 557-582, september 1982.
- K. D. Young, V. I. Utkin, U.Ozgruner, "A Control Engineer's Guide to Sliding Mode Control", *IEEE Trans. On Control Systems Technology*, Vol.7, No.3, str. 328-342, Maj 1999.
- L. A. Zadeh, "Outline of a new approach to the analysis of complex systems and decision processes", *IEEE Trans. Systems, Man, and Cybernetics 1*, str. 28-44, 1973.

L. A. Zadeh, "Fuzzy sets", *Information and Control*, 8, str. 338-353, 1965

L. A. Zadeh, "Fuzzy logic =Computing with worlds", *IEEE Trans. Fuzzy Syst.*, vol. 4, no.2, str. 103-110, Maj 1996.

L. A. Zadeh, " From Computing with Numbers to Computing with Words – From Manipulation of Measurements to Manipulation of Perceptions", *Proceeding of 9<sup>th</sup> Mediterranean Conference on Control and Automation*, Dubrovnik, Croatia, Junij 2001

C. Zhou, "Fuzzy Controller Design with Perception - based Information Using Fuzzy Numbers: A Computing with Words Approach", *Proceeding of 9<sup>th</sup> Mediterranean Conference on Control and Automation*, Dubrovnik, Croatia, Junij 2001