

## Chapter 7 – REFERENCES

Ahlstrom, K., J. Torin, K. Fersan, and P. Nobrant, “Redundancy management in distributed flight control systems: experience & simulations”, Dept. of Technol. & Soc., Chalmers Univ., Sweden; Digital Avionics Systems Conference, 2002. Proceedings. The 21<sup>st</sup> Publication Date: 2002, Volume: 2, On page(s): 13C3-1-13C3-7 Vol.2, ISSN: ISBN: 0-7803-7367-7.

Albus, J.S., “A Reference Model Architecture for Intelligent Systems Design”, published in: *An Introduction to Intelligent and Autonomous Control*, (Antsaklis, P.J., and Passino, K.M., (Eds.)), pp. 27-56, Kluwer Academic, Publishers, Boston, USA. 1993.

Alighanbardi, M., Y. Kuwata, and J. How, “Coordination and Control of Multiple UAVs with Timing Constraints and Loitering,” Proceedings of the 2003 American Control Conference, 2003.

Allen, R. W., and D. T. McRuer, “The effect of adverse visibility on driver steering performance in an automobile simulator”, Proceeding of SAE international Automotive engineering Congress, Detroit, March 1977.

Andersen, P., Lecture notes for 8th Semester Course, “Robust Control User’s Guard/Getting started for Robust Control Toolbox in Matlab”, Department of Control Engineering, Institute of Electronic Systems, Aalborg University, Denmark, U96-4153, April 18, 2001. <http://www.control.auc.dk/~pa/kurser/robust/USnote.pdf>.

Anderson, R. O., “A new approach to the specification and evaluation of flying qualities”, AFFDL-TR-69-120. pp. 60, 1970.

Angelova, A., L. Matthies, D. Helmick, and P. Perona, “Learning slip behavior using automatic mechanical supervision”, IEEE International Conference on Robotics and Automation, 2007.

Anon 1975, “NTSB Assays Iberia Accident at Logan”, 7 April 1975 and “Wind Factor Studied in Iberia Crash”, 14 April 1975, Aviation Week and Space Technology.

Anon 2000, “Flight Control Design – Best Practices”, RTO Technical Report, RTO-TR-29, December 2000.

Anon 2001, *Active Control Technology for Enhanced Performance Operational Capabilities of Military Aircraft, Land Vehicles and Sea Vehicles*, RTO Meeting Proceedings, RTO-MP-051, June 2001.

Anon 2002, “Collaboration for Land, Air, Sea and Space Vehicles: Developing the Common Ground in Vehicle Dynamics, System Identification, Control and Handling Qualities”, RTO Technical Report, RTO-TR-061, November 2002.

Anon 2003a, *Challenges in Dynamics, System Identification, Control and Handling Qualities for Land, Air, Sea and Space Vehicles*, RTO Meeting Proceedings, RTO-MP-095, June 2003.

Anon 2003b, Columbia Accident Investigation Board Report, Volume 1, August 2003, {<http://caib.nasa.gov>}.

Ashkenas, I. L., and D. T. McRuer, “A Theory of Handling Qualities Derived from Pilot-Vehicle System Considerations”, *Aerospace Eng.*, Vol. 21, No. 2, February 1962, pp. 60, 61, 83-102.

## REFERENCES

---

- Avizienis, A., “Framework for a taxonomy of fault-tolerance attributes in computer systems”, Proceedings of the 10th Annual International Symposium on Computer Architecture, Stockholm, Sweden, ISBN: 0-89791-101-6, 1983.
- Bacon, B. J., and Schmidt, D. K., “An Optimal Control Approach to Pilot/Vehicle Analysis and the Neal-Smith Criteria”, AIAA J. of Guidance, Control and Dynamics, Vol. 6, No. 5, 1983.
- Balas, E., and M. Padberg, “Set Partitioning: A Survey”, SIAM Review, Vol.18, pp. 710–760, Society for Industrial and Applied Mathematics. 1976.
- Balas, E. and M.C. Carrera, “A Dynamic Subgradient based Branch and Bound Approach for Set Covering,” Operations Research, Vol. 44, pp. 875–890, 1996.
- Baron S., Kleinman D. and Levison W., “Application of optimal control theory to prediction of human performance in a complex task”, Proceedings of the Fifth NASA-university annual conference on manual control, 1969, NASA-SP 215. P. 367-387.
- Bellutta, P., R. Manduchi, L. Matthies, K. Owens, and A. Rankin, “Terrain Perception for DEMO III” Proceedings of the 2000 Intelligent Vehicles Conference, 2000.
- Belosvet, A., et al., “Stability ‘in gross’ in aircraft-flight control closed loop system for statically unstable aircraft”, Journal of aircraft №1 (Russian).
- Bengtsson, M., “Standardization issues in condition based maintenance”, In Condition Monitoring and Diagnostic Engineering Management – Proceedings of the 16<sup>th</sup> International Congress, Växjö University, Sweden, 2003.
- Berko, V., et al, “The choice of flight control system parameters with taking into account the effect of flexibility”, Journal of aircraft №1-2 2000 (Russian).
- Bernstein, D.S., S. Zilberstein, and N. Immerman, “The Complexity of Decentralized Control of Markov Decision Processes,” Mathematics of Operations Research, 2002.
- Berthold, M., and D.J. Hand (Eds.), “Intelligent data analysis: An introduction”, 2nd Revised and Extended Edition, Springer-Verlag, Berlin, 2003.
- Bertsekas, D.P., 1988, “The Auction Algorithm: A Distributed Relaxation Method for the Assignment Problem,” Annals of Operations Research, Vol. 14.
- Bertsekas, D.P. and D.A. Castanon, 1989a, “The Auction Algorithm for Transportation Problems,” Annals of Operations Research, Vol. 20.
- Bertsekas, D.P. and J.N. Tsitsiklis, 1989b, “Parallel and Distributed Computation: Numerical Methods,” Prentice-Hall, Englewood Cliffs, N.J.
- Bertsekas, D.P. and D.A. Castanon, 1991, “Parallel Synchronous and Asynchronous Implementations of the Auction Algorithm,” Parallel Computing, Vol.17, pp. 707–732.
- Bertsekas, D., 1992, “Auction Algorithms for Network Flow problems: A Tutorial Introduction,” Computational Optimization and Applications, Vol.1, pp. 7–66.
- Bertsekas, D.P. and D.A. Castanon, 1993a, “Parallel Asynchronous Hungarian Methods for the Assignment Problem,” ORSA Journal on Computing, Vol. 5, No.3.

- Bertsekas, D.P. and D.A. Castanon, 1993b, "Parallel Primal-Dual Methods for the Minimum Cost Network Flow Problem," *Computational Optimization and Applications*, Vol. 2, pp. 319–338.
- Bertsekas, D., D. Castanon, and H. Tsaknakis, 1993c, "Reverse Auction and the Solution of Inequality Constrained Assignment Problems," *SIAM J. on Optimization*, Vol. 3, pp. 268–299.
- Bertsekas, D.P., D.A. Castanon, J. Eckstein, and S. Zenios, 1995, "Parallel Computing in Network Optimization," in *Handbooks in Operations Research: Vol. 7 Network Models*, M. Ball, T. Magnanti, C. Monma, G. Nemhauser editors, pp. 331–396.
- Bertsekas, D.P., 1995, "Nonlinear Programming," Athena Scientific.
- Bushgens, G., et al, 1979, "The longitudinal and lateral dynamics", *Mashinostroenye*, (Russian).
- Bushgens, G., 1990, "Aviation in 21st Century", *Journal of aircraft*, №1 (Russian).
- Bushgens, et al, 1995, "Aerodynamics and dynamics of passenger aircraft", *TSAGI-Chinese Avia published honos*, (Russian).
- Bushgens, G., et al, 2001, "Aerodynamics, stability and controllability of supersonic aircraft", *Nauka*. (Russian).
- Black, G. T. and J. J. Harris, "Interesting Steps Along the Way to a Level 1 Flight Control System Design", *RTO Symposium on Challenges in Dynamic System Identification, Control, and Handling Qualities for Land, Air, Sea, and Space Vehicles*, RTO-MP-095, May 2002.
- Brooks, R. A., "Intelligence without Representation Artificial Intelligence", *Massachusetts Institute of Technology, Artificial Intelligence 47*, pages 139-159, Elsevier, 1991.
- Broten, G., S. P. Monckton, and J. Collier. D. W. Gerhart and R. Grant (ed), "World Representations for Unmanned Ground Vehicles", *Proceedings of SPIE, Unmanned Systems Technology IX, Volume 6561*, May 2007.
- Brusov, V.S., and Yu.V. Tiumentsev, "Advanced information technologies and their application in the aeronautics", 2nd Intern. Sem. Recent Res. and Design Progr. in *Aeron. Eng. and its Influence on Education (RRDPAE'96)*, Warsaw Univ. of Technology, Inst. of Aeron. and Appl. Mech., Warsaw, Poland, Nov.25–26, 1996.
- Brusov V.S., S.A. Piyavsky, and Yu.V. Tiumentsev, "Neural network based tools for uncertainty management with applications to control system design", In: *Generalized Solutions in Control Problems*. Proc. of the IFAC Workshop GSCP-04 / Ed.: Yu.L. Sachkov, Pereslavl-Zalessky, Russia, September 2004.
- Burkard, R.E. and R. Cela, "Linear Assignment Problem and Extensions", *Technical Report 127*, Karl-Franzens University of Graz, Graz, Austria, 1998.
- Burridge, R. R., "Software Architectures for Robots Capable of Intelligent Autonomy: A Survey of the State of the Art", *Annual Forum Proceedings – American Helicopter Society*, Vol. 59, Part 1, pages 396-406, 2003.
- Bushgens, G.S., et al., "Aerodynamics, Stability and Controllability of Supersonic aircraft", pp. 811. *Moscow, Nauka Press* 1998.

## REFERENCES

---

- Cassandras, C.G. and W. Li, "A Receding Horizon Approach for Solving Some Cooperative Control Problems," in Proc. of 41st IEEE Conference on Decision and Control, pp. 3760–3765, 2002.
- Chean, M and J. A. B. Fortes, "A Taxonomy of Reconfiguration Techniques for Fault-Tolerant Processor Arrays", Volume 23, Issue 1 ISBN:0018-9162, January 1990.
- Chen, J., and R. J. Patton, "Robust Model-Based Fault Diagnosis for Dynamic Systems", Kluwer Academic Publishers, Boston, MA, U.S.A., 354 pages, ISBN 0-7923-8411-3, 1999.
- Coste-Manière, É., and R. Simmons, "Architecture, the Backbone of Robotic Systems", Proceedings of the 2000 IEEE International Conference on Robotics & Automation, San Francisco, CA, April 2000.
- Dantzig, G.B., "Linear Programming and Extensions," Princeton University Press, Princeton, N.J., 1963.
- Davidson, J. B., and D. K. Schmidt, "Modified Optimal Control Pilot Model for Computer-Aided Design and Analysis", NASA Technical Memorandum 4384, October 1992.
- Deal, D., "Beyond the Widget: Columbia Accident Lessons Affirmed", published in Air and Space Power, Summer, 2004.
- Deissenberg, C. and F.A. Gonzales, "Pareto Improving Cheating in an Economic Policy Game," Computing in Economics and Finance, April 2001.
- Demirci, U, and F. Kerestecioglu, "Fault Tolerant Control With Re-Configuring Sliding-Mode Schemes", Turkish Journal of Electrical Engineering, Vol. 13, No.1 2005, Tubitak.
- Dillow, J. D., "The Paper pilot – a Digital Computer program to predict pilot rating for the hover task", AFFDL-TR-70-40, 1970.
- Dinnikov, A., et al, 2000, "Analysis of use Neal-Smith criteria for aircraft dynamics estimation in case of flight control system reconfiguration", Journal of aircraft №1-2, (Russian).
- Dinnikov, A., et al, 2001, "The algorithms for fly-by-wire system", TSAGI scientific notes, (Russian).
- Domany, E., J.L. van Hemmen and K. Schultzen (Eds), "Models of neural networks", Springer-Verlag, Berlin, (Physics of Neural Networks Series), 1992.
- Doyle, J.C., B.A. Francis and A.R. Tannenbaum, "Feedback Control Theory", Macmillan Publishing Company, 1992.
- Efremov, A. V., et al, "Evaluation and prediction of aircraft handling qualities", Proceedings of AIAA Atmospheric Flight mechanics conference, Boston. Mass, August 1988.
- Efremov, A.V., et al., "Pilot as a dynamic system", pp. 327. Moscow, Mashinostroenie, 1992.
- Efremov, A. V., and A. V. Ogloblin, "Development and application of the methods for pilot-aircraft system researcher to the manual control tasks of modern vehicles", AGARD Conference Proceedings, *Dual usage in military and commercial technology in Guidance and Control*. pp. 15.1-15.12. Rome. Italy. October 1994.
- Efremov, A. V., and A.V. Ogloblin, 1995, "Development and application of the methods for pilot-aircraft system research to the manual control tasks of modern vehicle", AGARD conference proceedings AGARD CP-556 (English).

- Efremov, A. V., et al, "Investigation of pilot induced oscillation tendency and prediction criteria development", Wright Laboratory WL-TR-96-3109, pp. 1-139, May 1996.
- Ephrath A.R., "Detection of system failure in multi-axis tasks", Proceedings of Eleventh Conference on Manual Control, 1975.
- Feynman, R. P., "Personal Observations on the Reliability of the Shuttle", Report of the Presidential Commission on the Space Shuttle Challenger Accident, Volume II, Appendix F, {<http://science.ksc.nasa.gov/shuttle/missions/51-l/docs/rogers-commission/table-of-contents.html>}, 6 June, 1986.
- Ford, L. R., and D.R. Fulkerson, "Flows in Networks," Princeton University Press, Princeton, N.J., 1962.
- Freeman, P.R., "The Secretary Problem and its Extensions: A Review," *International Statistical Review*, 51 (1983), pp. 189–206.
- Gai E., and R. Curry, "Failure detection of pilots during automatic landing: models and experiments", Proceedings of Eleventh Conference on Manual Control, 1975.
- Gallager, R.J., "Information Theory and Reliable Communication," Wiley 1968, pp. 18.
- Garg, S., and D. Schmidt, "Cooperative Synthesis of control and display augmentation for a STOL aircraft in the approach and landing task", AIAA Paper No. 88-4182. AIAA Guidance, Navigation and Control Conference, Minneapolis, MN, August 1988.
- Gat, E., R. P. Bonnasso and R. Murphy "On Three-Layer Architectures", Artificial Intelligence and Mobile Robots, Aaai Press, 1998.
- Gat, E., "The MDS Autonomous Control Architecture", World Automation Congress, Jet Propulsion Laboratory, California Institute of Technology, April 2000.
- Girard, Anouck R., M. Pachter and P.R. Chandler: "Decision Making Under Uncertainty and Human Operator Model for Small UAV Operations," 2006 AIAA Guidance, Navigation, and Control Conference, August 2006.
- Goldberg, A.V. and R.E. Tarjan, "Solving Minimum Cost Flow Problems by Successive Approximation," *Mathematics of Operations Research*, Vol. 15, pp. 430–466, 1990.
- Goldberg, S.; Maimone, M. & Matthies, L., "Stereo Vision and Rover Navigation Software for Planetary Exploration", IEEE Aerospace Conference Proceedings, 2002.
- Groves, Theodore, "Incentives in Teams," *Econometrica*, Vol. 41, No.4, July 1973.
- Guo, W. and K. Nygard, "Combinatorial Trading Mechanism for Task Allocation," 13th International Conference on Computer Applications in Industry and Engineering, June, 2001.
- Harris, J. J. and G. T. Black, "F-22 Control Law Development and Flying Qualities", AIAA Paper No. 96-3379, August 1996.
- Haykin, S., "Neural networks: A comprehensive foundation", Macmillan College Publishing Company, Inc., New York, 1994.
- Herbert, M. & Krotkov, E., "Local Perception for Mobile Robot Navigation in Natural Terrain: Two Approaches", Workshop on Computer Vision for Space Applications, 1993, 24-31.

## REFERENCES

---

- Hess, R., 1978, "Dual Loop Model of the Human Controller", AIAA Journal of Guidance and Control, Vol. 1.
- Hess, R., 1979, "Structural model of the adaptive human pilot", AIAA Journal of guidance and control. vol. 3, № 5, pp. 416-423.
- Hess, R., 1984, "The effect of time delay, System subject to manual control", Journal of Guidance, Control and Dynamics, Vol. 7, pp. 165-174.
- Hess, R., et al, 1998, "Analysis of aircraft handling qualities and pilot induced Oscillation Tendency with actuator Saturation", Paper AIAA-98-4334, AIAA atmospherics Flight Mechanics conference, Boston Mass, USA.
- Ho, Y. and K. Chu, "Team decision theory and Information Structures in Optimal Control Problems – Part 1," IEEE Transactions on Automatic Control, Vol. AC-17, pp. 15–22, 1972.
- Hoh, R.H., et al, "Development of Handling quality criteria for aircraft with independent control of six degrees of freedom", AFWAL-TR-80 Wight-Patterson AFB, Ohio, p.229, 1980.
- Hooks, D., and C. Reising, "Integrated Vehicle Health Management (IVHM)", Presented at NDIA 5<sup>th</sup> Annual Systems Engineering Conference, 2002.
- Jadbabaie, Ali, Jie Lin, and A. Stephen Morse, "Coordination of Groups of Mobile Autonomous Agents Using Nearest Neighbor Rules," IEEE Transactions on Automatic Control, Vol. 48, No.6, June 2003.
- Jensen, F., "An Introduction to Bayesian Networks," Springer Verlag, 1996.
- Jensen, R. M., Veloso, M. M. and R. E. Bryant, "Fault Tolerant Planning: Toward Probabilistic Uncertainty Models in Symbolic Non-Deterministic Planning", In Proceedings of the 14th International Conference on Automated Planning and Scheduling (ICAPS-04), Vancouver, June 2004.
- Jones, R. M., "An Introduction to Cognitive Architectures for Modeling and Simulation", Interservice/Industry Training, Simulation, and Education Conference (I/ITSEC) 2004.
- Kanekawa, N, "Dynamic autonomous redundancy management strategy for balanced graceful degradation", Fault-Tolerant Parallel and Distributed Systems, Proceedings of IEEE Workshop on Volume, Issue, June 1994.
- Kannan, B., and L. E. Parker, 2006, "Fault-Tolerance Based Metrics for Evaluating System Performance in Multi-Robot Teams", in Proceedings of Performance Metrics for Intelligent Systems Workshop (PerMIS), August 2006.
- Kannan, B., and L. E. Parker, 2007, "Metrics for Quantifying System Performance in Intelligent, Fault-tolerant Multi-robot Teams", Carnegie Mellon Univ., Pittsburgh, October - November 2007.
- Kelly, A. M., and A. S. Hebert (ed.), "Intelligent Unmanned Ground Vehicles: Autonomous Navigation Research at Carnegie Mellon RANGER: Feedforward Control Approach to Autonomous Navigation", Kluwer Academic Publishers, pages 105-144, 1997.
- Kempka, D., J.L. Kennington, and H.A. Zaki, "Performance Characteristics of the Jacobi and the Gauss-Seidel Versions of the Auction Algorithm on the Alliant FX/8," ORSA J. on Computing, Vol. 3, No.2, pp. 92–106, 1991.

- Klein, R. H., and W. F. Clement, "Application of Manual Control Display Theory to the Development of Flight Director Systems for STOL Aircraft", AFFDL-TR-72-152, Wright-Patterson AFB, Ohio.
- Kleinman, D. L., and S Baron, "Analytic Evaluation of Display Requirements for Approach to Landing". NASA-1952, 1971.
- Kluev, M., and I. Kuznetsov, "The development of requirements to dynamic characteristics of maneuverable aircraft actuator", Journal of aircraft №2, 2001 (Russian).
- Konstantinov, S. V., et al, 1999, "The flight safety and some aspects of control system design of advanced maneuver aircraft", New Aviation Technologies of the 21 century, a collection of technical papers 17-22 Aug. 1999, the city of Zukovsky, (English).
- Konstantinov, S. V., and P. Moskalev, 2002, "The peculiarities in development of algorithms and structure of flight control system for perspective modern maneuverable aircraft", Journal of aircraft №3-4, (Russian).
- Kranz, G., "Failure is Not an Option: Mission Control from Mercury to Apollo 13 and Beyond", published by Simon & Schuster, 2000.
- Kuhn, H., "Extensive Games and the Problem of Information," *Annals of Mathematics Studies No.28*, Princeton University Press, Princeton, N.J., 1953.
- Kweon, S., and T. Kanade, "High-Resolution Terrain Map from Multiple Sensor Data", IEEE Transactions on Pattern Analysis and Machine Vision, 1992, 14, 278-2929.
- Lacroix, S.; Mallet, A. & Bonnafous, D., "Autonomous Rover Navigation on Unknown Terrains", Demonstrations in the Space Museum "Cite de l'Espace" at Toulouse Automation, Albuquerque, USA, 1997 7th International Sym. on Experimental Robotics, 2000, 669-683.
- Lala, J. H., and R. E. Harper, "Architectural Principles for Safety-Critical Real-Time Applications," IEEE, Volume 82, Issue 1, Pages 25 – 40, January 1994.
- Lampert, L., "The Part-time Parliament," ACM Transactions on Computer Systems, 16(2):133–169, May 1998. Also appeared as SRC Research Report 49.
- Lehman, J. F., J. Laird and P. Rosenbloom "A Gentle Introduction to Soar, an Architecture for Human Cognition", University Of Southern California Marina Del Rey Information Sciences, Report Number A096413, May 1996.
- Levison, W., Elkind, J., and Ward, J., "Studies of Multivariable Manual Control Systems: A Model of Task Interference", NASA CR-1746, May 1971.
- Llinas, J., and D. Hall, "An Introduction to Multi-sensor Data Fusion", Proceedings of IEEE Int'l Symposium of Circuits and Systems, ISCAS, Vol. 6, May - June 1998.
- Linkens, D.A., and H. O. Nyongess, "Learning systems in intelligent control: An appraisal of fuzzy, neural and genetic algorithm control applications", IEEE Proceedings on Control Theory Application, Vol. 143, No. 4, 1996.
- Lokshin, M., and Y. Shenfinkel, Flight control system for Suhoi aircraft family, The collection of papers of conference 'modern problems in dynamics of flight aerodynamics and flight test', Moscow, Moscow Aviation Institute 2004 (Russian).

## REFERENCES

---

- Lou, X-C., A. S. Willsky, and G. C. Verghese, "Optimally Robust Redundancy Relations for Failure Detection in Uncertain Systems" March 1985, M.I.T. Laboratory for Information and Decision Systems, LIDS-P-1447, Automatica (Journal of IFAC) archive Volume 22 , Issue 3, May 1986.
- Lovejoy, W., "A Survey of Algorithmic Methods for Partially Observable Markov Decision Processes," Annals of Operations Research, pp. 47–66, 1991.
- Luce, R.D. and H. Raiffa, "Games and Decisions: Introduction and Critical Survey," Dover Publications Inc., 1989.
- Lussier, B., R. Chatila, F. Ingrand, M-O. Killijian and D. Powell, "On Fault Tolerance and Robustness in Autonomous Systems", LAAS-CNRS, France, In Proceedings of the 3rd IARP-IEEE/RAS-EURON Joint Workshop, 2004.
- Lussier, B., A Lampe, R Chatila, J Guiochet, F Ingrand, M-O Killijian, and D Powell, "Fault Tolerance in Autonomous Systems: How and How Much?" [www.laas.fr/~mkilliji/docs/workshops/IARP05.pdf](http://www.laas.fr/~mkilliji/docs/workshops/IARP05.pdf)
- Macedo, J.; Matthies, L. & Manduchi, R., "Ladar-based Discrimination of Grass from Obstacles for Autonomous Navigation", Proceedings of the Seventh International Symposium on Experimental Robotics, 2000.
- Marcos, A., S. Ganguli and G. Balas, "Application of H-infinity Fault Detection and Isolation to a Boeing 747-100/200," AIAA Guidance, Navigation and Control Conference, Monterey, CA. 2002.
- Marschak, J. and R. Radner, "Economic Theory of Teams," Yale University Press, 1972.
- Moravec, H., and A. Elfes, "High-resolution maps from wide-angle sonar", In Proceedings of IEEE Int'l Conf. on Robotics and Automation, St. Louis, Missouri, March 1985.
- Mayne, D.Q. and L. Michalska, "Receding Horizon Control of Nonlinear Systems," IEEE Transactions on Automatic Control, Vol. AC-35, No.7, pp. 814–824, 1990.
- McLain, T. and R. Beard, "Coordination Variables, Coordination Functions, and Cooperative Timing Missions," AIAA Journal of Guidance, Control, and Dynamics, Vol. 28, No.1, pp. 150–161, January-February 2005.
- McRuer, D., D. Graham, E. Krendel, and W. Reisener, Jr., 1965, "Human Pilot Dynamics in Compensatory Systems: Theory, Models, and Experiments with Controlled Element and Forcing Function Variations", AFFDL-TR-65-15.
- McRuer, D. T., D. Graham, and E. Krendel, 1967, "Manual Control of Single-Loop Systems", *J. Franklin Inst.*, Vol. 238, No. 1, pp. 1-29; No. 2, pp. 145-168.
- McRuer, D. T., H. R. Jex, W. F. Clement, and D. Graham, 1968, "A Systems Analysis Theory for Displays in Manual Control", Systems Technology, Inc., Tech. Report. 163-1.
- McRuer, D. T. and E. S. Krendel, "Mathematical Models of Human Pilot Behavior". Advisory Group For Aerospace Research And Development, Paris (France), Descriptive Note : AGARDograph, January 1974.
- McRuer, D., 1973a, "Development of Pilot-in-the-Loop Analysis", AIAA J. of Aircraft, Vol. 10, No. 9.
- McRuer, D., et al, 1973b, "Measurement of driver/vehicle multiloop response properties with the single disturbance input", Proceedings of 9th annual conference on Manual control.

- McRuer, D., and R. Klein, 1974, "Automobile controllability-driver/vehicle response for steering control", Systems Technology Inc. Report TR 1040-1-1.
- McRuer, D., and R. Klein, 1976, "Comparison of human driver dynamics in an automobile on the road with those in simulators having complex and simple visual displays", STJ paper No. 173A.
- McRuer, D. et al, 1988, "Advanced piloted aircraft flight control system design methodology Vol. 1. Knowledge base", p. 228, NASA CR-191726.
- Michalewicz, Z., "Genetic algorithms + data structures = evolution programs", Third, Revised and Extended Edition, Springer-Verlag, Berlin, 2001.
- Modi, P.J., W. Shen, M. Tambe, and M. Yokoo, "An Asynchronous Complete Method for General Distributed Constraint Optimization," In Proc of Autonomous Agents and Multi-Agent Systems Workshop on Distributed Constraint Reasoning, 2002.
- Moorhouse, D. J., 1977, "Airspeed Control Under Wind Shear Conditions", AIAA Journal of Aircraft, Vol. 14, No. 12, December 1977.
- Moorhouse, D. J., 2004, "Integration of Aerodynamic and Propulsive Flight Control Systems", published in *Vehicle Propulsion Integration*, RTO-MP-AVT-100, August 2004.
- Moravec, H., and A. Elfes, "High-resolution maps from wide-angle sonar", In Proc. IEEE Int'l Conf. on Robotics and Automation, St. Louis, Missouri, March 1985.
- Mullane, M., "Riding Rockets: The Outrageous tales of a Space Shuttle Astronaut", published by Scribner, 2006.
- Murphy, Robert A., "An Approximate Algorithm for a Weapon Target Assignment Stochastic Program," in *Approximation and Complexity in Numerical Optimization: Continuous and Discrete Problems*, Kluwer Academic Publishers, 1999.
- Neal, T. P., and R. E. Smith, "Development of flying qualities criterion for the testing of a fighter flight control systems", AIAA paper № 70-927, 1970, p. 803-809.
- Nemhauser, G. and B. Wolsey, "Integer and Combinatorial Optimization," Wiley, 1999.
- Norton, W. J., "Balancing Modelling & Simulation with Flight Test in Military Aircraft Development", published in AGARD-CP-593, December 1997.
- Nygard, K., P. Chandler, and M. Pachter, "Dynamic Network Optimization Models for Air Vehicle Resource Allocation," ACC 2001, Arlington, VA, June 2001.
- Obolensky, Y., "Increase of maneuverability by multiaxis thrust vectoring control", The collection of papers of conference 'modern problems in dynamics of flight aerodynamics and flight test', Moscow, Moscow Aviation Institute, (Russian).
- Olfati-Saber, R. and R.M. Murray, "Consensus Protocols for Networks of Dynamic Agents," in Proceedings of the American Control Conference, 2003.
- Olesen, H.R., "A Platform for Model Evaluation", National Environmental Research Institute (NERI), 7th International conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Belgirate, May 2001. {<http://www.dmu.dk/AtmosphericEnvironment/harmoni/belgirate.htm>}.

## REFERENCES

---

- Pal, S.K., L. Polkowsky, and A. Skowron (Eds.), "Rough-neural computing: Techniques for computing with words", Springer-Verlag, Berlin, (Cognitive Technologies Series) 2003.
- Papadimitriou, C.H. and K. Steiglitz, "Combinatorial Optimization: Algorithms and Complexity," Prentice-Hall, Englewood Cliffs, N.J., 1982.
- Parzen, E., Passino, Kevin M., "Biomimicry for Optimization, Control, and Automation," Springer, 2005.
- Patton, R. J., "Fault Tolerant Control Systems: The 1997 Situation", Proc. IFAC Safe Process, Hull, United Kingdom, pp.1033-1055, 1997. IEEE.
- Pew, R. and A. S. Mavor "Modeling Human and Organizational Behavior," National Academy Press, 1998.
- Piegat, A., "Fuzzy modeling and control", Springer-Verlag, Berlin, (Studies in Fuzziness and Soft Computing, Vol. 69), 2001.
- Polkowsky, L., S. Tsumoto, and T.Y. Lin (Eds.), "Rough set methods and applications: New developments in knowledge discovery in information systems", Springer-Verlag, Berlin, (Studies in Fuzziness and Soft Computing, Vol. 56) 2000.
- Pospelov, D.A., "Situational Control: Theory and practice". Published by Nauka press, (Problems of Artificial Intelligence Series) (In Russian), 1986.
- Puterman, M.L., 1994, "Markov Decision Processes," Wiley Inter Science.
- Puterman, M.L., 2005, "Markov Decision Processes: Discrete Stochastic Dynamic Programming," Wiley Series in Probability and Statistics, Wiley Inter Science.
- Rachinayani, P. K., "Robust Fault-Tolerant Control For Aircraft Systems", Jawaharlal Nehru Technological University, M. S. in Electrical Engineering, August 2006.
- Rasmussen, J., 1983, "Skills, Rules, and Knowledge: Signals, signs, and symbols, and other distinctions in human performance models", IEEE Transactions on Systems, Man and Cybernetics.
- Rasmussen, S.J., P.R. Chandler and C.J. Schumacher, 2002, "Investigation of Single vs. Multiple Task Tour Assignments for UAV Cooperative Control," Proceedings of AIAA Guidance, Navigation & Control Conference, Monterey, CA, August 2002.
- Rasmussen, S.J., P.R. Chandler, J.W. Mitchell, C.J. Schumacher, and A.G. Sparks, 2003, "Optimal vs. Heuristic Assignment of Cooperative Autonomous Unmanned Air Vehicles," Proceedings of the AIAA Guidance, Navigation, and Control Conference, August 2003.
- RayChaudhuri, T., and L.G.C. Hamey, "From Conventional Control to Intelligent Neurocontrol Methods: A Survey of the Literature", Macquarie University, New South Wales, Australia, Technical Report No.95/170C, 1995 {URL: <http://citeseer.nj.nec.com/raychaudhuri95from.html>}.
- Reinelt, G., "The Traveling Salesman Problem: Computational Solns for TSP Applications," Springer Verlag, Berlin, 1994.
- Richards, A. and J. How, "Aircraft Trajectory Planning with Collision Avoidance Using Mixed Integer Linear Programming," American Control Conference, 2002.

- Richards, A., J. Bellingham, M. Tillerson and J. P. How, "Coordination and Control of Multiple UAVs", AIAA Guidance, Navigation, and Control Conference, AIAA Paper 2002-4588, August 2002.
- Ronco, E., and P. J. Gawthrop, "Neural networks for modelling and control", University of Glasgow, Centre for System and Control, Technical Report csc97008, November 1997.
- Rosenblatt, J., "DAMN: A Distributed Architecture for Mobile Navigation", Proceedings of the 1995 AAAI Spring Symposium on Lessons Learned from Implemented Software Architectures for Physical Agents, H. Hexmoor and D. Kortenkamp (Eds.), AAAI Press, Menlo Park, CA, 1995.
- Ross, S.M., "Introduction to Stochastic Dynamic Programming," Academic Press, 1983.
- Saffiotti, A., "Handling Uncertainty in Control of Autonomous Robots", Application of Uncertainty Formalisms in Information Systems, Computer Science, Published in A. Hunter and S. Parsons, editors, Uncertainty in Information Systems, Lecture Notes in Computer Science. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK, 1998.
- Samarin, A. I., "Neural networks with preliminary adjustment", 7th All-Russia Conference "Neuroinformatics-2005". Lectures on Neuroinformatics / Ed.: Yu.V. Tiumentsev. – Moscow, MEPhI Press, (In Russian) 2005.
- Sandholm, Thomas, "An Implementation of the Contract Net Protocol Based on Marginal Cost Calculations," In Eleventh National Conference on Artificial Intelligence (AAAI-93), pp. 256–262, Washington DC, 1993, AAAI.
- Schmidt, D. K., "Pilot Optimal Augmentation for the Air-to-Air Tracking Task", AIAA Journal of Guidance and Control, Vol. 3, September - October 1980.
- Schumacher, C.J., M. Pachter, P.R. Chandler, and L. Pachter, 2004, "UAV Task Assignment with Timing Constraints via Mixed-Integer Linear Programming," Proc. AIAA 3rd Unmanned Unlimited Systems Conference.
- Schumacher, C.J., P.R. Chandler, M. Pachter, and L.S. Pachter, 2007, "Air Vehicles Operations Optimization," Journal of the Operations Research Society.
- Shenfinkel, Y., "Flight control system for aircraft SU-27", Journal of aircraft №2, 1990 (Russian).
- Siewiorek, D. P., and R. S. Swarz, 1982, "The Theory and Practice of Reliable System Design" Digital Equipment Corporation, Bedford, MA, USA.
- Siewiorek, D. P., and R. S. Swarz, 1998, "Reliable Computer Systems: Design and Evaluation", A K Peters Ltd; 1998 ISBN: 156881092X.
- Simmons, R., "Structured Control for Autonomous Robots", IEEE Transactions on Robotics and Automation, 1994.
- Sha, L., "Using Simplicity to Control Complexity", University of Illinois at Urbana-Champaign, <https://guinness.cs.stevens.edu/~lbernste/papers/Sha%20Relibility%20Equation%20Simplicity%20IEEE%20final.pdf>.
- Smith, R. G. and R. Davis, "Frameworks for Cooperation in Distributed Problem Solving," IEEE Transactions on Systems, Man, and Cybernetics, January 1981.

## REFERENCES

---

- Sontag, E., “Neural Networks for Control”, In: H. Trentelman and J. Willems, Eds., “Essays on Control: Perspectives in the Theory and its Applications”. Vol.14 of “Progress in Systems and Control Theory”. – Boston, MA: Birkhauser, 1993. { URL: <http://citeseer.nj.nec.com/sontag93neural.html> }
- Stengel, R.F., “Toward intelligent flight control”, IEEE Trans. on Systems, Man, and Cybernetics, Vol. 23, No.6, 1993.
- Suykens, J.A.K., and H. Bersini, “Neural Control Theory: An Overview”, Journal A. Vol. 37, No.3, 1996.
- Swihart, D., and F. Barfield, “An Advanced Automatic Ground Collision Avoidance System for Fighter Aircraft”, presented at the RTO Symposium, *Flight in a Hostile Environment*, Solomons Island, Maryland, USA, October 1999.
- Sycara, K. and J.S. Liu, “Multiagent Coordination in Tightly Coupled Task Scheduling”, International Conference on Multi-Agent Systems, 1996.
- Thompson, P. M., “Minimum Flying Qualities, Vol. III: Program CC’s Implementation of the Human Optimal Control Model”, Systems Technology, Inc., 13766 South Hawthorne Blvd Hawthorne, CA 90250-7083, January 1990.
- Tiumentsev, Yu.V., 2002, “Intelligent autonomous systems as a challenge for information technologies”, Proceedings of the 8th National Conference on Artificial Intelligence (CAI’2002). Vol. 2 – Moscow: Fizmatlit Publishers, (In Russian).
- Tiumentsev, Yu.V., 2004, “Intelligent autonomous systems”, Aerospace Instrumentation, No.10, (In Russian).
- Thrun, S.; Montemerlo, M.; Dahlkamp, H.; Stavens, D.; Aron, A.; Diebel, J.; Fong, P.; Gale, J.; Halpenny, M.; Hoffmann, G.; Lau, K.; Oakley, C.; Palatucci, M.; Pratt, V.; Stang, P.; Strohband, S.; Dupont, C.; Jendrossek, L.; Koelen, C.; Markey, C.; Rummel, C.; van Niekirk, J.; Jensen, E.; Alessandrini, P.; Bradski, G.; Davies, B.; Ettinger, S.; Kaehler, A.; Nefian, A. & Mahoney, P. Stanley, “The Robot That Won the DARPA Grand Challenge”, Journal of Field Robotics, 2006, 23, 661-692.
- Toth, P., and D. Vigo, “The Vehicle Routing Problem,” SIAM, DT09, Softcover Book, · ISBN no.978-0-898715-79-8, 2001.
- Tran, B., and B. Chidambaram, “Health monitoring of an electro hydraulic system”, OSA-CBM Milestone # 5 Review, December 7-8, 2000.
- Tustin, A. (1944), “*An Investigation of the Operator’s Response in Manual Control of a Power Driven Gun*”, Metropolitan-Vickers Electrical Co., Ltd., Attercliffe Common Works, Sheffield, England, C.S. Memorandum No. 169, 22 August 1944.
- Tustin, A. (1947), “The Nature of the Operator’s Response in Manual Control and Its Implications for Controller Design”, *J. IEE*, Vol. 94, Part IIA, No. 2, 1947.
- Vaughan, D., “The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA”, published by University of Chicago Press, 1996.
- Veldhuyzen, W., and H. G. Stassen, 1976a,” The internal model: What does it mean in human control?”, Published In: T.B. Sheridan; G. Johanssen. Monitoring Behavior and Supervisory Control. NATO Conf. Series, Plenum, Plenum Press, pp. 139-157.

- Veldhuyzen, W., 1976b, "Ship maneuvering under human control: Analysis of the helmsman's control behavior", Ph.D. Thesis, Department of Mechanical Engineering, Delft University of Technology, 104p.
- Vorobev, N. N., "Game Theory" - Lectures for Economists and Systems Scientists (Applications of Mathematics 7), published by Springer, 1977.
- Walley, M.; M. Freed, M. Takahashi, D. Christian, A. Petterson-Hine, G. Schulein, R. Harris, "The NASA/Army Autonomous Rotorcraft Project", American Society 59<sup>th</sup> Annual Forum, Phoenix, Arizona, May 6-8, 2003.
- Wein, J. and S.A. Zenios, "Massively Parallel Auction Algorithms for the Assignment Problem," Proc. of 3rd Symposium on the Frontiers of Massively Parallel Computation, Md., November 1990.
- Weir, D. H., and D. T. McRuer, 1970, "Dynamics of driver/vehicle steering control", Automatica. Vol. 6 №1, pp. 87-98.
- Weir, D. H., R. H. Klein, and D. T. McRuer, 1971, "Principles for the Design of Advanced Flight Director Systems Based on the Theory of Manual Control Displays", NASA CR-1748.
- Wellman, M. and P. Wurman, "Market-aware Agents for a Multiagent World," Robotics and Autonomous Systems, 24:115–125, 1998.
- Xie, L., "Output Feedback H-Infinity Control of Systems with Parameter Uncertainty", International J. of Control, 63, pp. 741-750, 1996.
- Yokoo, Makoto, and K. Hirayaman, "Algorithms for Distributed Constraint Satisfaction: A review," Autonomous Agents and Multi-Agent Systems, Vol. 3, No.2, pp. 198–212, 2000.
- Zhou, K., and J. C. Doyle, 1997, "Essentials Of Robust Control", Published by Prentice Hall, Web: <http://www.ee.lsu.edu/kemin/essentials.htm>. ISBN 0-13-525833-2.
- Zhou, D.H. and P.M. Frank, 1998, "Fault Diagnostics and Fault Tolerant Control", IEEE Transactions of Aeronautical Electric Systems 34, pages 420-427.
- Zhou, K, 2005, "A New Approach to robust and Fault Tolerant Control", ACTA Automatica Sinica.
- WEB SITE A, "Control systems related research in Framework Programme 7 (2007-2013), Recommendations for a research agenda in Europe", Publication sponsored by the HYCON Network of Excellence, D R A F T DECEMBER 10, 2005. [http://www.ist-hycon.org/documents/ Report\\_Control\\_for\\_FP7-rev5.-jl-hycon-1.pdf](http://www.ist-hycon.org/documents/ Report_Control_for_FP7-rev5.-jl-hycon-1.pdf).
- WEB SITE B, <http://www.dtic.mil/ndia/2002systems/reisig2b3.pdf>
- WEB SITE C, <http://www.osacbm.org/mission.html>
- WEB SITE D, URL: <http://citeseer.nj.nec.com/suykens96neural.html>
- WEB SITE E, URL: <http://citeseer.nj.nec.com/sontag93neural.html>
- WEB SITE F, [http://www.ece.cmu.edu/~koopman/des\\_s99/verification/](http://www.ece.cmu.edu/~koopman/des_s99/verification/)

## REFERENCES

---

